

SUPPLEMENT

TO

THE ECONOMIC RECORD

OCTOBER, 1932

FOREWORD

The papers included in this Supplement were read and discussed at meetings of Section G of the Australian and New Zealand Association for the Advancement of Science held in Sydney in August, 1932.

For the two previous meetings the Section attempted to group its papers around a subject—Marketing in one case and Transport in the other—and each contributor was invited to address himself to some aspect of the general problem in relation to the economic life of Australia and New Zealand.

For the Sydney meeting it was proposed that contributors should generally have in mind in selecting subjects, the effect of external economic forces upon the economies of Australia and New Zealand. No attempt was made to allot subjects in such a way as to cover the ground exhaustively, and little opportunity was afforded for collaboration between contributors residing for the most part at great distances from one another. This serves to explain any lacunae and also any overlapping which may be apparent to a reader.

The chief interest of the papers then is that they attempt to show how world economic forces emanating from the centre appear in the eyes of those dwelling on the periphery.

It has not been possible to publish all the papers read before the Section. Fortunately two are being published elsewhere. Mr. J. B. Brigden's paper on "The Story of Sugar" is being issued by the Queensland Bureau of Economics. A paper by Mr. L. W. Holt on "The New Zealand Budgetary Problem" has been published as a pamphlet by the Economic Society through the Melbourne University Press.

D. B. COPLAND.

October 12, 1932.

THE STABILISATION OF STERLING.

- I. Reversing British Policy.
- II. The Price Level and Costs.
- III. The Exchange Equalisation Fund.
- IV. Estimating Purchasing Power Parity.
- V. Exchange Depreciation Inadequate.
- VI. Constructive Monetary Policy.
- VII. Effects on Australia.

I

So much has been written about the future relation of sterling to gold that this paper can do little more than give an account of the views that have been put forward, and the steps so far taken by the currency authorities in Great Britain. Despite the growing amount of printed matter appearing on the subject, it is very difficult to get reliable information upon some vital points. We are quite accustomed in Australia to pass heavy annual loan appropriations, but we usually make some statement concerning the purpose for which the funds are being raised. When the British Government placed before Parliament the proposal for borrowing up to £150m. for an Exchange Equalisation Fund, one member complained that insufficient information was given concerning the operation of the fund. The complaint was quite reasonable. By way of excusing myself from giving anything fresh in my paper, I shall repeat the complaint. "To come to this House (said Mr. Boothby), and ask for a loan of £150,000,000, and to refuse to give any information whatsoever about the state of the account of which this loan is to be the basis, is asking us to bite off rather more than we can be expected to chew."

The debate, however, showed clearly that the members of the House of Commons had learnt a great deal since 1925, when Mr. Churchill restored the gold standard at the old parity in order that "the pound might look the dollar in the face". Even Mr. Churchill is now able to convince himself that the only way to look the dollar in the face is to rectify the mistake of 1925 by depreciating the pound in terms of gold. In company with Sir Robert Horne, Mr. Amery, and other "inflationists", who are likely to make the doctrine of inflation a little too respectable, he was quite certain that prices could be raised by exchange manipulation. The Chancellor of the Exchequer, though showing a much greater respect for the facts than did

Mr. Churchill in 1925, was not so sure of the results of exchange management. An official statement from him during the debate contained the following reference to monetary policy: "When you consider the economic disturbances which are still occurring in the world, and of which we have probably not even now felt the worst, it is perfectly useless to pretend that we can hold our exchange position exactly as we please, independent of anything which is going on around us. We do not know what is going to be the future of gold prices. We do not know what settlement will be reached as regards reparations and war debts, and other matters, which are now disturbing the world. These uncertainties rule out any possibility of our being able to return to gold immediately. We do not know when or in what circumstances we may return to gold, or at what level."

This is a great advance on anything official a Chancellor of the Exchequer in Great Britain has ever said on the problems of monetary policy. At least it showed that the Government had not left matters entirely in the hands of the Bank of England with its general presumption in favour of deflation. The work of the monetary theorists since the war had not been without its influence, but the facts of unemployment, depressed trade and falling gold prices were more eloquent than the words even of Mr. Keynes. Indeed, it became an article of the creed of many business people that the depreciation of the pound sterling was a national necessity. Gold was no longer an emblem of patriotism. France and the United States having acquired two-thirds of the world supply, the forces of nationalism and respectability combined to discredit the gold standard as we knew it before the depression. For once political forces and economic sense seemed to be in unison. It is, I must admit, a dangerous combination, because the economist is the weaker partner, and politicians will always carry too far, and expect too much from, any new idea they seek to embody in national policy. Compared with the alternative of domestic deflation there can be little doubt that the benefits of depreciation will be very great. Whether they will fully justify the experiment from the economists' point of view must depend upon what other monetary measures are taken, and in particular whether the Bank of England assumes a more positive function in promoting a rise in sterling prices.

II

The most specific statement on British monetary policy so far made public from a responsible quarter was reported in *The*

Economist of June 18th, when referring to the concluding Parliamentary debates on the Finance Bill. I quote an extract: "Pressed for a statement, Mr. Chamberlain referred the House to what, he implied, was an accurate series of inferences drawn in a previous speech by a Conservative back-bencher, Mr. Albery. From a study of the Chancellor's speeches and answers, Mr. Albery had deduced the following six points of policy:— (1) That we are aiming at a return to some form of gold standard, not barring the possibility of a gold-cum-silver standard; (2) that the eventual return will be at a figure below the previous gold parity; (3) that a return to gold is not expected to take place in the near future; (4) that it is intended to control fluctuations in sterling exchange with a view to bringing about a higher price level of commodities; (5) that, meanwhile, every effort will be made to prevent violent fluctuations of sterling; and (6) when the higher commodity price level has been attained, stability of commodity prices will be an objective. These six points, according to Mr. Chamberlain, represent 'an accurate account of the general considerations which have been in my mind from the first'".

There is, of course, some conflict of principle between the fourth and fifth points. Substantial fluctuations in sterling might be necessary if prices are to be raised, but as will be shown later, the mere depreciation of sterling in terms of gold currencies will not necessarily raise sterling prices. On the whole, however, this statement is very encouraging and in great contrast to what was said officially less than a decade ago. It fully justifies the views of those of us in Australia who from the first looked upon currency depreciation as an integral part of the policy of general economic adjustment. In striking contrast is the dictum of Sir Otto Niemeyer that "rising exchange rates prejudice the whole fabric of national finance."¹ I need not repeat the many reasons for the view that stability of the price level, even though it does mean progressive exchange depreciation, is advantageous to a dependent financial country. This is true despite the increase in the local currency value of the external debt service, and other services that have to be met in foreign currencies.

Great Britain is, of course, in a different position. She is the greatest creditor nation in the world, her export trades are elastic, and she has what is now recognised as a very rigid cost structure. Certainly, as events have shown a structure much

1. Statement before Premiers' Conference in Melbourne, August, 1930.

more rigid than that of Australia.² To her, exchange depreciation was a means of escape from a burden of fixed costs, and at the same time a method by which the burden of external debts expressed in sterling could be reduced. What forced her to return to parity in 1925 was no doubt partly the fear that exchange depreciation would imperil the future of London as a financial centre in competition with New York. The subsequent experience of France and the recent experience of London has shown that this fear was not well founded. Exchange parity, rigid internal costs, and falling external prices were gradually undermining Britain's creditor position. In the rigid costs must be included the increasing burden of the public debt and the growing expenditure from the budget on social services, and in particular on unemployment. Politically, it was impossible to reduce this expenditure until a grave national emergency arose. Meanwhile, it had undoubtedly operated to hold up the level of wages by reducing the economic pressure on wage-earners.

I think a very strong case can be made out against British post-war economic and monetary policy. In a word, the country tried to face both ways. Through the Bank of England and the Treasury it attempted to follow along orthodox lines in national finance. Through the growing strength of radical forces in politics, and the power of unions of both employers and employed, it attempted the unorthodox course of regulation and heavy social expenditure. A conflict such as this was sure to end in a crisis. The political forces won for the time being, but in doing so they have in fact defeated themselves. By making monetary policy subservient to general economic policy they will eventually bring about the reduction in real costs, including real wages, against which they fought so vigorously after Britain returned to the gold standard in 1925. This raises an interesting question into which we must not enter now. Will the monetary policy of the future be influenced by the political forces more than in the past, using the word political to express the dominant social and economic influences in operation? In other words, are we likely to make our monetary machine more

2. On this point it is of great interest now to read Sir Josiah Stamp's recent reference to the wage level in Great Britain. "It is so resistant to change that we are beginning to regard it as a fixed level. We say that everything else must be adjusted around that level. So long as you have marked changes in the value of money and the prices of commodities you are bound to be in difficulties with a fixed set of costs or a fixed financial structure; and in our financial structure we have certain very fixed things, the two principals of which are:—Firstly, the unionised wage level; secondly, a very large amount of debentures and other fixed debts. There is a third, a very large internal debt." (*The Journal of the Academy of Political Science*, June, 1932).

adjustable than it has been in the past? This, I think, will be one of the lessons of the great depression and of Britain's failure to bend her own economic structure to the monetary policy she adopted after the war. So the complaint of a well-known business man in Melbourne the other day that business men had now to take cognisance of monetary policy is well founded. A rigid economic structure and a changing unit of money are incompatible in the long run. Unless the business man can devise some means of reducing the rigidity of the structure, there is no alternative to monetary policy as the means of making adjustment to rapid price changes.

If this monetary policy could be operated in a closed system, and could take the form of a mere alteration of the amount of currency it would present few difficulties. Some plan of stabilisation of the general price level would then be possible by the simple expedient of varying the supply of currency according to changes in the value of money as determined by an index number of prices. Consider for example Marshall's suggestion that "a Government Department could buy Consols for currency whenever £1 was worth more than a unit of purchasing money, and would sell Consols for currency whenever it was worth less". Marshall did not advocate this proposal, though he stated his belief that it would give "more stability to our foreign trade than our present currency".³ Over long periods of time these and other plans, such as Fisher's proposal for stabilising the dollar, would undoubtedly reduce the fluctuations in the secular movements in the value of money. They would not, however, deal at all fully with the many causes of maladjustment in the economic system, such as the over-production of certain commodities, the varying rate of investment as compared with savings, and differences between the long and short term rates of interest. All these causes of maladjustment are in force at the moment, and to use a phrase pleasing to the critic of monetary theorists, we cannot expect a monetary nostrum to remedy the present situation. This would be true in a close economic system; it is even more true in the international system as we know it to-day. Whilst, therefore, the objective of monetary policy is clearly to raise the present price level, and later to stabilise it at some point not yet clearly defined, we must not assume that the depreciation of sterling and the ultimate stabilisation of the sterling exchange in terms of gold or some common international currency, will automatically bring

3. *Memorials of Alfred Marshall*, page 207.

us within reach of this objective. Under certain conditions indeed the depreciation of sterling might cause greater confusion than now exists and retard the process of economic recovery.

III

It was not until the sterling exchange showed a rapid improvement in March that the problem of "stabilising" the rate became one of great immediate importance. In fact, however, it was a problem of preventing the rate from rising too rapidly under the stimulus of a flow of short term funds towards London. These funds were turned in the direction of London because the British Budget was balanced, the American situation was deteriorating rapidly under the Congressional propaganda for inflation, and the natural return of funds that had left during the August crisis of 1931. In addition, the trade returns were improving as a result of the expansion of exports and the restriction of imports under the influence of a depreciated exchange. In introducing the proposal for the Exchange Equalisation Fund, the Chancellor of the Exchequer remarked that whilst the flow of liquid capital from abroad "was flattering to their vanity, it was sometimes a serious embarrassment to their trade, and moreover, so far as it did not represent genuine improvement in the balance of trade, it was apt to give rise to dangerous developments". In reality the Government was apparently desirous of preventing sterling from appreciating, and it could not take effective action without providing funds in the Treasury and the Bank of England to purchase surplus exchange with a view to holding down the rate. The object of the Exchange Equalisation Fund of £150m., plus £25m. from the old exchange account, was indeed threefold. In the first place, it was designed to prevent what the Financial Secretary to the Treasury called "sudden and unmanageable lurches from one side to the other". Secondly, it was necessary to enable the accounts of the Bank of England's Issue Department to balance when it varied its gold holdings. The gold held against notes is still valued at the old par, while foreign exchange held is valued at the current market price. Thirdly, there was a possible loss by the Bank of England on account of the foreign credits it had raised in August before Britain went off the gold standard. This loss was to be made good to the extent of £8m.

The Treasury is to control the funds but the funds will be used in part to strengthen the Bank of England in its exchange

operations. The Bank has apparently from time to time varied its holdings of foreign exchange, but there is surprisingly little information concerning these operations of the Bank or of the Treasury. The Bank return, however, shows some unusual changes in the assets of the Issue Department. "Other securities" rose rapidly in April and were over £60m. during May and the early part of June. This coincided with the period of the appreciation of sterling or its maintenance at a figure round about \$3.67. Apparently the Bank was increasing its holdings of foreign exchange for the purpose of preventing the rate from rising. In July, however, the Bank had reduced its holdings of other securities in the Issue Department to about £20m., and at the last return (August 4th) they stood at only £22m. This decline in the holdings of other securities coincided with the steady depreciation of sterling to its present level (\$3.46). The Bank had thus steadied the fall of sterling by selling its holdings of foreign exchange. The causes of this fall are a little obscure. The most important probably are (1) the natural seasonal weakness of sterling at this time of the year, (2) the flow of funds towards America with the return of confidence there and the very low values of stock exchange securities, and (3) the current notion that the policy of the British currency authorities is to stabilise sterling at about \$3.40. Of these the second is probably the most important. Not only are U.S.A. funds being repatriated, but new short term capital is being invested in the United States.

IV

Perhaps the most interesting question regarding the stabilisation of sterling is the rate at which the relation of sterling to gold should be fixed in the future. I assume that Britain will return to the gold standard and that the United States will not be forced off the gold standard. I shall, therefore, speak of the sterling dollar exchange rate when referring to the rate for stabilisation. Post-war experience has familiarised us with the idea of purchasing power parity. Theoretically, we would say that the rate of exchange, sterling on the dollar, should be such that the internal purchasing power of the £ is equal to its external purchasing power when converted into dollars at the current rate. That is to say, it is a rate determined by the ratio of American prices to British prices. In arriving at such a rate, however, we have to consider the difficult problem of comparing British and American prices together with possible changes in

the tariffs and the real ratio of international exchange between the two countries. If a wide difference developed between wholesale prices as measured by the Board of Trade Index in Great Britain and the Bureau of Labour Index in the United States, we could be reasonably certain that purchasing power parity would be away from the old parity of \$4.86. We cannot, however, be quite certain that this movement was precisely determined by the ratio of the two price levels.⁴

If the doctrine of purchasing power parity is considered in relation to the prosperity of the export trades of a country, it will be observed that the rate of exchange has, in fact, a vital influence in equating internal costs to selling prices. Indeed this is only another way of stating the purchasing power parity theory of the exchanges. It is ultimately through the trade returns that the rate of exchange will be fixed. Short period movements resulting from the flow of capital will continue to occur, but ultimately the balance of trade will fix the rate. This in turn is largely determined by the prosperity of the export trades. That Great Britain had experienced considerable difficulties in maintaining her export trades with exchange at parity with gold is now an established fact. The full measure of these difficulties are perhaps best shown in Table 4 below, taken from a paper read by Mr. Snow before the Royal Statistical Society. The steady decline in the "favourable" balance in Class III shows the weakness of the position.

If parity of exchange is far removed from purchasing power parity the currency will be over-valued at parity, and exports will languish while imports are encouraged. Eventually this will drive the country to expedients to maintain parity or to a depreciation of its currency. We may, therefore, think of the exchange rate as the point at which the exports can be maintained, with imports at a level consistent with the current standard of living. This is perhaps the inner meaning of a statement recently made by Sir Josiah Stamp when referring to the opinions of leading economists regarding the problem of sterling. "May I express an opinion for them," he stated, "that what they are aiming at first of all is not to find first the level of exchange, but to find that price level in our country which would enable the country with its various rigid factors to function to its maximum possibilities—a price level which will not involve increases in money wages, but which would enable business to

4. On this point the discussion in Keynes' *Treatise of Money*, Chapter V., is of interest.

function profitably." The ultimate test will, of course, be the profitability of the export trades, or of trades competing with imports. A decline in either of these trades involves a heavy loss of national income with much unemployment. In so far as these trades can be maintained through exchange depreciation, the problem is to determine at what level the exchange should be fixed in order to preserve a reasonable balance between internal costs and selling prices.

I have made an attempt, perhaps on somewhat unorthodox lines, to ascertain this rate. Taking 1924 as base it is possible to work out the exchange on the following assumptions. The Board of Trade Index Number of industrial products (excluding foodstuffs) can be taken as the price level for industry. Cost of raw materials may be measured through *The Economist* Index Number, and general costs through the wage rate as determined by Bowley's index number of wages. In the second quarter of 1931, while England was still on parity with gold, these index numbers on 1924 as base were as follows:—

Industrial Products (Board of Trade)	60.24
Raw Material Prices (<i>Economist</i>)	49.68
Wages (Bowley)	96.92

Let x be the percentage ratio of the required price level of industrial products to the existing price level, when the new price level is determined by exchange depreciation. Raw materials would also be raised in the same proportion. If we assume that raw materials and wages enter equally into costs we get the following conclusion:—

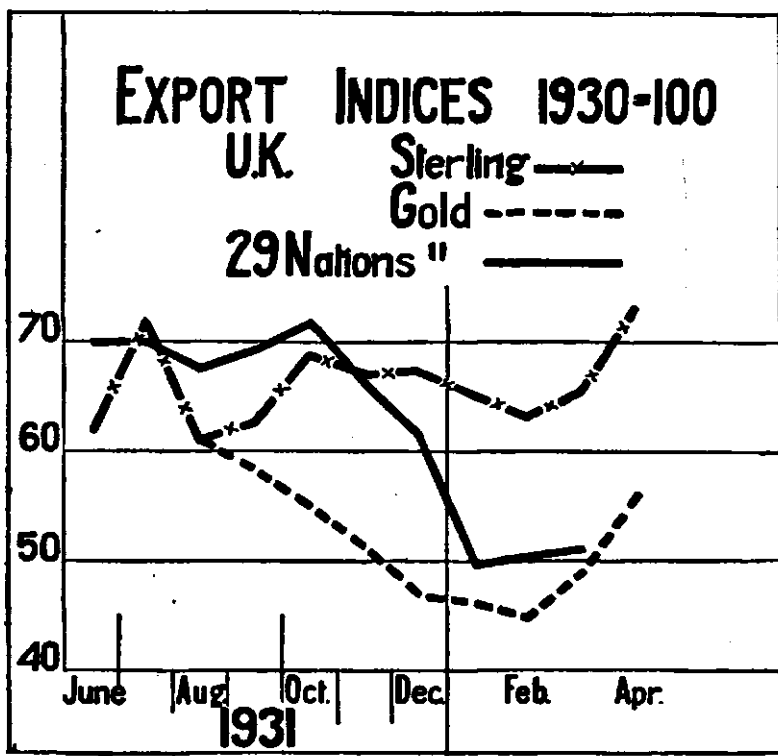
$$60.24x = \frac{96.92 + 49.68x}{2}$$

x is then equal to 1.37.

During 1924 the exchange rate sterling on the dollar was \$4.42. Applying the value of x to this rate we get a new rate of \$3.23.

If we assume that raw materials are double the importance of wages in determining costs, the new rate of exchange would work out at \$3.71. This would give us an upper limit of \$3.71 and a lower limit of \$3.23 between which the real purchasing power parity would lie. Somewhere between these two limits the exchange could be fixed with a reasonable certainty that the export industries could be maintained in a healthy condi-

tion.⁵ I have made other calculations, using the price index numbers of the first four months of 1932. This gives me a limit between \$3.14 and \$3.53. If we make the calculations on parity as the basis instead of the actual rate for 1924 the limits are \$3.46 and \$3.89, using the index numbers for the first four months of this year, and \$3.55 and \$4.08, using the index numbers for the second quarter of 1931.



V

A rate round about the purchasing power parity will not, of course, give a much needed increase in sterling prices. The parity point in any case may vary if gold prices continue to fall. Indeed, the slump in American prices in the past six months has probably caused the British authorities to revise their ideas of purchasing power parity. It would be a mistake, however, for Great Britain to confine her monetary policy to an effort at

5. Several references to the real purchasing power parity rate have been made in recent months. Mr. Keynes put it between \$3.40 and \$3.80 (*Lloyds Bank Review*, April, 1932), Mr. Hawtrey at about \$3 (*Journal of the Royal Institute of International Affairs*, March, 1932, p. 220), and Professor Gregory, from \$3.50 to \$4.00 (*The Gold Standard*, p. 99).

depreciating her currency, *pari passu*, with a fall in gold prices. An even greater mistake would be to attempt to under-value her currency by a substantial amount with a view to stimulating her export trades. I have shown in the accompanying chart the movements in the value of the export trade of 29 countries, together with movements in the British export trade valued in sterling, and in dollars at the ruling rates of exchange. It is clear from the chart that some improvement in British trade has occurred relative to world trade, even when the value of British exports has been converted into dollars at the ruling rate of exchange. This suggests that the British export trade received a stimulus that might not be maintained, as costs rise relatively to selling prices, or as other countries adjust their own costs to their selling prices. There are two sources of economic loss in a seriously undervalued currency. In the first place, British export industries are stimulated, and the industries of other countries, especially gold standard countries, are disorganised temporarily by the competition of British goods. There is a consequent loss to the gold standard countries whose industries may actually be more efficient than the British industries. With an adjustment of costs to prices in both countries, these more efficient industries in the gold standard countries will eventually defeat those British industries that have received temporary and artificial stimulus from the under-valued currency. The consequent disorganisation of industry in Great Britain is the second source of economic loss. Actually the losses may be much greater than these in a period of acute depression, like the present, when confidence is at a low ebb. British policy must, therefore, be designed to stimulate activity abroad contemporaneously with her own internal improvement caused in the first instance by the depreciation of her exchange.

She has also to consider the position of her debtors. There are conflicting estimates of the changes in the amount of interest received from abroad. The Board of Trade gives the net income from overseas investment as £250m. in 1929, £220m. in 1930, and £165m. in 1931.⁶ Clearly, the fall in income from investments has been one of the chief causes of the adverse balance of payment on income account. A monetary policy that attempts to

6. A different estimate is given by Sir Robert Kindersley in the *Economic Journal* for June, 1932. His figures are £231m. for 1929, £209m. for 1930, £170m. for 1931. There are some important differences between his method of estimating the income and the method of the Board of Trade. The fixed interest-bearing securities, such as foreign and colonial Government stocks, have declined very little. No decline at all has taken place in the fixed interest-bearing stocks in the British Empire, but the ability of some British and Empire countries to meet their payments would be jeopardised by unfavourable export seasons at the present level of prices.

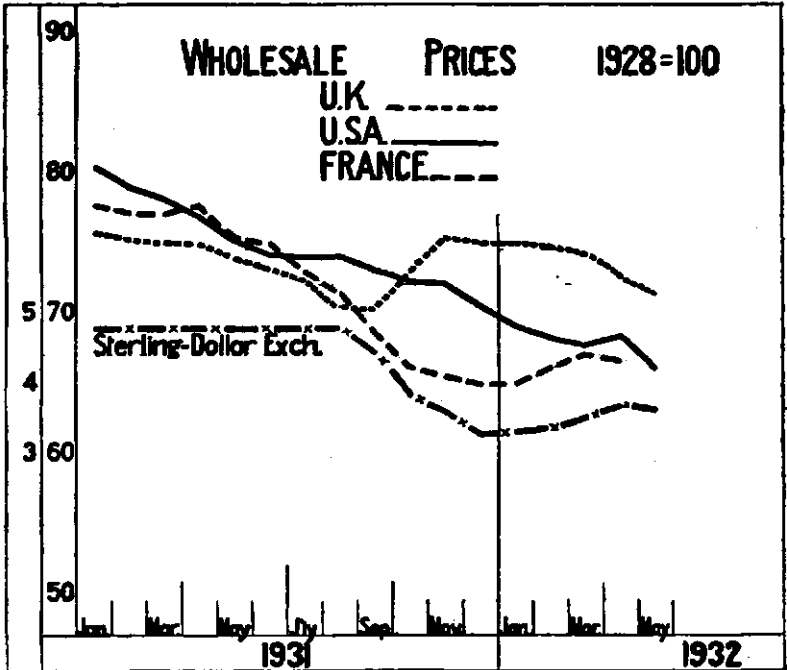
stabilise sterling prices at a low level will impose a serious burden upon Britain's debtors, and render impossible a recovery of British income from investments to the 1929 level. It may be doubted whether sterling prices can be raised sufficiently to bring about this recovery in any case. It is quite certain that the prevailing level of sterling prices, even with an exchange depreciation of 30%, will make it impossible. A rise in gold prices should not, therefore, be made an excuse for an appreciation of sterling in terms of gold. In other words, the exchange cannot be managed in the immediate future on any traditional theory of the balance of payments. It may be doubted, however, whether a rise in gold prices would be followed immediately by any improvement in sterling exchange. The goods that would benefit most by such a rise are the raw materials and foodstuffs that make up the bulk of British imports. As these would increase in value the cost of imports to Britain would increase, and the pressure on exchange would rather be in the direction of depreciation. On the whole, Britain's debtors would benefit because the sterling prices of their exports (mainly raw materials and foodstuffs) would improve, and the burden of their external debts would be correspondingly lightened. Should a favourable flow of funds on investment account exert an influence towards an appreciation of sterling this benefit would be lost under a so-called natural exchange rate. It is, therefore, important for Britain to hold down her exchange rate on gold in order that her debtors may profit by any rise in gold prices. Provided such a rise is taking place the depreciation of sterling cannot be responsible for any of the difficulties mentioned above in the discussion of a heavily under-valued currency. The problem arises, therefore, as to what action Britain should take in order to stimulate recovery of gold prices while she is maintaining a depreciated exchange.

VI.

The relation of the sterling dollar exchange to British, French, and American prices is shown in the accompanying chart.

It will be observed that sterling prices rose when sterling was depreciating in terms of gold, even though gold prices in both France and the United States fell. Later the improvement in the sterling exchange was accompanied by relative stability of sterling prices followed by a decline. The rise in

French prices during the first quarter of the year is not in keeping with what one would have expected. A study of the local trade and tariff restrictions may explain the movement. The French index number is more comparable with *The Economist* than the Board of Trade, which is the basis of the sterling index number as given on the chart. This makes the movement all the more inexplicable. The American index number used is the Bureau of Labour, which is comparable with the Board of Trade

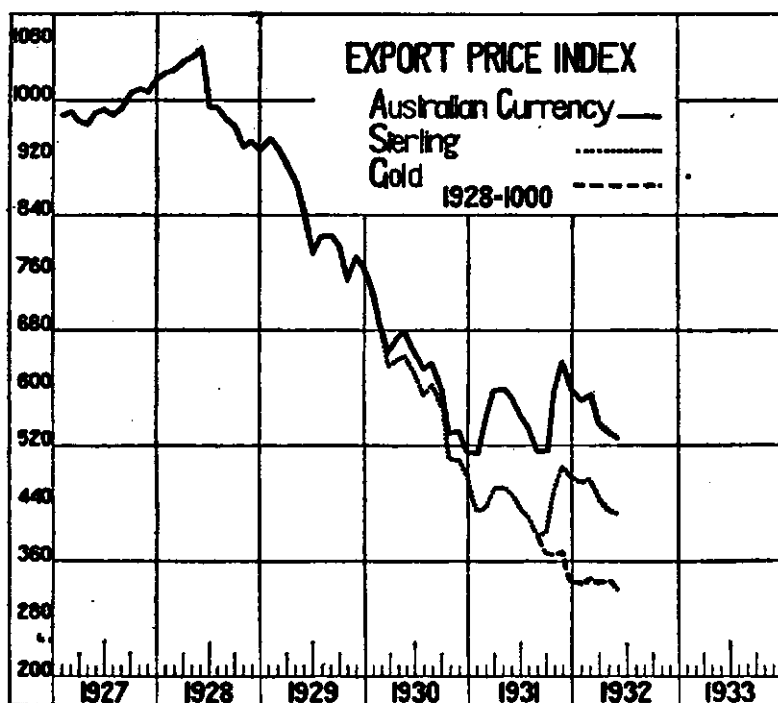


index in Great Britain. The actual figures are given at the close of the paper.

Quite the most serious feature of the chart is, of course, the continued downward movement of gold prices in the United States. While this movement continued the depreciation of sterling could not bring much relief to either British or overseas countries whose currencies are linked with sterling. Great Britain must, therefore, endeavour to devise a policy under which she will reap all the benefits of exchange depreciation through a rise in gold prices. What policy can she pursue? A good deal has been said on this matter in recent weeks, and I have nothing new to add. I suggest that pending an international agreement among central banks, Great Britain should pursue vigorously

her present policy of low interest rates, that she should endeavour to have a similar policy adopted in as wide an area as possible, and that concerted action should be taken by her to restore international lending. Short term interest rates are low, and with the conversion operation in London the long term rate has been revised downwards. But a good deal has yet to be done to adjust the long term rate of interest to the short term rate in all countries. This can be done only by definite action on the part of the banks to reduce deposit rates, and by action on the part of the central bank to increase its holdings of Government securities, preferably by an expansion of central bank credit. There is evidence in the Bank of England return that Britain has been operating in this way. There has been a steady increase in the Government securities held by the Bank of England. At the date of the last return they stood at £76m., compared with about £65m. early in July, and £50m. when Britain went off the gold standard. At the same time there has been an increase in bankers' deposits with the Bank of England, a movement that would naturally be associated with the purchase of securities by the central bank. Bankers' balances with the Bank of England now stand at £85m., compared with about £55m. when Britain went off the gold standard. The policy of purchasing Government securities might, however, be more rigorously pursued, somewhat on the lines of the recent operations carried out by the Federal Reserve Banks in the United States. If Britain is able to secure the adoption of such a policy by a number of other countries whose currencies are linked with sterling, an increase in economic activity leading to an improvement in prices will take place in these countries. This is the real reason why some authorities have advocated the creation of a sterling bloc, recognising British leadership in international finance. Such a group might contain most of the Empire countries, together with many European countries, Japan and even some South American countries that prefer to stabilise their currencies in relation to sterling, rather than to the dollar or the franc. But the wider the area the more likely is the policy to prove helpful to Britain herself and to the gold standard countries. The great difficulty would, of course, be a possible shift of short term funds from London to New York or Paris, should these two centres again attract short term investors. This might depress the sterling exchange to an unduly low point, bringing the evils of under-valuation already discussed. Against this possibility must be set the fact that a stimulation of investment in a wide area, such as a sterling bloc established on the

lines suggested, would increase gold prices and provide a basis for low interest rates and general expansion in the gold standard countries. In this event, the attractiveness of gold standard countries for short term investments would not be so great relative to the attractiveness of the sterling bloc. Moreover, the objective of the policy would be to shift funds from short term to long term investments, and thus to remove the menace of



short term money that has exerted such a devastating influence upon the international money markets in the past twelve months. A policy of this nature would be positive as compared with the policy of mere exchange depreciation. The gold standard countries would themselves be assisted by the policy, and the basis could then be laid for international action, certainly between Great Britain and the United States.

VII

Clearly Australia and the British Dominions in general would benefit by the stabilisation of sterling at a low rate if at the same time the policy of expansion of investment was being pursued. The chart on export prices for Australia shows clearly the effect upon the value of our exports, of the

depreciation of sterling and the further depreciation of the Australian £. Gold prices are approximately 68% below the level of 1928, and sterling prices approximately 57%. Despite an expansion of the volume of exports of over 25% since the beginning of the crisis, the total sterling value of the exports of merchandise for the year ending June 30th last was approximately £78m., compared with over £140m. before the depression. Our imports have been reduced from approximately £144m. to £44m., and this low level must be observed unless we have a substantial recovery in export prices. The volume of exports in 1931-32 cannot be maintained in a normal season, so that some rise in prices is required if exports are to be kept at a sterling value of about £80m. The stabilisation of sterling at a low level with a subsequent rise in both gold and sterling prices is thus a matter of vital importance to Australia, as it is to most other British countries. The act of stabilising at a low rate will be welcomed by most people in Australia, even by the many people who have raised their voice against a supposed artificial rate of exchange, Australia on London. It will readily be accepted that a depreciation of the British £ in relation to gold of say 30%, giving a rate of approximately \$3.40, is an act of necessity for Great Britain. Such a rate will be regarded as the normal rate, and most people will observe that it raises the value of Australian exports and reduces the burden of the external debt. Britain's action, however, is based upon the position of her export trades and the necessity for maintaining the internal price level. In a word, monetary management is to be adopted instead of cost reduction as the method of adjustment to the new position. It is a curious commentary upon our knowledge of the elementary principles of economics and banking theory that we can welcome the adoption of such a fundamental principle in Great Britain, whilst deploring its extension to Australia. This is not the place to argue the case for and against a high exchange rate in Australia, but I think I may be permitted to draw attention to the fact that a depreciation of 30% of sterling on gold should under present conditions logically be followed by a depreciation of Australian currency on sterling of a substantial amount, certainly not less than the present exchange rate.

D. B. COPLAND.

*The University of Melbourne,
August 5, 1932.*

TABLE I

*Exports of Great Britain and 29 Nations*Sources: London and Cambridge Economic Service and *Economist*

Period.	Exports of Great Britain. £m.	Dollar-Sterling Exchange.	Exports of Great Britain. \$m.	Exports of Great Britain. Av. 1930 = 100 £.	Exports of Great Britain. Av. 1930 = 100. \$.	Exports of 29 Nations. Aver. 1930 = 100. \$.
Average 1930	47.54	4.8623	47.50	100	100	100
1931						
June	29.4	4.865	29.39	61.84	61.87	70.0
July	34.3	.857	34.23	72.15	72.06	70.0
Aug.	29.1	.857	29.04	61.21	61.14	67.5
Sept.	29.8	.542	27.81	62.68	58.55	69.2
Oct.	32.8	3.886	26.19	68.99	55.14	69.2
Nov.	31.9	.719	24.38	67.10	51.33	66.3
Dec.	32.1	.772	22.24	67.52	46.82	61.5
1932						
Jan.	31.1	3.430	21.92	65.42	46.15	49.5
Feb.	30.0	.459	21.32	63.10	44.88	50.5
March	31.2	.634	23.30	65.63	49.05	51.0
April	34.8	.752	26.83	73.20	56.48	

TABLE II

Wholesale Prices

United Kingdom

United States

France

1928 = 100

Sources: *Economist*

	United Kingdom (Board of Trade).	United States (Bureau of Labour).	France (<i>Economist</i>)	Sterling Dollar Exchange (av. daily)
1931				
January	76.2	80.9	78.1	4.86
February	75.7	79.4	77.7	4.86
March	75.5	78.6	77.7	4.86
April	75.3	77.4	78.1	4.86
May	74.4	75.7	75.9	4.86
June	73.6	74.6	75.4	4.87
July	72.8	74.4	73.6	4.86
August	70.9	74.6	71.9	4.86
September	70.7	73.6	69.1	4.54
October	74.4	72.7	66.8	3.89
November	75.8	72.6	65.9	3.72
December	75.4	71.0	65.3	3.37
1932				
January	75.4	69.6	65.4	3.43
February	75.1	68.6	66.5	3.46
March	74.6	68.2	67.5	3.63
April	73.0	68.8	67.0	3.76
May	71.8	66.4	66.0	3.70

TABLE III
Australian Export Price Index
 1928 = 1000

Date.	Index Australian Currency.	Index Sterling.	Index Gold Values.
1931			
January	511	429	
February	560	433	
March	596	461	with Sterling
April	597	462	Values.
May	584	452	
June	558	432	Identical
July	545	422	
August	512	396	
September	514	398	373
October	596	461	369
November	637	492	374
December	595	477	382
1932			
January	583	469	331
February	589	474	387
March	553	445	333
April	538	433	334
May	532	428	323

TABLE IV
British Trade, Excess of Commodity Imports over Exports
 £ million

	Class I. (Food-stuffs).	Class II. (Raw Materials)	Class III. (Manufactured All Articles. Articles).	
1924	484	217	—353	336
1925	483	250	—328	393
1926	453	271	—250	463
1927	460	204	—266	386
1928	449	198	—287	352
1929	454	206	—268	382
1930	403	148	—157	386
1931	361	101	—46	409

THE COURSE OF WORLD PRICES

- I. What Prices?
- II. Wholesale Prices.
- III. Export Prices.
- IV. Index Numbers Generally.
- V. Wool and Wheat.
- VI. Prices and Costs.

This paper attempts only to give in convenient form a few data of the main price movements in recent years and months in different countries, with some comments on the comparability and significance of the figures. A simple statement of the facts of the decline in prices is desirable as a background for the discussion of any aspect of the world depression. It is doubtful, however, whether a simple statement is possible.

I

In relation to business activity, the important thing is the relation of prices to costs. "Prices" in this connection should be the prices received by the producer. These prices are never satisfactorily measured. "Costs", so far as they depend on causes outside the industry concerned, depend on retail prices, wages and interest. These are not so difficult to measure as production prices, but the obstacles have been great enough to prevent a full and accurate measure in any country. The retail index for food or for food-and-rent is generally some guide to costs and, under Australian methods of adjustment of wages (and, even at times, interest) to retail prices of food and housing, an index of the latter is a moderately satisfactory index of the external factors in costs. This index for Australia has a comparatively high degree of accuracy. It appears to measure, also, with fair accuracy, at least in the long run, the movement in the retail prices of other commodities besides food and housing. It is closely related to wage movements. It may, therefore, be accepted as a fairly good measure of costs external to the industry. For other countries the choice is between an index of food prices and one covering all household expenditure. The measurement of food prices is generally good but that of other household expenditure is uncertain. In some important countries, it is certainly very rough. We are reduced then to retail food prices for a general comparison, with the important reservation that wages in most countries have nothing

like the same close connection with retail prices that they have in Australia.

For "costs" then we have the index of food prices, which is inadequate, but is at least measured with fair accuracy on uniform lines in most countries. For "prices", we require production prices—the prices received by producers—and we have not got them.

Production prices for foodstuffs and raw material are easily obtained. It is with manufactured goods that the difficulty occurs, and there are no figures which make any pretence of being comparable for different countries. There are two measures of price which have some bearing on the matter—the so-called index of wholesale prices, and the index of export prices. These may be briefly considered.

II

This is not the place for a detailed exposition of the vices of the wholesale price index number. It is one of the major handicaps of economic science that a single term should cover measures of prices so different in their field, and in many cases so loosely constructed, as the different index numbers of wholesale prices. Two of the best known index numbers may be instanced, which purport to measure the same prices for the same country. From 1925 to the beginning of 1930, the British Board of Trade shows a fall in wholesale prices of 11 per cent.; *The Economist* index number a fall of 23 per cent. This appalling discrepancy is not cited in any spirit of pharisaical rectitude. Australia must confess itself the chief of sinners. I hope, however, some fruits of repentance may manifest themselves within the next twelve months.

The deficiencies of the wholesale price index, as a measure of prices obtained by producers, fall under two main heads.

- (1) Some index numbers are almost confined to foodstuffs and raw material; others include as many manufactured and semi-manufactured articles as possible. *The Economist* and "Board of Trade" index numbers, quoted above, illustrate the two tendencies; and neither are extreme cases. Most countries rely on one index number, and it is necessary to have a clear picture of the content of each index number before making comparisons. A fall of 5 per cent. recorded in one country may signify a greater fall in prices than 10 per cent. recorded in another.

- (2) The basis of most wholesale price index numbers is consumption, where any basis is acknowledged. The prices recorded are wholesale prices to the consumer. Hence on the one side they neglect, or under-weight, production for export, and on the other they are swollen by taxes and duties of customs and excise. For economic recovery we need higher prices relative to costs. Raising prices by taxation may in some cases help to that end—where, for example, a customs duty or sales tax causes an indirect reduction in real wages. But that only happens under special conditions with very rigid nominal wages. Prices may be raised by customs or excise duties, without any increase in price to the producer, but, on the other hand, with an increase in costs. For example, the tax on tea in Australia increases wholesale prices, but it also increases retail prices, and wages. No producer receives a better price for his production, and all producers' costs are raised. In a world of falling prices, Country A may keep the index of wholesale prices steady by such taxation, while Country B without such taxation, shows a fall of 10 per cent. Yet producers' prices relative to costs will have weathered the storm better in B than in A. Even if without actual taxation, the home price of an export commodity is sustained by control of the home-market, it may well be that over the whole community the increase in costs outweighs the benefit of higher prices for some production. It follows that no inference from the movement of the wholesale price index can be made without a full knowledge of how these prices have been affected by taxation and marketing control.

III

An index of export prices, in conjunction with an index of import prices, would give the best measure of the direct effect of world price movements on the economy of a country. Their importance would vary with the importance of external trade; even with the countries most dependent on external trade, export production is not more than a quarter of total production of goods and services. So that at the best the picture they give of production prices is very incomplete.

Export prices can be computed with considerable accuracy for countries exporting only foodstuffs and raw material, such as Australia, New Zealand, and the Argentine. For other countries their accuracy is dubious. For all countries, and particu-

larly for countries like Australia, index numbers of import prices are rough, and may be too uncertain for use.

IV

To those deficiencies in respect to wholesale prices, export prices and import prices, may be added the limitations of index numbers generally. Beside the possible technical defects in the construction of the index and in the collection of significant data, there is the general impossibility of constructing any accurate price index where there is any great change in the relative importance of the commodities under survey. No index number can take into proper account the consumption of petrol in comparison with pre-war years. In general, index numbers of wholesale prices, based on consumption, will not be seriously affected. But exports and imports are subject to greater changes in a comparatively short period, and the corresponding index numbers cannot be used safely without inquiry into changes that may have taken place in the relative importance of the commodities exported and imported. For example, an export index number for Australia, based on export quantities 30 years ago, when gold made one-third of total exports, would be very different now from one based on post-war exports. The change in the make-up of imports in the last three years is so great that a comparison over recent years would be dubious, even if the other difficulties in an import price index could be overcome.

With these reminders of the dangers of inference from index-numbers, a selected sample may be offered for consideration in the three tables, I, II, and III. The countries are grouped, as you see, into "sterling countries", "gold countries", and other. "Sterling countries" is meant to indicate countries with stable currencies tied to sterling by a controlled and controllable ratio. "Gold countries" are those whose currencies are still nominally at par with gold. "Other" countries are nondescript, including Canada, whose love for gold is tempered by a certain controlled distance, and countries like Spain and the Argentine, whose currencies are both inflated and unstable. The same countries are shown for Wholesale prices and Retail food prices. For export prices, the difficulty of getting recent figures has limited the selection.

(The data are taken for the most part from publications of the League of Nations with reference to original sources for some of the later figures. The two sets of figures are not always in perfect harmony but the discrepancies are small and immaterial for the present purpose).

TABLE I
Wholesale Price Index Numbers
Base 1913 = 100

Period	Sterling Countries						Gold Countries						Other			
	Great Britain		British India	Denmark	New Zealand	Australia	United States	France	Holland	Switzerland	Germany	South Africa	Canada	Japan	Argentina	Spain
	Board of Trade	Economist														
1925	148	155	179	210	161	170	148	141	155	162	142	128	160	202	147	188
1928	140	135	164	158	147	165	140	131	149	145	140	120	151	171	130	167
1929	187	128	159	150	147	166	138	127	142	141	137	116	149	166	128	171
1930	I	131	119	147	143	147	134	(119)	131	136	132	107	149	152	125	172
	VII	119	107	129	129	144	120	(115)	115	129	125	100	143	134	122	170
1931	I	107	91	110	118	140	110	(106)	105	115	115	102	120	120	116	173
	IV	106	90	110	115	134	105	(106)	102	112	114	99	116	119	114	172
	VII	102	86	105	110	131	103	102	97	110	112	98	112	116	114	175
	X	104	90	108	113	131	101	93	89	106	107	99	110	111	123	175
1932	I	106	90	109	118	132	96	89	84	101	100	96	108	121	121	176
	IV	102	86	104	115	129	94	89	80	98	98	94	107	116	121	181
	V	101	83	100	114	129	92	89	79	96	97	—	106	114	120	177
	VI	98	81	97	113	128	92	86	78	95	96	—	104	111	—	174
Percentage fall to June, 1932																
(i) From 1925	34	48	46	46	20	25	38	(a)	50	41	32	(b)	35	45	19	7
(ii) From Jan., 1930	25	32	34	21	12	19	32	(28)	40	30	27	12	30	27	4	+1
(iii) From Jan., 1931	8	10	12	4	8	4	17	(19)	26	17	17	8	18	7	+3	+1

(a) 1926. The French figures in brackets are interpolated. (b) To April, 1932. (c) To May, 1932.

TABLE II
Retail Food Price Index Numbers
Base 1914 = 100

Period		Sterling Countries					Gold Countries					Other			
		Great Britain	British India	Denmark	New Zealand	Australia	United States	France	Holland	Switzerland	Germany	South Africa	Canada	Japan	Spain
			(a)				(a)	(b)							
1925	171	169	194	147	154	156	—	95	169	148	120	137	236	189
1928	157	161	150	148	155	149	111	91	157	152	117	148	202	176
1929	154	164	148	144	160	155	124	89	156	155	115	147	203	181
1930	I	154	163	145	143	153	152	124	89	155	150	112	154	194	182
	VII	144	153	137	140	147	141	122	82	152	146	109	143	169	180
1931	I	186	125	127	129	135	130	182	78	148	134	108	129	153	198
	IV	129	117	123	121	131	122	130	74	142	129	107	117	154	190
	VII	128	113	119	117	125	117	125	74	140	130	104	108	149	193
	X	130	118	120	119	124	117	116	73	138	123	103	104	145	200
1932	I	131	116	—	118	125	107	114	68	132	116	99	101	164	199
	IV	125	111	—	113	127	101	115	64	128	113	99	95	155	197
	V	123	111	—	112	125	99	114	64	126	113	98	91	155	184
	VI	125	111	116	111	123	98	111	63	125	113	96	90	151	179
Percentage fall to June, 1932															
	(i) From 1925 .. .	27	34	40	24	19	37	—	34	26	24	20	34	36	5
	(ii) From Jan., 1930	19	32	20	22	18	36	10	29	19	25	14	42	22	2
	(iii) From Jan., 1931	8	11	9	14	7	25	16	19	16	16	11	30	+1	10

(a) Gold Index.

(b) 1931-25 base.

TABLE III
Export Price Index Numbers
 1913 = 100

Period	Sterling Countries					Gold Countries.				Other.
	Great Britain	India	Denmark	New Zealand	Australia	U.S.A.	Switzerland	Germany	South Africa	Canada
1921	269	215	246	155	158	150	210	81	(a) 124	149
1925	184	158	212	173	189	144	162	133	120	145
1928	168	133	139	155	162	125	151	134	118	128
1929	159	128	149	148	139	125	150	132	116	130
1930	152	105	125	116	106	113	142	124	106	107
1931	136	—	—	90	89					
1932 (6 m.) . . .	128(b)	—	—	83	90					

(a) Including gold exports.

(b) Three months.

If the figures of these tables could be taken at their face value, one would expect to see some considerable difference in the movement of prices between sterling countries and gold countries. If they are taken in groups, some tentative inference may be allowed. If the fall in wholesale prices up to May, 1932, is taken from the year 1925, no difference appears. Both groups appear to have had about the same fall in prices. If January, 1930, is taken as the starting point, the fall in gold countries appears very much greater than in sterling countries, movement be taken only from January, 1931, the fall in gold countries appears very much greater than in sterling countries in which there was relative stability. In other words, the sterling countries are those in which prices fell most rapidly in the earlier part of the depression, and it was this greater fall in prices which forced them to seek relief by a measure of currency inflation. The same comparison holds for retail food prices, but here the difference between gold and sterling countries is, as might be expected, less marked, partly because there would be some lag in the movement of retail prices.

V

Let us now leave these very imperfect attempts at generalisation by means of index numbers, and come down to the common earth of actual prices of a few important commodities. Contemplation of their vagaries over the last sixty years should be entertaining at least, if not profitable.

The commodities selected are wool and wheat, as of paramount interest to Australia, and cotton, as a kindred raw material in which we are not yet deeply interested, or—shall we say?—involved. The prices taken are yearly averages:—

Wool. Average Australian export prices.

Wheat. Melbourne price on rails Williamstown.

Cotton. Liverpool spot price for American middling.

For 1932, prices are taken as at the end of June, since the average for the year is not to be guessed, and the wool price is based on Mr. Waites' index of wool-brokers' prices, as export prices are only valid if taken for the whole year. All prices are in sterling; the Australian prices for wool and wheat for the last two years have been turned into sterling at the current rate of exchange.

It is of interest to compare the run of these prices with one another and with the Statist index of wholesale prices for Great Britain. The Statist index is chosen because it is almost

COMMODITY PRICES FROM 1871

Scale in Pence
for
Wool and Cotton

Scale in Pence
for
Wheat

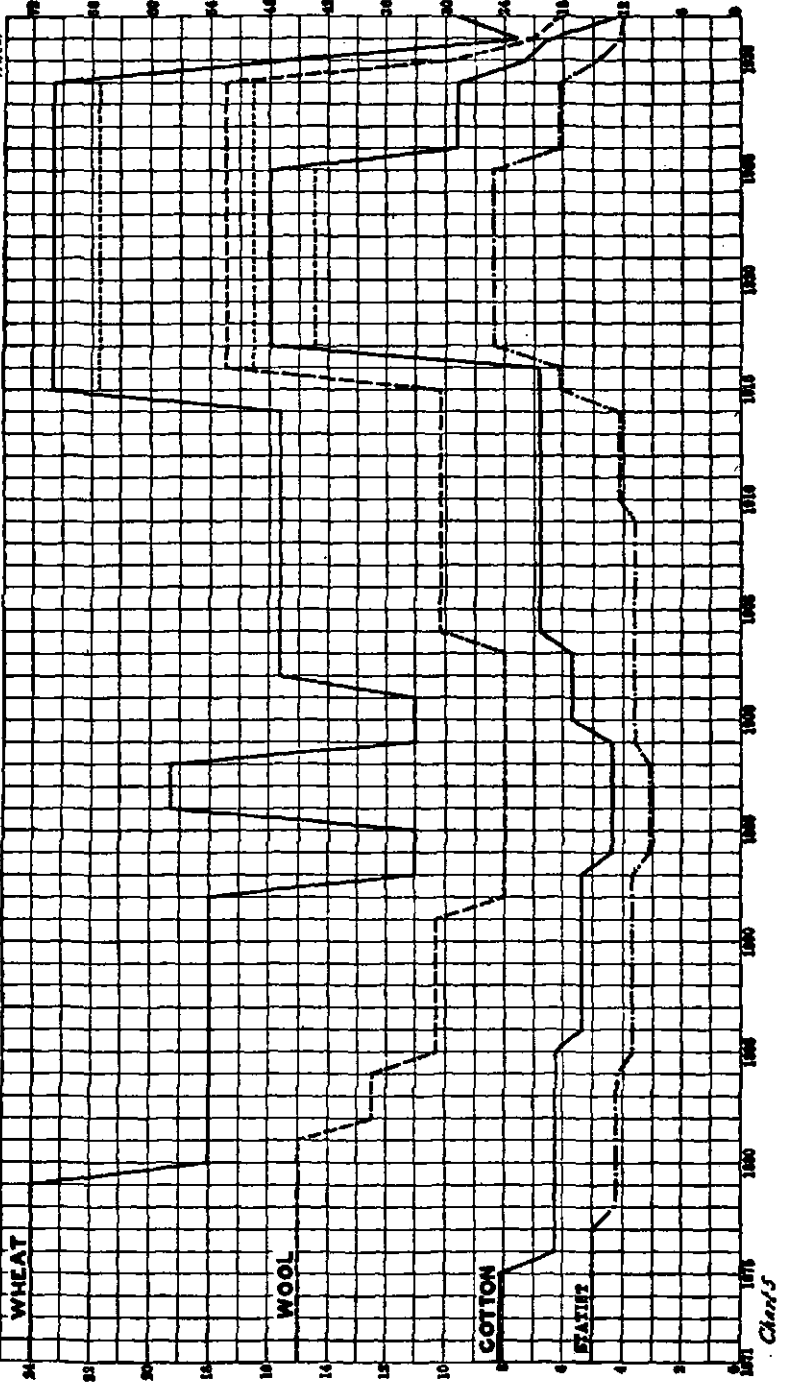


Chart 5

purely an index of foodstuffs and raw material which enter freely into international trade. Fresh meat and potatoes are the only commodities in it which have even partially a naturally sheltered market. The Statist index, therefore, gives a good picture of the general movement of world prices of foodstuffs and raw materials, of which wool, wheat and cotton are typical examples.

On charts 1, 2, 3, and 4 are graphed the prices of wool, wheat and cotton, as defined above, and the Statist index of wholesale prices from 1871. These detailed graphs, which are not here reproduced, are exciting but not very luminous. I have, therefore, reduced them to a simple diagrammatic form, which is shown superimposed on the yearly plottings. The horizontal lines show the actual average for the years specified. The periods of years covered by the horizontal lines were chosen by inspection as periods for which the price appeared to oscillate about a certain level, with no marked trend either way. (For wheat, however, the horizontal line from 1880 to 1892 requires some apology.) These simplified diagrams are then put together in chart 5, in which their relations can be studied. The great similarity between all four graphs, both in the time and degree of their movements, is very striking. The commodities chosen differ as widely in the conditions of their production as any outside the range of purely tropical agriculture. Yet their general form and that of wholesale prices generally are almost the same. The only marked divergence is in wheat, which in 1896 and 1897 soared suddenly to double the prices which preceded and followed. This sudden rise was the result of two bad harvests in succession, and it will be noticed that wheat throughout its career is more liable to rapid oscillations than wool or cotton.

The graph illustrates a well-known movement in the general course of prices. The high level shown in the 'seventies was not a brief episode. The Statist index had been at approximately the level shown at the beginning of the graph since the year 1853, with never more than 6 per cent divergence either way. For twenty-five years prices had been wonderfully stable. Then came the familiar long decline by steps to the low level in the 'nineties, followed by a similar rise. In the war and post-war boom prices got out of hand, and soared to unprecedented levels. Yet it will be noticed that the general level reached by wool and wheat and cotton was not greatly above that of the 'seventies, even when the prices are measured in sterling, which from 1919 to 1925 was inflated in terms of gold. If the same

prices are turned into gold, the general level reached, as shown by the broken horizontal lines, is very little above that of the 'seventies.

After the high level of 1917 to 1929 has come a fall again, but a very different fall from that of the 'nineties. Then prices were down to less than half of the level of the 'seventies, but it took fifteen or twenty years to do it. Now prices have halved in two years, even when expressed in sterling. Expressed in gold, many important commodities, including wool, are less than one-third of their price from 1917 to 1929. And still no end is clearly in sight, though one may be half guessed at, dim descried in the shadow of the next International Conference.

VI

It is of some interest to relate these prices of wool and wheat, expressed where necessary in Australian currency, with the price of food and housing, which has been referred to earlier as a fairly good index of Australian costs. If the price for any year is divided by the food and rent index, we get a measure of how much food and housing, and roughly how much of other commodities and services, can be got in exchange for a pound of wool or a bushel of wheat. In the following table the food and rent index for Sydney is divided into the price of wool and wheat, and the result reduced to an index with the average for the whole period 1871 to 1932 as base (= 100). This index may be called the index of the "real" price of wool and wheat. The periods taken are the same as those shown in the graphs, for which the price appeared to oscillate about a fairly definite level, with no marked trend either way.

If these index numbers of "real" price can be taken as roughly measuring the relation of nominal price to costs, they tell an interesting story of the varying lot of the wool grower and the wheat farmer. It will be observed that they cannot be compared horizontally. Each index is in relation to the average real price of its commodity over the whole period of sixty-two years, and indicates how the wool grower has fared relatively to his average over the period, and similarly for the wheat grower relatively to his average. No inference is to be drawn as to the relative inadequacy with which the merits of the wheat farmer and the wool grower have been recognised by the price received for his products. A few points may be noted. Both products began the period with real returns per unit of quantity 60 per cent. over the average for the period; both ended

WHEAT

WOOL

Period	Average Price per bus. d.	Food and Rent (1911 = 100)	"Real" Price Index (1871-1932 = 100)	Period	Average Price per lb. d.	Food and Rent (1911 = 100)	"Real" Price Index (1871-1932 = 100)
1871-79	72	91	162	1871-81	15	90	163
1880-92	54	95	116.....	1882-84	12.5	99	125
1893-95	33	80	88	1885-91	10.3	95	107
1896-98	58	76	154	}1892-1903	8.6	83	102
1899-1901	33	82	82				
1902-1914	47	97	98	1904-1915	10.2	101	99
1915-29	70	162	88	1916-1929	17.5	164	105
1930	46	174	54	1930	9.9	174	56
1931	29	155	38	1931	9.2	155	58
1932 (June)	36	148	50	1932 (June)	7.5	148	50

NOTES: The prices in the last two years differ from those used previously in that they are Australian and not sterling prices.

Neither here nor elsewhere in this paper has allowance been made for the addition to the export price of wool represented by Bawra dividends. Spread over the whole period, 1916-29, Bawra payments would have increased the average price by four-fifths of a penny.

with real returns just half the average. Wheat kept up rather better than wool, though with more oscillations, up to the end of the century. They then ran level up to the War, but in the period of high prices wool rose considerably above wheat. The fall was sudden in both cases, but in 1931 wheat reached an exceedingly low point, from which it recovered a little to a common low level with wool. The whole trend has been downward. Even in the post-war boom the real returns of the wool grower per unit of quantity were on the average only slightly above the pre-war period, and for the wheat grower they were not so good.

The magnitude of the change is to be noted. If the figures may be trusted, the inference is that wool and wheat now exchange for less than one-third of the quantity of other goods and services which they exchanged for sixty years ago. There has been no decline in the standard of living of the producers which would correspond with the decline in the "real" price of their products. Only a small part of the change can be ascribed to the present depression of these industries. The major part would have to be accounted for by an increase in efficiency relative to other production. An absolute increase of efficiency of this order would not be unlikely, but that the production of wool and wheat should have doubled in efficiency relative to all other production is so startling as to be incredible.

The subject cannot be further explored here, but one possible flaw in the argument may be referred to. The evidence is that over the last twenty years the cost of food and housing has been a fair rough measure of all retail prices. The relation of food and housing costs to other retail prices for the preceding forty years would require a good deal of investigation before any exact inferences could be safely made from the last table.

*Bureau of Census and Statistics,
Canberra.*

L. F. GIBLIN.

REPARATIONS AND WAR DEBTS

- I. Introduction.
- II. Reparations.
 - (i) The Facts of Reparations.
 - (ii) The Balfour Note.
 - (iii) The Dawes Plan.
 - (iv) The Young Plan.
 - (v) The German Situation After 1929.
- III. The War Debts.
 - (i) Facts of the Debts.
 - (ii) The War Debt Settlement.
- IV. A Feasible Settlement.
 - (i) Other Factors.
 - (ii) Credit Inflation.
 - (iii) Adjustments of the Debts.

I

It is doubly unfortunate that the problem of the Reparations and the Allied debts is so complicated by considerations of sentiment. The debts were the outcome of the fiercest passions of which men are capable, and these emotions still colour discussions concerning the debts, disguising the real nature of the issues involved and preventing a scientific attack upon their settlement. Neither France nor Germany can look upon the reparation question as a business proposition. "For France, receiving reparations is a sacred right. To Germany paying reparations is a moral iniquity." The problem is in all its essentials one of pure economics, and only upon that assumption is it capable of a solution that will be satisfactory and lasting. Legal claims and moral pretensions are both of little moment compared with the economic consequences of the debts and with the urgency of finding a remedy for these effects.

The facts of that urgency can be simply stated. The international economic system is based upon mutual indebtedness so delicately balanced that disturbance of either the capacity for meeting debts or the facilities for payment will seriously impair its efficiency. International indebtedness is never actually in balance; but, like the atmosphere with its varying pressures, it is always tending towards equilibrium. International indebtedness is no longer in approximate equilibrium, and this condition of unbalance or depression is by its effects on credit, threatening to destroy the existing world system. The Advisory Committee under the Young Plan clearly indicated the character of the emergency which has now to be faced. Their report states that transfers from one country to another on a scale so large

as to upset the balance of payments "can only accentuate the existing chaos and increase its difficulties, that the release of a debtor country from a burden of payments which it is unable to bear may merely have the effect of transferring that burden to a creditor country which, in its character as a debtor, it, in its turn, may be unable to bear." The Committee declared that the adjustment of reparations and war-debts to the existing troubled world situation is immediately necessary, and is the only way of re-establishing confidence, economic stability and real peace. Disagreement with this expert diagnosis is possible in part, but its main thesis would be unshaken. The problem is, therefore, that of restoring a real balance of indebtedness with all possible expedition.

II

(i) *The Facts of Reparations.* The title to reparations was written into the Treaty of Versailles in accordance with the view that Germany and her Allies were solely responsible for the war—a view that, as Sir John Fischer Williams said, "No one would now suggest as being true with reference to the particular people who are being asked to submit to grave hardship in order to make the payment." The leniency which was urged by America was inconsistent with her attitude concerning the War Debts in which she was directly interested as creditor. The net result was a comprehensive statement of the various kinds of damage for which Germany was held responsible, and a Commission upon which America was not represented was appointed to assess this damage and to arrange the mode of payment according to Germany's capacity. That Commission estimated the total damage at £6,600,000,000, gold; but it did not even consider whether Germany was able to pay such a sum. History has shown the truth of J. M. Keynes' contention that it was hopelessly impossible. The growing difficulties of transfer were merely the outward and visible sign of acute political differences which reached a climax at the Hague Conference of 1929. The Young Plan was drawn up by a committee of experts to overcome those difficulties, but, as events proved, this action was taken too late. The Governments concerned were then forced to fall back on the method of conference, under the humiliating condition that America, which was calling the tune, steadily refused the responsibility of paying the piper.

Part of the Reparation charge was immediately liquidated by the confiscation of German private property abroad—with the exception of the United States, where the property was released. The value of this private property was estimated at

£585,000,000. Then Germany surrendered Government property and railway material to the extent of £765,000,000. Finally, private property in Germany amounting to £325,000,000 was handed over in the form of ships, securities, etc. The cost of the occupation to 1923 and the sums collected during the Ruhr occupation total £300,000,000, deliveries of goods account for £375,000,000, cash payments under the Dawes and Young Plans to July, 1931, come to £475,000,000. The grand total of financial reparation already exacted amounts, therefore, to £2,825,000,000. An American estimate puts the minimum at £1,700,000,000 at 31st March, 1929.

(ii) *The Balfour Note*. In 1922, long before the Dawes Plan had been formulated, Great Britain made a sensational declaration of her policy in regard to reparations. The fundamental principle of the Balfour Note, as it was called, was that Britain expected to receive from her debtors only as much as she herself was obliged to pay to the United States. There is little doubt that this declaration was made in a spirit of generosity, and was due to Britain's anticipation that the strain on the international system caused by the debts would be insupportable. If Russia is excluded, British loans to the Allies with accrued interest totalled £1,300,000,000 as compared with the corresponding British debt to America of £945,000,000. In essence, therefore, Britain proposed:

- (a) To abandon her claims on Russia.
- (b) To surrender claims amounting to £355,000,000 for loans made to the Allies.
- (c) To remit reparation claims amounting to 22% of whatever Germany should pay.

It is probable that this pledge was a move in the direction of complete cancellation of the debts; but it was premature, and was bitterly resented in the United States. Both America and France interpreted the note as an attempt to throw upon those countries the moral responsibility for exacting reparations. In commenting upon this declaration, Sir Arthur Salter says, "On this occasion, as on several others, Great Britain undertook prematurely and independently a commitment which would only have been wise as part of a general scheme accepted by the other and calling for equal sacrifices from them." Moreover, it left Britain open to the charge that the offer was not disinterested, since she had attained her objectives from reparations, and that it was easy for her to surrender further payments in the hope of promoting the recovery of world trade on which she was vitally dependent.

From this point British and French policies concerning reparations began to diverge even more widely. Britain's far-sighted vision of the inevitable difficulties of transferring such vast sums across national frontiers, apparently lent support to the German determination to refuse any voluntary sanction to any scheme implemented by France alone. After the disastrous occupation of the Ruhr it was obvious that the only question was how long a show of Anglo-French unanimity could be maintained. A compromise had to be found, and it was found in procedure rather than in policy.

(iii) *The Dawes Plan.* The Dawes Committee in 1924 had drawn up a new scheme of payments which was built round the principle of annual payments increasing proportionately with increases in German prosperity. It provided collateral security by an elastic control of assigned revenues, and it entrusted the machinery of enforcement to a unified authority. It is important that the adjusting provisions of the Dawes Plan be clearly grasped. These were as follows:—(a) If the foreign exchange position endangered the gold value of the mark, foreign payments would be stopped on the authority of a Transfer Committee and the sums due invested in marks; and (b) if world prices fluctuated by more than 10 per cent. the gold payments were to be proportionately altered.

Despite grave doubts, both as to the legitimacy and as to the amount of continuous reparation payments, the Dawes Plan restored confidence in the international situation at once, and gave Europe a valuable respite for reconstructive effort. National finances of both debtor and creditor countries were stabilised, production was stimulated, and trade increased. Further, owing to the efforts of Briand and Stresemann, political conciliation was greatly advanced.

(iv) *The Young Plan.* Owing to the restoration of confidence through the Dawes Plan, there ensued a tremendous flow of investments to Germany. "This sudden influx of capital," says Salter, "made early payments too easy as it made later payments too difficult." In 1925-1929 the net import of capital totalled £750,000,000, a sum that exceeded by 50 per cent. the total reparation payments up to the Hoover Moratorium. It was well known that much of this capital was sunk unproductively in social improvement, despite the fact that the annual charges were assuming staggering proportions. By 1928 it was evident to the informed that the time was not far distant when the transfer problem would become acute, since there did not exist a sufficiency of foreign funds at Germany's command to cover the payments.

The whole economy of Germany was by this time dangerously balanced on the goodwill of short-term investors. A new committee was appointed with the unavowed objective of "commercialising the debts," and of "making Reparation safe by making it lighter." The state of the capital market, however, forbade such a huge conversion; but it must be noted that the automatic provisions of the Dawes Plan for lightening the payments were not allowed to work. It is to be conceded that the plan for funding and converting the debt was the right ultimate solution but it was premature and impracticable. Moreover, the Young Plan was ill-conceived, since it introduced the complication of splitting the payments into two categories, *i.e.*, the *conditional* payments, which were to be made if possible, and the *unconditional*, or unavoidable payments. A disproportionately large share of the unconditional payments was allotted to France, and the self-regulating mechanism for adjusting the debt to gold prices was abandoned.

(v) *The German Situation After 1929.* Any examination of the German position for our purpose would be incomplete without reference to the character and distribution of the German foreign debt, excluding reparation. The census taken by the Reich Government in July, 1931, gave the following facts:—

TABLE I
Foreign Investments in Germany
In Millions of Gold £'s

Creditor Country	Loans from Banks	Other		Total
		Short- Term Loans	Long Term Loans	
United States	119	34	310	463
Great Britain	81	19	76	176
France	18	15	21	54
Holland	62	39	55	156
Switzerland	58	34	50	142
B.I.S.	38	—	—	38
Other Countries	26	43	32	101
Total	402	184	544	1,130

This table does not include investments in real estate, private business investments and other forms of "direct investment," which the Wiggin Committee estimated at £300,000,000. The most striking facts which emerge from these figures, as many critics have pointed out, are the enormous volume of American investment and the comparatively trifling investment made by France in Germany. Those facts are of great significance.

ance in relation to the political treatment of German indebtedness.

One further aspect of the German situation which is relevant to this survey is the statement of the German balance of payments as a factor in precipitating the international crisis. This statement was accepted as a rough estimate by the Advisory Committee under the Young Plan in December last; and, despite the "Standstill Agreement," the situation must now be much more serious than these figures reveal. The prodigious efforts which have been made to maintain the Gold Standard under these conditions have necessitated the incredibly severe deflation as implemented in the emergency decrees, the maintenance of a huge export surplus in the face of low prices, and involved adverse effects resulting from "exchange control, tariffs and exchange depreciation in other countries". The consequent strain and injury inflicted upon German industry, the heavy sacrifices and stringent economies, have had a disastrous effect upon German capacity to make further payments, and this fact could not be ignored at Lausanne.

TABLE II

Germany's Balance of Payments in 1931

In Millions of Gold £'s

<i>Credits.</i>		<i>Debits</i>	
Export surplus for year, including services and deliveries in kind	150	Reparations up to June 30th	40
Utilisation of foreign assets of German banks	65	Interest and normal amortisation on liabilities abroad	75
Rediscount and other credits	60	Balance, representing capital withdrawn . .	245
Drawn from gold and de-visen reserve of the Reichsbank	85		
Total	360	Total	360

The Versailles Treaty was wittily called "Peace with a vengeance". The Lausanne settlement might with equal truth be termed "Reparations repented". Reparations are now only of interest as an attempt to incorporate a punitive scheme into the international exchange system. The complete failure to achieve the objectives of vengeance will scarcely be denied after a decade of disequilibrium ending in economic collapse. It is true that under the Lausanne agreement of July 8th, 1932, Germany has undertaken, after an interval of three years, to

make eventual payment by means of bonds to the total amount of 3000 million marks, but only under certain safeguards to her economic structure. The disposal of the fund is left to the creditor powers, who, if and when the payment is made, will administer the fund in the interests of economic reconstruction in Europe.

III

(i) *Facts of the Debts.* It is upon the Allied Debts rather than on Reparations that effort must be concentrated for effective action. These loans were raised in America upon agreed terms, and expended on supplies during a period of extreme emergency. No repayment has been made of the great bulk of the loans, and the plain fact is that the annual service must be met either by the taxpayers of America who did not receive the goods, or by the taxpayers of Britain and France who did, in effect, use the goods. The problem, therefore, is a problem of persuasion; and here again the argument has to be directed, not to the manner in which the debt was incurred nor to the immediate responsibility for its service, but to the long term economic effects of insisting on payment as contrasted with the effects of partial or total cancellation. Neither is the problem a purely American one, for a similar situation exists in connection with that part of the British internal war debt (approximately £1,120,500,000), which represents loans to the Allies, and that part of the French internal debt which represents loans for reconstructing devastated territory. That loans to Britain raised in America were substantially for the needs of Allies rather than for herself, even if it were true, is no longer the major consideration from the British point of view. Large inter-governmental debts are in existence which are offset by internal debts incurred by the governments of the United States, Britain, and France to the investors in their war bonds. The prospective loss of the values represented by these bonds is the real source of resistance to war debt adjustment, and it is a resistance of a particularly stubborn kind.

The main argument for cancellation turns on expediency, and that will be examined presently; but there are at least good reasons based on equity for alleviation of the debts. The Allies, including America, were engaged in a joint enterprise, but were partners with differing and unequal interests. The loans raised in America were in the main spent in that country and contributed materially to an unprecedented prosperity. The United States, in short, made a very small effective contribution to the costs of the war. A stronger argument for alleviation, however,

the argument that he should pay taxes or shoulder losses in order to relieve Europe. He fails, further, to see why the mass of post-war private loans raised by the international bankers for investment should receive preference in repayment to the public loans for which he holds scrip. He certainly has no immediate intention of abandoning his claims merely, as Professor J. M. Clark puts it, "in order that these subsequent private obligations should be collectable." He feels, too, that whilst Europe is not now capable of meeting the debts that is a situation that is merely temporary. Finally, he senses the connection between excessive expenditure on internal armament and the difficulty of paying interest on external debt; and he feels inclined to make debt remission wait upon effective disarmament.

TABLE IV

Total Payments on Account of War Debts to the United States

Country	Principal \$m	Interest \$m
Austria	863	—
Czechoslovakia	18 000	—
Belgium	17 100	14 490
Estonia	—	1 247
Finland	396	2 249
France	161 350	38 650
Great Britain	202 000	1,149 720
Hungary	74	394
Italy	37 100	2 521
Latvia	—	503
Lithuania	235	892
Poland	1 287	19 311
Roumania	2 700	—
Yugoslavia	1 225	—
Total	442 330	1,229 977

Grand total of principal and interest for all countries, \$1,672,307,424.

The major part of the payments received from Europe is applied by the American Government to the reduction of the national debt. It is thus employed in wiping off the internal debt in the United States due to the War. A scaling-down of the European loans would prolong the pressure of the internal debt, and that is not a pleasing outlook. The certainty of increased taxation has, moreover, to be faced. The difference between the yield of American income tax in 1929-30 and the estimated yield for 1932-33 represents a decline of approximately

65%, or an amount equal to six times the annual receipts from the War Debts. There is the further point that the private debts are equally disturbing to the international financial situation. There is no good argument for salvaging private loans if the general taxpayer is to be sacrificed. Any concessions that are to be made, therefore, must involve equality of sacrifice as between the public and private creditor in America; and in a contest between the mobilised investment houses and the unorganised taxpayer it is not difficult to forecast the result.

TABLE V
Amounts Due to the U.S.A. for 1932

Country	Principal \$m	Interest \$m	Total \$m
Austria	·288	—	·288
Belgium	4·200	3·750	7·950
Czechoslovakia	3·000	—	3·000
Estonia	·108	·492	·600
Finland	·055	·257	·312
France	11·364	38·637	50·000
Great Britain	28·000	131·520	159·520
Greece	·660	·449	1·009
Hungary	·012	·057	·069
Italy	12·200	2·506	14·706
Latvia	·045	·206	·251
Lithuania	·039	·186	·225
Poland	1·325	6·162	7·487
Roumania	·800	—	·800
Yugoslavia	·250	—	·250
	<hr/>	<hr/>	<hr/>
	62·346	184·222	246·467
German (army costs)	6·000	—	6·000
	<hr/>	<hr/>	<hr/>
	68·346	184·222	252·467

The real facts of the case are, of course, that America has never really received payment on these claims since new loans have been made of greater volume than that of interest received. The United States has, therefore, never experienced the economic effects which would follow effective repayment; and little thought has been given in America to that highly interesting problem. Among the immediate consequences would be the disruption of foreign exchanges and a marked decrease in the commodity balance of exports. "This is the destiny of creditor countries, and it involves readjustments in the economic structure which the United States has not yet begun to make, shows no desire to make, and could not make suddenly without suffer-

ing seriously in consequence." The American producer fears, rightly, that an increase in goods that compete with the product of industries now protected would displace domestic production, and that a shrinkage of exports would lead to a contraction of industrial activity. This would imply unemployment, diminished purchasing power and demand for the products of American industries, and a decline in the standard of living. A suspicion is gaining ground that America could not have attained the standard of prosperity it had until 1929 if the Allies had made effective payments.

As the real character of this "magnificent episode" in American history becomes more widely appreciated, the inner truth of the existing paradoxical situation will be realised. There is growing support for the opinion that there is no way of effectively collecting the European debt which will inevitably enrich the American economy, and as that opinion spreads the resistance to readjustment must crumble. The dilemma which faces America is either the renunciation of the debt, with the inevitable large-scale writing-off of losses, or the lowering of the tariff, with the certain prospect of increased competition for American industries. And the real measure of the self-denial upon which America must decide is contained in the thought that it must be made in the interests of world recovery. Professor J. M. Clark has pointed out that the United States cannot afford a serious collapse of Europe's buying power, but that this basic fact has been obscured because for sixteen years America has been selling goods to a Europe that was not prosperous, and because during that paradoxical process America was making extraordinary profits. "From now on," he says, "trade must be on a totally different basis; a basis not of Europe's necessity, but of Europe's power to pay in goods, and of our own willingness to accept payment in that form." The debts, therefore, are assets of doubtful value, and, on the assumption that the international exchange system is worth preserving, they can be kept alive only at a cost which the world cannot face.

IV

(i) *Other Factors.* It would be fallacious to assume from what has been said that the war-debts and reparations were the sole cause of the world's troubles. An adjustment of these debts would undoubtedly be the greatest single contribution that could be made by America to enable rapid recovery. But the economic life of the world, and of Europe in particular, has been vitiated in other ways which even complete cancellation would

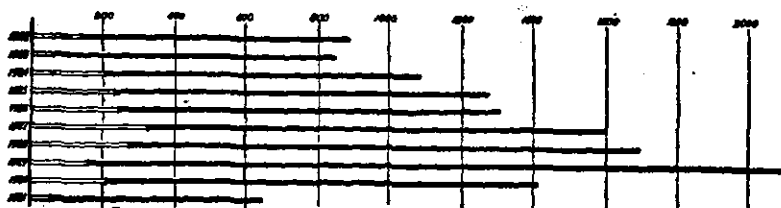
not cure. Since the war the world has passed through a time of irrational production, or rather, through a period when production was expanded at a pace that disregarded the real needs of consumers as well as their effective purchasing power.

The financial authorities did nothing, as they did nothing in the world boom of the 'nineties, to restrain this ill-balanced expansion. Instead, by a systematic expansion of credit facilities through the banks and by the newly-created facilities of instalment selling, they stimulated industry of all kinds to enlarge and improve equipment, to expand output, and to glut every market with commodities. In every country, as Monsieur Frederic Jenny says, "Inflation of credit fostered ill-omened illusions. The policy of unrestrained credit which characterised the period of 1925-1929 impeded producers from regaining the true standard of natural consumption to which the war and its consequences had blinded them. . . . War-debt and reparation settlements were made under the same illusions which led astray producers."

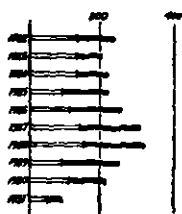
Foreign and Domestic Capital Issues in Millions Sterling

(Foreign Issues Shown Open, Domestic Black)

United States



Great Britain



(ii) *Credit Inflation.* In a similar fashion credit inflation led to the stream of uneconomic loans, to the reckless lending for all purposes during the period. In these loans is involved a mass of capital, the investment of which failed to justify the inflation in which they originated. They now represent a burden of debt

for the incurring of which the international investment houses are to blame. The only excuse possible is that some outlet had to be found for the spurious accumulations of the period; but these unproductive loans are more responsible for the prevailing inertia than even the reparation-war-debt commitments.

There would, moreover, seem to be agreement among the investment houses that the only radical cure of the world *malaise* is to jettison the major part of the war-debt cargo. That they are obviously not disinterested in shifting to the general taxpayers of certain countries the first and inevitable losses in order to increase the chance of salvaging the remaining private debts is plain. It is necessary, however, in order to counteract the shock investors have sustained to achieve a speedy adjustment. The restoration of enterprise, i.e., the revival of the risk-taking function is more essential to recovery than any other single factor. While the worth of scrip represented by war-loans and commercial bonds based on foreign debt is in doubt, investment in American can experience no lasting recovery.

(iii) *Adjustments of the Debts.* It seems clear, from the political side, that America is preparing to consider any reasonable moratorium or adjustment on her external loans, now that Europe has partially solved her own internal problems of reparations and disarmament.

It is at least clear from the reports of the expert committees and conferences which have discussed the debts in the last twelve months that the Hoover Moratorium must be extended for a long term, and the Advisory Committee suggests ten years as a minimum. Whether creditors compound or debtors default, it is equally certain that the later payments must be scaled down. The "writing off" of a considerable part of both public and private debts is inevitable. But the American contention that war-debts, tariffs and trade recovery are separable problems cannot be sustained any longer in face of the facts. A more flexible attitude towards long-term investment on the part of France, together with a readiness to allow gold reserves to exert their natural effect on national price-levels, is urgently necessary before the return to normal conditions can commence. In the light of difficulties in the way of a recovery of British investment strength, and of Australian dependence upon that recovery, the opinion must be expressed that our situation must remain precarious until the necessary large-scale adjustments of existing debts, both public and private, are made overseas.

For a durable and equitable solution, therefore, the co-operation of the United States is indispensable. The effects of the

shock which has been sustained by the American investor and the timidity of the French investor, who now control the main reservoir of free capital, will take years to eliminate. It will be found that the practicalities of the problem forbid a complete cancellation of the war debts by the United States. How far the burden may be reduced by safe agreement rather than by dangerous default will be determined by the extent to which Europe convinces America that better relations between European peoples have been established.

TABLE VI

Annuities Payable by Germany
Under the Young Plan
(Selected Years)

	£m Gold
1st April, 1930	85·395
1931	84·250
1941	109·035
1951	117·160
1961	119·915
1965 (peak)	121·440
1971	82·185
1981	85·565
1988	44·890

Thus we are back again at the beginning. If we wish to achieve even a partial restoration of prices, which would in its turn alleviate the burden of all debts and restore equilibrium, we have to rectify underlying causes that are deeply embedded in the old bad conditions responsible for the debts. International co-operation which will effectively reduce friction among the peoples is the *sine qua non* of better business. War and welfare are incompatible; and political rivalries leading to preparation for future war is the worst possible breeding ground for world prosperity, despite much loose talk to the contrary. France and Germany in particular must in future be regarded as complementary rather than competitive countries. The protectionist policy of Germany is more than a minor factor in perpetuating hostilities that have been transferred into other fields of human endeavour. It may, therefore, be accepted that complete cancellation, however desirable, is impracticable owing to the slow rate at which groups of creditors can be persuaded to write off their claims.

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THE AUSTRALIAN BALANCE OF PAYMENTS, 1928-29 TO 1931-32

- I. Introductory.
- II. The Balance of International Payments.
- III. The Balance of International Indebtedness.
- IV. Notes on Goods, Services and Gold.
- V. Notes on Capital Items.

I

It is with great diffidence, and only in view of the intimate relation of the balance of international payments to most of the controversial questions of the day, that I put forward the following tentative estimates of the main items which have entered into our balance of payments during the four years ending in June last. There are many gaps in our knowledge of the position, some of which can only be filled, if at all, by resort to methods of estimation which will not win universal acceptance. The conclusions reached, therefore, must be regarded as first approximations rather than as final results pretending to a substantial degree of accuracy.

The calculations have been carried out in terms of English sterling throughout. For the more important items the figures for 1931-32 will require little revision. In a few cases, items of minor significance have been estimated in 1931-32 on the basis of the previous year's figures, with an allowance for known tendencies. Figures thus subject to material revision have been marked with an asterisk.

The form in which the items entering into the balance of payments have been set out approximates fairly closely to that used by the League of Nations in its annual volumes on *International Trade and Balances of Payments*. The individual credit and debit "current" items appear in the first statement, and are followed by a statement of the inward and outward movements of capital, so far as they can be traced. The totals of these statements are then set out in the summary tables which follow. If the information contained in the primary statements were both accurate and exhaustive, the balances on current account (including the monetary movement of gold) should be exactly offset by contra balances on capital account each year. In practice, differences inevitably appear, on account of errors of estimation, omissions and time-lags. The discrepancies

attributable to time-lags will be greater, of course, the greater are the fluctuations in the total volume of transactions. During the four years at present considered these fluctuations have been unparalleled in their violence.

The balances appearing at the foot of the summary tables call for more detailed investigation than is possible at this juncture. If the accumulation of short-term trading balances in Australia be taken into account, however, the unexplained balances in the last three years of the period become relatively small and roughly cancel out. In 1928-29 the balance not specifically accounted for amounts to approximately £18 millions. Some part of this discrepancy is possibly due to the actual receipt in 1928-29 of part of the overseas public borrowings of 1927-28, which amounted, for the States and the Commonwealth as a whole, to the huge sum of £54,254,627. Further discussion of the possibilities must await a fuller exploration of the balance of payments in earlier years. Attention should be called, however, to the fact that the estimates of the banks' overseas balances are based on average liabilities and assets for the June quarters of each year. The use of quarterly averages, the only figures at present available, involves possibilities of error, particularly when large transactions take place near the end of the financial year.

III

The annual movements of capital, inward and outward, have already been dealt with. A supplementary statement may now be given setting out the total capital sums outstanding at successive dates. For convenience they have been termed "liabilities" and "assets". Some of the items included, however, are not of the nature of fixed money obligations, and the totals should be accepted with caution. Further warnings will be found in the "notes on capital items" in section V.

IV

The estimates of the current movements of goods, services and gold presented in the foregoing statements have in some cases been based on conjectural materials, while in others they represent the bald results of lengthy and intricate calculations. A full explanation of the sources of the primary data and the methods followed in their elaboration must be deferred. Meanwhile some indication of the degree of validity attaching to the less obvious of the estimates may be gained from the following notes:—

Current Movements of Goods, Services and Gold

Inward or Credit Movements (Exports)	1929-29	1929-30	1930-31	1931-32
	£ 000 stg.	£ 000 stg.	£ 000 stg.	£ 000 stg.
I. MERCHANDISE				
1. Merchandise, including silver bullion and coins other than gold, exported	133,646	98,255	76,628	75,417
2. Ships' stores exported	2,316	2,047	1,408	1,456*
3. Value of gold produced in all forms	1,371	1,873	2,156	3,605
4. Deduct household effects, prizes, etc., exported	-111	-102	-94	-77
5. Deduct for over-valuation of wool exported	-1,718	-1,195	-613	—
	141,004	100,878	79,485	80,395
II. INTEREST AND DIVIDENDS				
6. Interest on Commonwealth Government investments overseas	90	181	161	160*
7. Interest on sinking fund investments overseas	51	49	61	63
8. Interest on net banking balances overseas	1,353	893	459	446
9. Interest on New Zealand Government debt domiciled in Australia	269	293	328	330*
10. Interest on New Zealand Local Bodies' debt domiciled in Australia	388	436	436*	436*
11. Interest on "other" assets overseas	286	791	965	1,074
12. Interest on local investments in Australian Government securities domiciled overseas, n.e.i.	?	?	?	?
13. Interest and dividends on other long and short term investments overseas, n.e.i.	?	?	?	?
	2,437	2,543	2,350	2,499
III. OTHER SERVICES				
14. Insurance earnings overseas by Australian companies— Life	2,741	2,254	2,805	2,000*
Fire, marine, and general	30	30	25	30
15. Earnings of Australian ships on account of all overseas freight traffic	647	647	633	595
16. Expenditures of foreign ships in Australian ports	5,603	5,849	4,076	3,470
17. Duties collected on ships' stores consumed in Australian waters	83	78	69	60*
18. Expenditure in Australia by overseas tourists and travellers	1,228	1,139	811	663
19. Funds brought in by immigrants and returned emigrants	1,072	795	369	307
20. Emigrants' remittances and money gifts from overseas, n.e.i.	560	578	546	436
21. Diplomatic, consular, and similar expenditure in Australia	60	60	55	50
22. War pensions received from overseas	381	451	448	436
23. Government receipts in cash on account of reparations	876	878	1,265	—
24. Government receipts from overseas, n.e.i.	12	12	12	12*
	13,263	12,372	10,792	7,859
IV. GOLD COIN AND BULLION				
25. Gold coin and bullion in all forms exported, in excess of production	1,116	24,999	10,120	5,901

Current Movements of Goods, Services and Gold

Outward or Debit Movements (Imports)	1928-29	1929-30	1930-31	1931-32
	£ 000 stg.	£ 000 stg.	£ 000 stg.	£ 000 stg.
I. MERCHANDISE				
26. Merchandise, including silver bullion and coins other than gold, imported	143,300	130,787	60,586	44,099
27. Value of outside packages of imports (unrecorded)	2,690	1,316	—	—
28. Add for undervaluation of freight, insurance, and sundry charges ..	2,966	5,543	3,195	3,217
29. Add for undervaluation of films ..	605	1,071	446	155
30. Deduct household effects, prizes, etc., imported	-172	-181	-108	-109
	149,389	138,535	64,119	47,362
II. INTEREST AND DIVIDENDS				
31. Interest on Government debt overseas :—				
Commonwealth :				
(a) Long-term securities	7,850	8,217	8,368	4,400
(b) Short-term securities	—	6	157	331
(c) Bank overdrafts (net)	-19	305	280	12
States :				
(d) Long-term securities	19,562	19,193	18,893	18,881
(e) Short-term securities	—	148	594	948
(f) Bank overdrafts (net)	80	608	551	79
32. Interest on Local Bodies' debt overseas	1,500	1,450	1,500	1,500*
33. Interest and dividends on long-term private capital invested in Australia	8,750	8,750	6,087	4,117
34. Interest on short-term balances ..	†	†	†	†
35. Deduct contribution of British Government to interest on migration loans	-109	-126	-131	-131*
	37,414	38,451	36,279	30,137
III. OTHER SERVICES				
36. Insurance earnings in Australia by overseas companies—				
Life	-2	31	24	80*
Fire, marine, and general	975	944	471	400*
37. Expenditure overseas by Australian tourists and travellers, including fares	3,619	3,344	1,545	1,149
38. Funds taken out by emigrants and returning immigrants, including fares	1,190	1,516	1,370	747
39. Immigrants' remittances and money gifts sent overseas, n.e.i.	801	847	703	333
40. Commonwealth contributions to assisted passages	133	58	10	—
41. Diplomatic, consular, and similar expenditure overseas	170	177	168	133
42. Expenditure overseas by Department of Defence	1,386	453	132	81
43. War pensions paid overseas	343	367	374	445
44. Contributions to upkeep of soldiers' graves	95	95	95	14
45. Overseas mail subsidy	130	130	130	110
46. Loan flotation expenses and stamp duties on transfers	430	174	17	16
47. Government expenditure overseas, n.e.i.	122	108	95	80
	9,391	8,234	5,123	3,528
IV. GOLD COIN AND BULLION				
48. Gold coin and bullion imported ..	348	394	374	631

Item 1.—Includes the recorded (sterling) values of all exports, other than gold in all forms, and ships' stores, which are recorded separately.

Item 3.—Since Australia is a gold-producing country, the gold production of the year has been regarded as an export of merchandise. Exports in excess of actual production are entered under item 25.

Item 4.—Since household effects, prizes, etc., are not paid for, they must be deducted from exports at their recorded values.

Item 5.—A comparison of the recorded export values of wool per pound with the prices recorded by the wool-selling

Capital Movements

Inward or Credit Movements (Increase of Liabilities)	1928-29	1929-30	1930-31	1931-32
	£ 000 stg.	£ 000 stg.	£ 000 stg.	£ 000 stg.
49. Government debt domiciled overseas:—				
Commonwealth:				
(a) Long-term securities	6,279	7,241	-1,952	-108
(b) Short-term securities	—	175	8,645	1,400
(c) Bank overdrafts (net)	-1,865	10,618	-7,817	-2,590
States:				
(d) Long-term securities	-4,164	-11,595	-616	-1,453
(e) Short-term securities	—	4,325	19,430	2,850
(f) Bank overdrafts (net)	9,580	13,058	-15,309	-3,743
50. Local Bodies' debt domiciled overseas	—	3,000	1,000	—
51. Excess of assets over liabilities in Australia of overseas life insurance companies	—	4	11	—
52. Long-term private capital invested in Australia	—	—	—	—
53. Trade debts held temporarily in Australia	?	?	?	?
	10,030	28,024	3,392	-3,639

Outward or Debit Movements (Increase of Assets)	1928-29	1929-30	1930-31	1931-32
	£ 000 stg.	£ 000 stg.	£ 000 stg.	£ 000 stg.
54. Commonwealth Government investments overseas	-86	-173	-155	-7*
55. Sinking fund investments in securities domiciled overseas, or in bank accounts	-7,769	-32	247	-170*
56. Excess of assets over liabilities overseas of Australian banks less excess of assets over liabilities in Australia of overseas banks	-3,927	-26,479	-2,357	16,132
57. Excess of assets over liabilities overseas of Australian life insurance companies	—	952	-7,537	—
58. New Zealand Government debt domiciled in Australia	-1	109	-102	—
59. New Zealand Local Bodies' debt domiciled in Australia	314	814	—	—
60. "Other" assets overseas	1,260	14,065	4,819	4,813
61. Local investments in Australian Government securities domiciled overseas, n.e.i.	?	?	?	?
62. Other long and short term investments overseas, n.e.i.	?	?	?	?
	-10,309	-10,743	-5,085	+20,768

Summary Tables

Current Movements of Goods, Services, and Gold	1928-29	1929-30	1930-31	1931-32
	£ 000 stg.	£ 000 stg.	£ 000 stg.	£ 000 stg.
Inward or Credit Movements (Exports) :—				
I. Merchandise	141,004	100,878	79,485	80,395
II. Interest and Dividends	2,437	2,553	2,350	2,499
III. Other Services	13,293	13,372	10,792	7,359
IV. Gold Coin and Bullion	1,116	24,999	10,120	5,901
Total Credits	157,850	141,802	102,747	96,654
Outward or Debit Movements (Imports) :—				
I. Merchandise	149,389	138,535	64,119	47,362
II. Interest and Dividends	37,414	38,451	36,279	30,137
III. Other Services	9,391	8,234	5,123	3,525
IV. Gold Coin and Bullion	348	294	374	631
Total Debits	196,542	185,514	105,895	81,658
Excess of Debits (-) or Credits (+)	-38,692	-43,712	-3,148	+14,996

Capital Movements	1928-29	1929-30	1930-31	1931-32
Inward or Credit Movements (Increase of Liabilities)	+10,030	+28,024	+3,392	-3,639
Outward or Debit Movements (Increase of Assets)	-10,309	-10,743	-5,085	+20,768
Excess of Credits (+) or Debits (-)	+20,339	+38,767	+8,477	-24,407
Balance, accounted for by lags, errors, and omissions, especially in capital items	+18,453	+4,945	-5,329	+9,411
	+38,692	+43,712	+3,148	-14,996

brokers reveals discrepancies in the earlier years which cannot be satisfactorily accounted for. The adjustment has been made on the basis of the brokers' prices, plus an allowance for charges incurred between store and ship. The recorded export values in 1931-32 are believed to be correct, in consequence of revised methods of valuation.

Item 6.—From Commonwealth Budgets.

Item 7.—Estimated at 4½ per cent. in each year.

Item 8.—Estimated at 3 per cent. in the first three years and 2 per cent. in 1931-32, on the average amounts outstanding at the beginning and end of the year.

Items 9 and 10.—Actual amounts payable by the New Zealand Government and local bodies.

Item 11.—Computed at the rates received.

Item 14 (a).—Actual excess of income over outgo overseas, as returned by the companies.

(b).—Estimated from New Zealand business of Australian companies.

Balance of International Indebtedness

(Approximate)

Liabilities	At 30th June				
	1928	1929	1930	1931	1932
	£ 000 stg.	£ 000 stg.	£ 000 stg.	£ 000 stg.	£ 000 stg.
63. Government debt domiciled overseas:—					
Commonwealth:					
(a) Long term securities ..	153,507	159,786	167,727	155,775	165,272
(b) Short term securities ..	—	—	175	8,320	10,320
(c) Bank overdrafts (net)	150	Cr. 1,515	9,103	1,288	Cr. 1,304
States:					
(d) Long term securities ..	416,661	412,497	400,902	400,286	398,232
(e) Short term securities ..	—	—	4,825	24,255	27,195
(f) Bank overdrafts (net)	Cr. 3,957	5,623	18,679	3,370	Cr. 373
64. Local Bodies' debt domiciled overseas ..	26,000*	26,000	29,060	30,000	30,000*
65. Excess of assets over liabilities in Australia of overseas life insurance companies (£A) ..	42*	42	46	57	57*
66. Long-term private capital invested in Australia (£A) ..	175,000	175,000	175,000	175,000	175,000
67. Trade debits held temporarily in Australia ..	?	?	?	?	?
	767,462	777,433	805,457	808,849	806,216

Assets	At 30th June				
	1928	1929	1930	1931	1932
68. Commonwealth Government investments overseas ..	3,320	3,234	3,062	3,907	3,900*
69. Sinking fund investments in securities domiciled overseas, or in bank accounts ..	8,899	1,130	1,098	1,345	1,175*
70. Excess of assets over liabilities overseas of Australian banks less excess of assets over liabilities in Australia of overseas banks (£ stg. f) ..	47,016	43,029	16,610	14,263	20,285
71. Excess of assets over liabilities overseas of Australian life insurance companies ..	6,293*	6,293	7,245	-292	-292*
72. New Zealand Government debt domiciled in Australia (£A) ..	4,169	4,166	4,277	4,175	4,175*
73. New Zealand Local Bodies' debt domiciled in Australia (£A) ..	7,072	7,326	8,200	8,200*	8,200*
74. "Other" assets overseas ..	6,721	6,981	21,646	23,845	20,878
75. Local investments in Australian Government securities domiciled overseas, n.e.i. ..	?	?	?	?	?
76. Other long and short term investments overseas, n.e.i. ..	?	?	?	?	?
	82,490	72,281	61,538	66,453	77,271
Net liabilities as above ..	684,913	705,152	743,919	742,396	729,299

Item 15.—Total freight charges on imports have been estimated under item 28. The share earned by Australian ships was allocated in accordance with the tonnage of overseas cargo discharged by Australian ships as compared with the tonnage discharged by foreign ships. The total freight charges on exports were separately estimated by applying actual and estimated freight rates to quantities exported. The total earnings on exports were then allocated according to the tonnage of overseas cargo shipped by Australian ships and foreign ships respectively.

Item 16.—Estimated at 20 per cent. of the total freight earnings of foreign shipping, from data in *Report of the Overseas Shipping Conference* (1929) and sundry sources. The item covers numerous expenses (other than stores, fuel and duties) in Australian ports, and crews' expenditures in Australia.

Item 18.—Estimated in detail from the numbers of "temporary visitors arriving" from various groups of countries in each year. The average length of stay and average expenditure per head assumed differ considerably for the various classes of visitor.

Item 19.—Estimated at £30 per head for immigrants from British and North American countries, and £25 per head for all other immigrants, in the first three years; and at £25 and £15 respectively in 1931-32.

Item 20.—Estimated as in the writer's *Capital Imports and the Terms of Trade*.

Item 21.—Little more than a guess.

Item 23.—No reparations were received in 1931-32, on account of the Hoover Moratorium.

Item 24.—From Commonwealth Budgets.

Item 26.—Includes the recorded values of all imports, other than gold. The recorded values of merchandise imports are the sterling f.o.b. values plus an arbitrary addition of 10 per cent. as an allowance for freight and charges.

Item 27.—"Outside packages" were not separately recorded until the second half of 1929-30. Previously it is probable that they were excluded almost entirely from the recorded values of dutiable goods and in part from the recorded values of free goods. In 1930-31 they amounted to about 3 per cent. of the value of other merchandise imports. An adjustment of 3 per cent. of the value of dutiable imports has therefore been made.

Item 28.—Total freight charges on imports were estimated by applying actual freight rates to quantities imported, in the

case of "bulk" imports; and by applying an estimated rate per ton to the remaining tonnage of goods discharged from overseas. The estimated rate per ton on "berth" imports was deduced from the actual average rate per ton earned on inward and outward cargoes in 1927 and 1928 by vessels carrying over one million tons of goods between Australia and Europe. (*Report of the Overseas Shipping Conference, 1929*). By calculating the average freight rate per ton on "berth" exports, from actual freight quotations, and estimating the comparative tonnage of inward and outward "berth" cargoes, it was possible to break down the weighted average rate per ton, as given in the *Report*, into its two component rates. The percentage of freight charges, so estimated, to the f.o.b. values of all merchandise imports in 1927-28 was 10·6; in 1928-29, 11·3; in 1929-30, 13·7; in 1930-31, 14·8; and in 1931-32, 17 per cent. The rise in the percentage has been due to the much more rapid fall in import prices than in freight rates. For insurance and numerous small charges not included in the recorded values a further adjustment of 1 per cent. of the f.o.b. values of merchandise imports was made. The excess of the total charges, so estimated, over the 10 per cent. already allowed, is the final adjustment required.

Item 29.—Cinematograph films are recorded at official valuations which bear little relation to the sums paid as rentals and purchase price. The total remittances overseas have been roughly estimated from data collected by the Royal Commission on the Moving Picture Industry, and from information obtained privately. The excess of these remittances over the recorded values of imports is the adjustment required.

Item 31.—The figures stated are the averages of the amounts "payable" at the beginning and the end of each financial year. Interest on overdrafts has been calculated at 5 per cent., and 3 per cent. has been allowed on net credit balances. In 1931-32 the amount paid in interest on Commonwealth Government long-term debt has been reduced by £3,920,000, payment of which was postponed under the Hoover Moratorium on war debts and reparations.

Item 32.—Partially estimated, but in the main a compilation.

Item 33.—This item is largely conjectural. Interest has been allowed at 5 per cent. in the first two years, at 4 per cent. in 1930-31, and at 3 per cent. in 1931-32, on a capital value in Australian currency of £175 millions.

Item 35.—From Commonwealth Budgets.

Item 36.—Excess of income over outgo in Australia, as returned by the companies.

Item 37.—Estimated in detail from the numbers of "Australian residents departing temporarily" to various groups of countries in each year. The average length of stay and average expenditure per head assumed, including fares, differ considerably for the various classes and destinations.

Item 38.—Estimated at varying amounts per head, allowing for fares, for "Australian residents departing permanently" to various groups of countries.

Item 39.—See item 20.

Item 40.—From Commonwealth Budgets.

Item 41.—Includes upkeep of Australia House and Agents-General, and representation at conferences, etc.

Item 42.—Estimated by Department of Defence; does not include value of goods imported.

Items 43 to 46.—From Commonwealth Budgets.

Item 47.—Includes expenditure in territories outside Australia, contributions to overseas institutions and scientific bodies, etc.

V

The capital movements stated for each year in the Balance of Payments are based on the corresponding items in the Balance of International Indebtedness. For the most part the individual liabilities and assets have been stated in English sterling, as nearly as can be ascertained. Movements in the capital items recorded in Australian currency have been so small since the depreciation of the Australian exchange that the effects of the exchange depreciation can be safely ignored.

Items 49 and 63.—The information as to long-term and short-term securities is available in the *Finance Bulletin* and the Commonwealth Budget. Bank balances and overdrafts overseas have been specially supplied by the Commonwealth and State Treasuries.

Items 50 and 64.—Mainly a compilation made by the Commonwealth Bureau of Census and Statistics.

Items 51 and 65.—From details supplied by the companies. The returns are not complete.

Items 52 and 66.—The amount of £175,000,000 has been chosen after consideration of a number of estimates, none of which has very much validity. Little information on this item has so far become available.

Items 53 and 67.—There is some evidence to suggest that considerable amounts of trade money were held temporarily in Australia during the early stages of exchange depreciation. No estimates of the amounts involved have been made. The view is held in responsible quarters, however, that from £7,000,000 to £10,000,000 was so held, and that practically the whole of this amount has now been repatriated.

Items 54 and 68.—From Commonwealth Budgets. Includes amounts owing by the British Phosphate Commissioners, White Star Line, and "other administrations".

Items 55 and 69.—Data from *Statistical Register of Western Australia* and *Annual Reports of the National Debt Commission*.

Items 56 and 70.—Estimated by the method explained in the writer's "Australian Monetary Policy Reviewed", *Economic Record*, November, 1931. There have been some revisions in the estimates of "shareholders' funds" stated therein.

Items 57 and 71.—From details supplied by the companies. The returns are not complete.

Items 58 and 72.—Data from *New Zealand Official Year Books*.

Items 59 and 73.—Data from *New Zealand Official Year Books*.

Items 60 and 74.—From confidential information received.

Items 61 and 75.—There is much evidence to suggest that Australian securities domiciled overseas have been repurchased by Australian residents, particularly while Australian Government stocks were very low in price overseas. No estimate of the amounts involved, in excess of those already included, has been made.

Items 62 and 76.—During the more acute stages of the depression it was common knowledge that capital was being moved out of Australia in the interests of security, even while the exchange was heavily depreciated. No estimate of the amounts involved can be made, but they were probably offset in some degree by the reverse movements referred to under item 53.

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SOME ASPECTS OF THE STERLING-GROUP PROPOSALS

- I. **Introductory.**
- II. **The Raising of Prices.**
 - (i) Relation between exchange rates and internal prices.
 - (ii) Re-emergence of equilibrium and the raising of Wholesale Prices.
- III. **The Stabilization of Prices.**
 - (i) Price stability defined.
 - (ii) The stabilization of productive activity.
 - (iii) The proposed standard of value.
 - (iv) Price stability and Central Bank action.
- IV. **The Stabilization of Exchange.**
 - (i) Incompatibility of Price Stability and Exchange Stability.
 - (ii) Exchange between the sterling-group and gold countries.

I

Some economists, over-anxious, it would seem, to popularize a subject so technical that it baulks market-place treatment, quite unintentionally have failed to stress the difficulties arising from the suspension of gold payments. Far too much has been taken for granted. Emphasis has been placed on immediate benefits. Although the ultimate consequences have not been ignored, they have been pushed into the background. There have been some exceptions. Perhaps the most striking recent illustration of failure to present the whole case is found in the advocacy by some of the establishment of a sterling bloc. In present circumstances, agreement among the principal non-gold countries to link their paper currencies to depreciated sterling may be very desirable. But the attendant difficulties should not be overlooked. That it is necessary to display the utmost caution in advocating a sterling group is shown by the readiness with which many persons accept the proposals as the complete solution of most of our economic ills.

But what are the main details of the proposals? It is suggested:

- (a) That non-gold countries, in order to re-establish the equilibrium between costs and prices within their respective territories, should raise internal commodity prices to a level approximating that of the average of three or four years ago.
- (b) That the first step to this end should be taken by Great Britain.

- (c) That having raised prices to the level indicated in (a), Great Britain should announce that sterling prices will be stabilized at the new level.
- (d) That the other countries of the sterling group, having raised their internal commodity prices to the level indicated in (a), should maintain the external purchasing power of their currencies at a fixed rate with sterling.
- (e) That co-operation between the Central Banks and the Treasuries of the countries comprising the sterling union is essential.

Different writers have emphasized different aspects of these details. To Great Britain unanimously is assigned the responsibility of initiating discussion, of launching the scheme, and of maintaining it. "If Great Britain will give a lead . . . by a clear declaration of its policy, including the level . . . at which it proposes eventually to stabilize the value of sterling, we may expect to see a growing measure of stabilization among the countries whose currencies are at present more or less closely linked to sterling, and probably the accession of a number of other countries to the sterling area."¹

Is the Sterling Union to be regarded as an end or as a means? Those who consider that the death-knell of gold was sounded when Great Britain suspended gold payments in September, 1931, see in the establishment of a sterling group the dawn of a new monetary era, when we will "have done with the absurdities of violently-fluctuating price-levels", and will insist on a monetary system which will be "worthy of the twentieth century".² Whether by the management of paper currencies, absolutely independent of gold, the much-desired stability of prices will be achieved is very debatable. This much is certain: a sterling group will not function satisfactorily until those circumstances, which were responsible for the suspension of gold by the principal countries, are removed. "The gold standard will not work when the world becomes afraid of it."³ Is the world less afraid of managed, irredeemable paper currencies? "It is not in periods of general distress that a paper currency can be successfully managed."⁴

The sterling group should not be regarded as other than a temporary arrangement. "Those who jumped to the conclusion,

1. Note of Dissent by Janassen, Mant and Strakosch to the *Final Report of the Gold Delegation of the Financial Commission of the League of Nations*. Page 73.

2. Blakett: *Halley-Stewart Lecture*, 1931. Page 106.

3. Williams: *The Effect of Currency Depreciation on International Trade*. A paper read before the Academy of Political Science, April, 1932.

4. Gregory: *The Gold Standard and Its Future*. Page 94.

in September, that the events of 1931 meant the doom of the gold standard and the dethronement of gold appear to have completely misunderstood the situation."⁵ Some of them confused cause with effect. Others overlooked that, despite the weaknesses of the gold standard, it had functioned satisfactorily prior to 1914, and did not fail to keep exchanges stable when, after the war, it was again adopted by the principal countries. The breakdown of the gold standard was not due to some inherent defect of the system, but was "the combined result of the obligation to pay reparations and war debts, on the one side, and the unwillingness of the receiving countries to receive payment in the form of goods and services, on the other".⁶

Despite the belief to the contrary expressed by many authorities, it may never be possible to secure the necessary conditions to assure the satisfactory working of the gold standard. In this event, the experience gained by those countries in experimenting with the management of paper currencies will give them a bargaining advantage over those countries which hang on to gold to the last. Moreover, "to be prepared, if necessary, to use a concerted managed currency gives a better chance of not being forced to rely upon it".⁷ Thus may be justified the formation of a sterling group.

II

Commodity prices having fallen a far greater percentage than have costs, it is said that to restore the profit margin prices must be raised approximately to the level of some three or four years ago. So long as those countries which have departed from gold remained faithful to the metal, they could not "adjust the exchanges to the level of money costs".⁸ As gold prices fell, it became increasingly difficult to maintain production, especially in the export industries. Freed from gold, they were able to raise prices or to prevent a continuation of the downward trend. By depreciation of the value of their currencies in terms of gold, they obviated the necessity of making devastating cuts in costs. It is questionable, however, whether the advantages have come up to expectations.

(1) *Relation Between Exchange Rates and Internal Prices*

The assumption that commodity prices within a non-gold country move in consonance with changes in the exchange rate

5. Einaig: *The Tragedy of the Pound*. Page 160.

6. Janssen, Mant and Strakosch, *op. cit.* Page 67.

7. Salter: *Halley-Stewart Lecture*, 1931.

8. Gregory: *Op. cit.* Page 88.

between that country and a gold country is supported by the following table:—

Wholesale Prices in United Kingdom and Sterling-Dollar Exchange

Month	1 Exchange London- New York (Monthly Average)	2 Wholesale Prices (U.K.), 1926=100		3 Previous Indexes con- verted to Base, Sept., 1931=100		4 Commodity Index in the United Kingdom if Prices had risen pro- portionate to the decline in Exchange	5 Previous column converted to Base, Sept., 1931 =100
		Board of Trade	Statist	Board of Trade	Statist		
1931							
August	4.86	87.2	82.1	100.3	98.1	100	93.6
Sept.	4.53	87.0	83.3	100.0	100.0	106.8	100.0
October	3.89	70.5	84.6	105.2	102.1	120.0	112.4
Nov.	3.73	71.8	85.1	107.2	102.8	123.3	115.4
Dec.	3.38	71.4	87.0	106.6	105.8	131.2	122.8
1932							
January	3.46	71.4	86.4	106.6	104.9	128.8	120.6
Feb.	3.45	71.5	88.0	106.7	107.4	128.8	120.6
March	3.62	70.7	86.0	105.5	104.3	125.6	117.6
April	3.69	69.1	84.7	103.1	102.2	124.1	116.2
May	3.68	68.0	82.7	101.5	99.1	124.1	116.2
June	3.65	66.2	80.7	98.8	95.9	124.9	116.9

We cannot but be impressed with the very moderate effect of sterling depreciation on prices, as disclosed in a comparison of columns 3 and 5. Rises in prices were much less than in proportion to falls in the dollar value of sterling.

It is highly probable that the benefits of sterling depreciation are exaggerated by the movements of wholesale price indexes. Prices of wholesale commodities are more sensitive to exchange fluctuations than are the prices of retail goods. This seems to be borne out in the United Kingdom since the suspension of the gold standard. Thus, while the Board of Trade Wholesale Price Index at the end of October was 4.9% above that for the end of August, the United Kingdom official Cost-of-Living Index between the same dates disclosed a rise of .69%. From which we may conclude, after allowing for the time lag, that if, as a result of currency depreciation, wholesale prices should continue to rise, the gap between costs and prices will be lessened in those industries engaged in wholesale trading to a greater extent than will be the case in those industries handling retail commodities.

If retail prices are less responsive to exchange variations than are wholesale prices, the prices of services are still less

responsive. Indeed, one of the advantages claimed for currency depreciation is that such services as wages and salaries remaining relatively stationary, the higher commodity prices permit of the re-emergence of profit. If service costs rose proportionately to the rise in commodity prices, the profit margin may entirely fail to reappear.

(2) *Re-emergence of Equilibrium and the Raising of Wholesale Prices*

The weakness of wholesale price indexes to measure the benefits of currency depreciation cannot be over-stressed, especially in view of the objective of monetary policy, which it is claimed should be pursued. Professor Cassel, in his *Memorandum of Dissent*, says: "The countries off the gold standard have to secure the greatest possible stability for the internal purchasing power of their paper currencies. Before doing this, however, they must first raise their price-level at least some half-way up to the price-level of 1929."⁹ Although he does not here specifically mention the wholesale price level, we assume, from the calculations he has made elsewhere of the purchasing parity of sterling-dollar exchange, that he advocates restoration of wholesale prices. His assumption that changes in the wholesale price index measure variations in internal purchasing power calls for comment.

In an addendum to the Final Report of the League of Nations Gold Delegation,¹⁰ Mr. G. B. Roberts criticized the employment of wholesale commodity prices "as either (i) a measure of the purchasing power of gold, or (ii) as a test of the success of monetary policy". "It will be admitted," he continues, "that in considering the price-structure, particularly for purposes of international comparisons, a wholesale commodity price index will probably prove most useful." The Delegation, after admitting that the wholesale price-index "fails to take account of many elements of the national price-structure—such as prices of real estate, securities, and so forth"¹¹—adopted such an index. First, because it "measures those fluctuations of the purchasing power of money, which, when there is a reasonable degree of freedom of trade, are common to all countries, and have a direct international influence"; and secondly, because its construction "involves less serious technical difficulties than that of any other form of price-index".

9. Cassel: *International Banking Supplement of the London Times*, June 25, 1932. Page 75.

10. *Ibid.* page 59.

11. *Op. cit.*, page 23.

All this shows how inadequate must be any monetary policy directed in accordance with changes in an index of wholesale prices. Such index may be the "most useful" of any at present computed, but since there is not "a reasonable degree of freedom of trade", and more effective restrictions on the international movements of goods are being continuously imposed, great caution should be shown in employing it as a test for monetary policy. Much of the work of Cassel, and that of others who attach great importance to the theory of purchasing power parity, is discredited because insufficient recognition is given to the inherent weaknesses of wholesale price-indexes. There can be no reasonable objection to making a rough comparison between the purchasing power of different currencies by computing the ratio between their wholesale price-levels, but it is time to lodge a protest when we find Cassel writing: "The Swedish krone *ought* to have been quoted in January, 1932, at kr. 4.17 to the dollar (U.S.A.), whereas the actual average dollar rate for that month was kr. 5.22. Thus, in American currency, the value of the krone *ought* to have been 25 cents, whereas the above-mentioned average rate is only equivalent to 19.15 cents per krone."¹² In this quotation the italics are mine. Why "ought"? Are there not other factors in the exchange situation at a given time than the difference between purchasing powers?

The danger of basing definite conclusions on the ratio of wholesale price-indexes is seen when a computation is made of the theoretical purchasing-power parity between Australia and London, by employing in turn the three best-known United Kingdom indexes. Consider the result for May, 1932. In each calculation the Melbourne Wholesale Price Index was used. The base year for each index was 1911. Purchasing-power parity of exchange, using the *Statist* Index, was £A137.7, employing the *Economist* Index, £A155.3, and the British Board of Trade Wholesale Price Index, £A128.5. The official selling rate for the month in question was £A125 10s. Od. All that we are entitled to infer from the above calculation is that in June, 1932, the Australian pound, in terms of the British pound, probably was over-valued. We certainly cannot say that in May the former pound *ought* to have been worth only 12s. 11d. sterling (as measured by the *Economist* Index), not 15s. 11d. sterling.

Since the wholesale price index omits some of the essential elements in the price-structure, is the assumption valid that equilibrium will be restored if this index be raised to approxi-

12. *The Observer*, April 2, 1932.

mately the level of that of three or four years ago? If it is, we thereby further assume that there is a relationship between wholesale prices and all other prices of such a character, that equilibrium will be restored if wholesale prices be raised to the level from which they have fallen. The validity of this further assumption has not been proved. From the fact, for instance, that during the last few years in the United Kingdom wholesale prices fell a much greater percentage than did the cost-of-living index, as shown in the Macmillan Report,¹³ we are not justified in concluding that a rise in wholesale prices will be accompanied by a less proportionate increase in retail prices. On *a priori* grounds, we may expect retail prices to rise proportionately more with given increases in wholesale prices than they fall, with the same given decrease in wholesale prices. Therefore, we cannot say that should the wholesale price-level rise to the plane of previous equilibrium, harmony between the various elements of the price-structure will return.

III

(1) *Price Stability Defined*

If by trial and error the general level of prices was raised approximately to that of three or four years ago, it is proposed that the next aim of monetary policy should be stabilization of the internal purchasing power of the monetary unit. By "price stabilization" the authorities do not mean the stabilization of the prices of individual commodities, but the maintenance of the average of all prices at a relatively constant level. Moreover, in seeking stability of prices they do not seek "a price-level without any fluctuations whatever".¹⁴ What is sought is a price-level from which marked short-period fluctuations have been eliminated.

"The goal of world monetary policy," says Sir Arthur Salter, "should obviously be a reasonable stability of the general world price-level. . . . National price-levels must vary in order to correct disequilibria in the balance of trade."¹⁵ By concerted action, however, on the part of the world's Central Banks, it would be possible to reduce to a minimum the fluctuations in national prices necessary to correct such disequilibria. A greater degree of stability in national prices would follow Central Bank co-operation than would be possible if each country were to act on its own initiative in monetary policy. As long as nations

13. Cf. page 85.

14. *Stamp: Papers on Gold and the Price Level*. Page 25.

15. *Recovery*. Page 75.

trade with each other, variations in national price-levels to induce movements in goods to balance international trade accounts may be necessary. But such variations, provided world prices were relatively stable, would be slight, and would occasion little disturbance to a nation's economy. Moreover, a pre-requisite to stable world prices is the adoption by the principal nations of a monetary policy having for its objective the stabilization of prices within their own borders.

(2) *The Stabilization of Productive Activity*

But should the aim of monetary policy be the stabilization of the general price-level or the stabilization of productive activity? If the former be pursued, the relationship between production and prices would be thrown out of balance in the event of a continuing increase in industrial efficiency. "A 'managed' financial system involves also a national planning of productive effort."¹⁶ In the price equation there are other than monetary factors. Broadly speaking, to maintain prices at a relatively constant level, an increase in volume of output per unit of human effort would require an increase in the money side of the equation proportionate to the former increase. In these circumstances, a country, despite stability of its internal price-level, would have inflated its currency. Thus it is said that "keeping the wholesale price-level nearly stable in America from 1927 to 1929 probably was inflation."¹⁷ Moreover, maintenance of prices when industrial efficiency is increasing disturbs the relative positions of the factors of production—a point excellently illustrated by Sir Henry Strakosch in his *Memorandum to the League of Nations Gold Delegation*. It is important to recognize that changes in the distribution of the national income may occur even under conditions of price-stability. A monetary policy directed towards the attainment of a stable level of prices, if successful, would not, therefore, necessarily be in the best interests of the community. "Merely keeping the price-level stable will not be a sufficient guide to a Central Bank, however complete its powers. . . ."¹⁸ In many current writings, stabilization of prices is stressed as the aim of monetary policy. The paramount objective should be stabilization of the distribution of the social product. To attain this latter stability requires that "the price-level should fall *pari passu* with the

16. *Gold, Credit and Employment*, Cole. Page 94.

17. Sir William Beveridge: *Halley-Stewart Lecture, 1931*. Page 178.

18. Sir William Beveridge: *Op. cit.* Page 178.

increase of productivity per head",¹⁹ and conversely that it should rise in consonance with a decrease in industrial efficiency.

(3) *The Proposed Standard of Value*

It is one thing to claim that price stability is desirable, but it is another to say how it is to be achieved. Sir Basil Blackett is definitely of the opinion that "stable money is an intensely practical proposition",²⁰ and is within our grasp to-day. He added, however, that he did not mean "that it is easy and simple of attainment". Sir Arthur Salter believes that it is possible to bring gold prices back to the level at which they stood in 1929, and thereafter to maintain "an approximate stability in the general price-level".²¹ "Both," he continued, "are practicable if the world really desires them". Sir William Beveridge, on the contrary, is not so sure that stable money is possible of attainment. The practical difficulties, he thinks, are underestimated. But he concludes: "We must attempt it, but cannot do so with hope of success unless we see the obstacles that have to be overcome, and are daylight clear about the aim."²²

The chief obstacle to be overcome is the selection of a suitable standard of value. It is obviously impossible to do without some standard. There must be some objective representation of the unit of account, just as there must logically be some concrete representative of other units of measurement. The term "yard" means the nearest distance between two points. To represent that distance, authority has placed down a standard "yard". For the monetary unit "pound" likewise we require some concrete reference. Originally, the British "pound" was a pound of silver. It eventually came to mean 113 grains of pure gold. The value of the silver pound and of the gold pound was the amount of general commodities which these could buy. What, now, is to be the concretion of the British pound? It is suggested that the term no longer should refer to so many grains of gold, but to a group of commodities which, at the level of stabilization, can be bought for a pound. "The most natural standard," says Professor Cassel, "for measuring the value of a paper currency is obviously the general level of commodity prices in this currency".²³

It is apparent, from the scant attention given to the subject by some writers, that the very great technical difficulties of computing a satisfactory index are not recognized. The problem

19. Robertson in *The International Gold Problem*. Page 21.

20, 21, 22. Halley-Stewart Lecture, 1931.

23. *International Banking Supplement of the London Times*, 25/6/32.

cannot be disposed of thus: "The only matter for discussion is as to what commodities should be included in the index number and how they should be weighted."²⁴ No index yet computed fully meets the requirements, nor is it likely that in the immediate future a satisfactory one will be computed. Those, therefore, who advocate the stabilization of the internal purchasing power of a paper currency are left without a standard of comparison. No adequate means exists for determining whether the value of a currency is stable or not. The argument for such stabilization is not helped by the assertion that, although the Wholesale Price Index is imperfect, it is better than nothing at all.

(4) Price Stability and Central Bank Action

Even if we assume the existence of a satisfactory test of stability, can we be assured that the price-level will be kept stable by employment of the customary instruments of credit and currency control? Sir Arthur Salter says that the problem of price-stabilization is not a technical one. "It is one of human weakness."²⁵ To governments with empty treasuries and decreasing revenue, additional notes are very attractive as an alternative to the reduction of expenditure. Taxation by means of the printing press is not unheard of. To prevent default in the payment of interest on the public debt, bankers have frequently been forced to grant accommodation to bankrupt governments. Thus, in some countries, the volume of the means of payment has grown disproportionately to the volume of production. The danger of an uncontrolled inflation getting under way is very real in those countries whose currencies are independent of a metallic basis.

But a Central Bank entirely freed from political pressure may not succeed in maintaining a stable price-level for any length of time, though it faithfully pursues that objective. In consonance with seasonal variations in the volume of production, there must be proportionate changes in the volume of media of exchange, if prices are to be held relatively stationary. To achieve this, the Central Bank must expand and contract credit in agreement with these variations. But a further requirement for stability is that savings must vary with changes in the rate of flow of credit. We are not entitled to assume any such agreement between changes in credit and fluctuations in savings. No action taken by the Central Bank can guarantee preservation of the balance between income and savings.

24. E. H. Davenport: *The New Statesmen and Nation*, May 28, 1932.

25. *Recovery*. Page 58.

IV

(1) *Incompatibility of Price Stability and Exchange Stability*

It is claimed for the sterling group proposals that at the same time as stability of internal purchasing power is maintained, the exchange rates between different members of the group can be held stable. Sir Basil Blackett says: "The ideal to be aimed at is a world in which local currencies everywhere have a stable purchasing power locally, and at the same time can always be exchanged into other currencies at a stable rate of exchange."²⁶ That this ideal is impossible of attainment is recognized by Sir Josiah Stamp, who refers to the "apparently irreconcilable aims of stability in the price-level and stability in the exchange rates".²⁷ "The world's monetary problem is how to make the best reconciliation possible between external and internal monetary stability without sacrificing either unduly to the other."²⁸ Had Sir Basil Blackett said that between the members of a sterling group with stable internal price-levels the aim should be stability of their exchanges, he would have indicated an objective far less impossible of achievement.

There are some rather cogent reasons for rejection of the assumption that if stability of internal purchasing power within the countries of the sterling area were secured, stability of inter-sterling group exchanges would be a desirable aim of monetary policy. A stable rate of exchange, in the event of a fall in export prices, would set in motion a train of cause and effect in a group exporting country which may seriously disturb that country's internal equilibrium. A rate of exchange varying with changes in an export price index is advocated for Australia in order that the profit margin in primary production might be maintained, once it had been regained by raising the exchange rate to the level of purchasing-power parity. Under conditions of a stable exchange, a fall in export prices, even of moderate dimensions, would disturb the equilibrium between primary producers' costs and prices received for their output. No attempt to stabilize the prices of particular commodities within the sterling group is advocated. A diminution in the volume of primary producers' spending power arising from a fall in export prices would shorten their demand for the products of domestic secondary industries, and also for imports.

26. *London Times*, January 23, 1932.

27. *Papers on Gold and the Price Level*. Page 44.

28. *Williams: Op. cit.* Page 19.

But since the level of prices generally is kept stable, the fall in the prices of export commodities requires that the prices of other commodities must rise. Thus, coincident with a fall in their income, those engaged in rural industries would be faced with increased prices of the products of other industries. On the other hand, if an exporting country maintained both the stability of its exchanges with other members of the sterling group, and the stability of the internal purchasing power of its currency, an increase in export prices might give rise to unhealthy conditions, which might result in a boom-crisis. If the volume of exports had not greatly diminished, the higher prices would mean a larger income. Exporters would increase their demand for both home-produced and imported commodities. The increased demand for locally-manufactured goods would stimulate the production of capital goods. The expected rise in prices of the products of secondary industry which stimulated investment would not eventuate. The increase in the prices of export goods would require a reduction in the prices of other goods, because, *ex hypothesi*, the internal price-level remains stationary. Losses on capital investments would then be likely to occur.

(2) *Exchange Between the Sterling Group and Gold Countries*

If stable rates of exchange were maintained between different parts of the sterling group, fluctuations as between group members and non-gold countries would not be eliminated. As the sterling-dollar exchange varied in accordance with movements in gold prices, so the exchange rates between members of the sterling area and countries outside would vary. This raises the question of the relationship between the sterling area and gold countries. It is hoped that by so varying the sterling-dollar rate the necessity of reducing costs as gold prices fall would be obviated. In the main, this would be true, but greater increases in industrial efficiency in gold countries than in the non-gold area would necessitate some reduction of costs in the sterling group, if the competing advantage gained through the exchanges is to be retained. "Under no system of monetary policy can things be very pleasant for a country which finds the productivity of other countries in competitive goods increasing faster than its own."²⁹

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- (b) Inflow of gold from non-monetary reserves.
- (c) Reduction in demand for gold for industrial purposes.
- (d) Economies in gold used for monetary purposes.

The first three are of minor importance. They may mitigate the effects of a decline in gold production, but not compensate for this decline in full, or arrest a downward trend in price levels following insufficient increase in gold to finance increased trade. To finance increased trade turnover, more credit is necessary. If the world's currencies be based on gold, a new inflow of gold will be necessary to supplement the existing reserves on which credit is based. It would seem that if new gold did not keep pace with trade and other factors the price level would tend downward.

Cassell has estimated the average increase in world production and trade at about 3% per annum. A parallel demand for monetary gold, *i.e.*, 3% of the total world's monetary gold stocks of about £2,500 million, would require about £75m. of extra gold annually. Annual gold production during the last few years has been about £80m. If half of this be taken for non-monetary purposes, as in the past, and the balance (less than 2% of existing monetary stocks) be used as before, there will not be enough to finance the increased trade and production. Hence, the importance of considering reforms which aim at greater economy in the use of gold for monetary purposes.

II

Post-war changes in the functioning of the gold standard and in banking technique have helped to economize gold. A feature has been the development of central banking. In many countries the issue of notes has been concentrated in one bank. The Bank for International Settlements has been established, and gradually central banks have tended to co-operate, though less than was hoped by the Genoa Conference. Central banks increased their gold holdings considerably compared with the pre-war position, on account of withdrawal of gold coin from circulation. Circulation of gold coin was a luxury, and its withdrawal was an important method of economizing gold.

Central banks were no longer obliged to convert their notes into gold coin, and gold bars became standard, solely for payment of international balances. The gold bullion standard supplanted the gold specie standard. But this substantial economy in gold was offset to some extent by increases in legal minimum

ratios of gold to be held by many central banks. In many cases reserves had to be held against sight liabilities, as well as against the note issue. Banks have to keep a greater reserve than the minimum in order to provide against possible drains of gold; thus the demand for reserves was considerably increased by post-war legislation.

Another feature of this period was the adoption of the gold exchange standard by many countries. This system consists in including foreign exchange in the reserves, and redeeming notes in foreign exchange instead of in gold. This development had both good and bad effects on the monetary situation. It resulted in absolute economy of gold in the countries holding foreign exchange; but central banks in countries in which these assets were held had to increase their holdings of gold, for they had to meet the demands of any country wishing to convert its holdings of foreign exchange into gold. It was impossible to distinguish between foreign exchange held as reserves and ordinary trade holdings, and the central banks had, therefore, to hold larger gold reserves than were actually necessary.

The gold exchange standard increased the complication of the international banking system. It disturbed, in certain cases, the reciprocal effect of reserve movements. Gold exports from one country augmented the circulation of another; but international movement of foreign exchange is nothing more than a transfer of rights from one bank to another.

At the same time, the amount of liquid capital greatly increased. Keynes estimated that there was between £600m. and £800m. of short-term money on the London money market. This was prevented from being absorbed as long-term capital. Commercial banks increased in power. Money markets became more and more international. Discount policy became more complicated, and banks introduced open market dealings to reinforce their control.

These developments weakened the connection between gold movements and changes in price-levels. Before the war, large gold movements caused by a favourable or unfavourable balance of payments brought about corrective changes in relative price-levels. To-day alterations in discount rates, due to gold movements, cause such a rapid and considerable shifting of international liquid funds that the direction of a movement of gold may change before any alteration in the price-level can take place. This relaxation of correlation between movements of gold and changes in price-levels means that stability of a currency

can now be more easily regulated. A high discount rate attracts foreign capital, improving the rate of exchange; gold may flow in independently of the level of prices. Further, co-operation is needed between central banks to equate non-monetary factors, such as tariffs. Formerly, movements of gold levelled out excessive differences between local price levels. Now, when movements are not parallel with price movements, central bank co-operation is required to determine levels of prices.

III

The present position of gold is marked by an increase in supply, due mainly to lower prices. Cost of production is reduced, and the price of gold has risen so much that mines which could formerly be worked only at a loss now show a profit. This has attracted capital, and output has increased about 12% since 1928. Depreciation of the rupee and the high price of gold have caused a withdrawal of large quantities from hoards in India. By the end of March, 1932, India had surrendered gold amounting to \$180m. At lower world prices, industrial demand for gold has greatly decreased. While trade is at lower prices, central banks may require less gold for reserves. But their liabilities have been less affected by the fall in prices than might be expected, and the assumption that monetary requirements have greatly contracted up to the present is incorrect.

The demand for gold bullion has materially increased with the failure of nations to observe completely the gold exchange standard. Central banks' foreign exchange holdings have been liable to depreciation, and as a result rapid demands for conversion into gold have arisen. This distrust of foreign currency assets may absorb the recent increase in available stocks of monetary gold.

Maldistribution and sterilization of gold stocks have greatly complicated the monetary position of the world to-day. War disruption of normal trade relations and economic and monetary policies of some countries have caused maldistribution of gold. Reparations and war debts conflicting with tariff barriers have transferred the gold to the creditor nations. Cessation of foreign lending and increased gold reserves in gold exchange centres have increased this tendency. At the end of June, 1931, the United States of America and France held over 60% of the world's central gold reserves. Changes since then are shown in the following table:—

Central Gold Reserves.

(\$m.)

	30/6/31	30/3/32	Change, Amount	June to March Percentage
France	2,211	3,010	799	36.1
Switzerland	162	471	309	190.7
Netherlands	200	353	153	76.5
Belgium	200	350	150	75.0
Total	2,773	4,184	1,411	50.9
U.S.A.	4,593	3,985	-608	-13.2
Rest of world, ex- cluding U.S.S.R.	4,756	3,067	-689	-18.3
	12,122	11,236	114	1.0

Gold accumulated in France, Switzerland, the Netherlands and Belgium, from the inflow of foreign balances, repatriated bank capital and foreign capital seeking safety. In recent years France and U.S.A. trade absorbed gold, but failed to increase credit proportionately. U.S.A. issued gold certificates requiring 100% cover; the Bank of France can only issue franc for franc in notes against new gold. By its "reflation" policy, and the Glass Steagle Act, the United States has partly remedied the sterilization of reserves, but in France no such steps have been taken. Dr. Felix Mlynarski maintains that gold sterilization by the Bank of France was a passive and not an active policy. With the Treasury embargo on capital exports, France accumulated liquid capital that could not be used for credit expansion, for the market was not ready to absorb new credit.

IV

With the rigid gold supply, stability of gold prices will depend upon steps taken to regulate demand. At a higher price-level, gold production will decline. Demand for gold for industry and non-monetary purposes will increase. Appreciation of the rupee may lead to renewed demand by India. Unless the risk of exchange depreciation is reduced or a new system devised in place of the post-war gold exchange standard, demand for gold reserves will increase if the gold standard be readopted.

Increased demands can be offset by enforced measures economizing gold. Strain on gold would be relieved by concentration of reserves in the central bank in each country. Smaller bank notes may replace subsidiary coin. Use of cheques in place of notes would help.

More effective, however, would be far-seeing central bank policies. Close co-operation between central banks and the Bank for International Settlements would effect a reduction in percentage reserve ratios. Adequate economies here will depend on the size of the reserves which countries consider necessary, upon conditions under which the gold standard is restored, and upon the acceptance of the old gold exchange standard. Return to gold on a devalued basis would greatly lessen the demand for gold, and if this be combined with reduction in percentage reserve ratios, a more optimistic outlook for the future of gold may be adopted.

Currencies must be managed so that monetary and economic equilibrium is attained and maintained. In addition, stability, confidence and free movements of goods and capital are essential. International movement of gold cannot proceed smoothly when the movement of other economic values is hampered by artificial impediments.

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POLITICAL OBSTACLES TO WORLD RECOVERY

- I. Introduction: The two fundamental assumptions of any discussion of world recovery.
- II. The distinction between economic and political factors. The three main political factors.
- III. The political obstacles to-day.
 - (1) Domestic turmoil in Germany.
 - (2) The lack of unity between public opinion and democratic government on international affairs.
 - (3) Nationalist policies (a) Protection;
(b) Armaments.
- IV. Conclusion.

I

A discussion of world recovery is meaningless unless we make two initial assumptions of a purely economic kind. The first is that the recovery of each nation depends upon the stimulation of international trade, though the degree of this dependence may vary, since some nations are naturally more self-contained than others. To emphasise the international factor is not to deprecate the importance of internal organisation, but simply to point out that however efficient the exploitation of domestic resources may be, it cannot, in the absence of healthy international trade, produce enduring prosperity. The second assumption is closely related to the first, though not a necessary deduction from it. It is that there can be no ultimate conflict between the economic interests of nations. The recovery of one nation will ultimately help, and not hinder, the recovery of others; and the collapse of one will damage the interests of all.

If nations are not interdependent, there is no world problem, but only separate and unrelated national problems, and if trade between nations is not mutually advantageous, the question is not how the world may recover, but how certain nations may recover at the expense of others. These are simple, and perhaps obvious principles, but in a Protectionist world there is a constant tendency to ignore them.

The motives of human behaviour are so mixed, and the consequences so entangled, that it is impossible to distinguish between the political and economic factors with any logical exactness. We must be satisfied with useful working distinctions. The principal way in which political factors

impinge upon economic processes is through the destruction of confidence. International trade rests on credit, credit on confidence, and confidence on stability. In stating that stability is the condition of confidence, I do not imply that the world need remain static and rigid, but simply that the process of change, however continuous and far-reaching, shall not be such as to destroy economic expectations.

II

There are three main ways in which political factors obstruct economic recovery.

(1) When domestic dissensions between political parties become so acute as to threaten the framework of national order, the fear of civil war paralyses a nation's productive power. The nationals hoard their money or attempt to expatriate it, and foreigners refuse further credits. These actions intensify the economic difficulties, and the deepening depression sharpens the political animosities. At the moment of writing this is the condition of Germany.

(2) In democratic countries, the governments tend to lack the moral authority necessary for the continuous pursuit of a coherent international policy. In countries with a multiple party system, many governments live daily in the shadow of defeat, and even where there are only two major parties, a divergence of opinion between government and people is especially likely to develop in the sphere of international affairs. Hence when the French Premier goes to Geneva or Lausanne, he must always keep one ear attuned to the whisperings in the lobbies at home, and one eye for the division lists of the *Chambre*. He must not only think of how the permanent interests of France can best be served, but of how his decisions will react upon the prospects of his party. When the American Administration makes a pronouncement upon war debts it must think not only of the long-term effect on American economy, but of the short-term effect on the voter in the Middle West. This instability in the relation between the electorate and the statesman responsible for international policy is a chronic cause of equivocation and postponement. The Lausanne Conference was postponed for six months, until after the Prussian and French elections, but who can say if Herr von Papen represented the will of Germany, or M. Herriot the will of France?

(3) A Government may pursue either a political or economic policy in the international sphere. In so far as it directs

its efforts to an increase of the national wealth, it pursues an economic policy. In so far as it is concerned with the achievement of national prestige, influence, or independence, it pursues a political policy. This is the most important distinction of all. Whether a policy is political or economic depends upon the motives and the consequences, not upon the means used. The French occupation of the Ruhr in 1923, and the Japanese invasion of Manchuria this year, are examples of the use of the crudest and most powerful of political methods for economic ends. The erection of tariff barriers is a milder method of using political authority for economic purposes. Conversely, economic methods may be used for political ends, as when Indians strive to force Britain to grant political autonomy by the use of the trade boycott, or when France grants a loan to Austria on condition that she renounces the *Anschluss*. It is the nature of the end and not the means used which divides the two kinds of policy.

Admittedly it is not always easy to know whether economic or political motives dominate the minds of the responsible statesmen. When the allied representatives assemble to discuss reparations, it is not always easy to discern whether they are most concerned to formulate an agreement which will bring a suitable retribution upon Germany, and reduce her political strength, or one which will be economically profitable to themselves. Sometimes they do not seem to be aware that these two intentions may be incompatible. Yet even if the statesmen concerned never quite disentangle the two groups of motives in their own minds, it is highly important that they should make the attempt. For if the primary purpose of reparations is economic, it is necessary to examine carefully their likely economic consequences, whereas if they are chiefly of a political character, their economic effects can presumably be lightly treated. When a nation puts political prestige before economic prosperity, its policy is commonly, though loosely, described as nationalistic. •

III

To restate the argument so far. There are three main types of political factor, the first two internal and third external, which are likely to obstruct economic recovery.

- I. Domestic political turmoil.
- II. The instability of democratic government in relation to international policy.
- III. Nationalism.

(1) *Political Turmoil in Germany*

The outstanding case of domestic turmoil to-day is the situation in Germany. Events are crowding so thick upon one another's heels, that it is useless to attempt a detailed description of the balance of political forces at the moment of writing. I shall restrict myself to three points; first, to illustrate the very intimate interactions of economic and political factors; second, to indicate the nature of the central political issue; and third, to suggest the way in which other nations might help to relieve the domestic tension.

The political confusion has been primarily caused by the economic depression into which the whole world has been plunged since 1930. There were, of course, certain special factors, such as the reliance on foreign loans, and the increasing burden of reparations, which have deepened the German difficulty. But in the political sphere it has been the spectacular rise of the Nazi party in 1930, that has upset the balance of democratic government, and it is the economic suffering which has given point and vigour to Hitler's appeal. The political uncertainty has quickly reacted upon economic affairs. Take, for example, the condition of German agriculture. Until the banking crisis in July, 1931, the interest rate on agricultural mortgages was $9\frac{1}{2}$ -10%, and the banks refused to lend on more than 40% of the property value. Since then it has been impossible to raise loans to all. If this is compared with American agricultural conditions where the Federal Land Banks lend to 50% of value at $5\text{-}5\frac{1}{2}$ % interest—the handicap under which German agriculture operates will be obvious.¹ It is true that interest was reduced 25% by the Emergency Decree of December 8th, 1931, but this cannot affect future borrowings. The essential feature of the high interest rates under which German industry labours is that they represent not simply economic but political risk. They are controlled by the fear that political upheavals may prevent repayment altogether. This constant interaction between politics and economics is pushing the nation down a vicious spiral.

There is party instability in countries other than Germany. M. Herriot has had difficulty in constructing a government and his majority is not very secure, and the approaching Presidential elections make the future American policy very uncertain. But the party divisions in these countries do not involve the same fundamental cleavage, the same deep opposition of attitude to

1. Article by Max Sering in *Economic State of Germany*.

the method and end of government as now exists in Germany. The vital political issue in the Reich, is whether democracy is to survive, or, more accurately, whether it can be recovered. The von Papen Government has never met the Reichstag, for the very good reason that if it had, it would have been immediately overthrown. The only direct road to stability is by the re-establishment of democratic rule. This is not because democracy is, in itself, necessarily more stable than dictatorship, but because it seems certain that a dictatorship by the Right can only be made permanent through civil war. For the Communists, the Social Democrats, and the Centre Catholic Party are all violently opposed to a Nazi tyranny, and if there is to be a dictatorship, Hitler's party is the only one strong enough to maintain it. A further danger of a Nazi dictatorship is that it would increase France's sense of insecurity and persuade her of the need for more armaments.

In the interests, then, of internal stability and international confidence it is to be hoped that the Centre parties, which are committed to democratic methods at home and conciliatory methods abroad, will be able to regain power. Alternatively, if the Nazis are returned in an absolute majority at the forthcoming Reich elections, it is to be hoped that they will be ready to soften their extremism, and so do something to placate foreign fears and domestic resentments.

It is here that the internal situation is closely related to the policy of Germany's neighbours. For a great part of the extremism which Hitler represents is a response to what Germany regards as the unjust penalties the Allies have imposed upon her since the Peace. In removing the foreign causes of German resentment, the Allies would at the same time be robbing extremism of its most moving appeal.

It may be argued that the Lausanne decision on reparations, together with the private Standstill Agreements, lifts the foreign economic burden from Germany's shoulders. It is true that Lausanne relieves Germany of immediate payments, and that if the agreement is ratified, it will represent a satisfactory settlement of the purely economic side of Germany's foreign difficulties. But it does not touch the political resentments. France refused to delete the war guilt clause from the Treaty, and the Disarmament Conference has done nothing to satisfy the German claim to equality in armaments. These are the two pegs upon which German nationalists now hang their claims.

In comparison with the economic burden of reparations, these political questions may seem slender pretexts for aggressive nationalism. And in 1928 they would have been. Nothing so surely heals old political wounds as economic welfare, but when depression brings suffering and exhaustion, old wounds are prodded into active ulcers.

Allied reparation policy shows curious oscillations from a political to an economic emphasis. The 1919 settlement was completely dominated by political motives, and blind to economic possibilities. The Dawes Plan in 1924 marked a genuine attempt to give economic factors due consideration, by making provision for a change in the value of gold, an index to prosperity, and transfer protection. The Young Plan, formulated in 1929, was much more completely dominated by political considerations.² It was not based upon an examination of what Germany could pay, but upon what she could be made promise to pay. The re-introduction of the sanctions clause at the second Hague Conference was, in the German view, a complete denial of the supposition that the Plan was a free contract. With the Hoover Moratorium in July, 1931, the economic factors again asserted themselves. And the Lausanne decision, if ratified, would mean the triumph of economic realism. Unhappily, the psychological atmosphere in Germany has become so thick with uncertainty and impatience, that it is now too late to treat reparations as a purely economic question, unrelated to armaments and war guilt. In the German view all three factors are now aspects of a single problem. Since there is considerable doubt whether the Lausanne agreement will ever be ratified, either because of political complications in European countries, or the unwillingness of America to play her part in debt revision, the economic uncertainty has not been removed. Until the Lausanne Agreement is ratified, and until the war guilt and armament grievances have been met, the foreign causes of political instability in Germany will retain their potency.

(2) *The Instability of Democratic Government*

When President Hoover proposed a year's moratorium Italy accepted immediately and unreservedly. France hesitated for seventeen days and then accepted with political reservations, thereby preventing the proposal from producing its psychological effect. When America jolted the Disarmament Conference out of the somnolence produced by the droning of figures by

2. See "Reparations", John Fischer Williams, *International Affairs*, March, 1932.

experts, it only took Italy a few hours to accept unreservedly again. Other governments, dependent upon party support, could not dare so drastic a step. They reserved their decisions while they examined the scheme for objections, and from that moment the Conference was dead. And the Lausanne Conference was deprived of its one big opportunity to win American support.

The speed and decisiveness of the Italian policy stand in sharp contrast to the vacillation and equivocation which commonly mark the attitude of democratic governments to a new international situation. For democratic statesmen, unlike Mussolini, must always be anxiously alert to the way their decision may effect domestic politics. Judging by the memoirs which the statesmen who played a prominent part in drawing up the Treaty of Versailles have since written, the Treaty itself was a compromise between what its authors regarded as sound policy and what they felt the war fevered public opinion in their countries would stand. And ever since 1919 the same process has been going on. At the present time we find that M. Herriot, after pledging himself to the Lausanne Agreement, fears that he may have alienated the support of some of the Right groups on which he relies and so hastens to make public statements calculated to whittle down the value of the French concessions, by emphasising their conditional nature.

There are three main reasons why divergencies between a government opinion and public opinion are likely to arise.³ First, because the plain man lacks knowledge of the outside world. World problems may affect him in the most fundamental way, but they do not impinge upon his consciousness in the vivid and concrete form which domestic issues assume. The members of a government, on the other hand, are well tutored by their Foreign Office and their Board of Trade on significant trends in foreign affairs. When there is such disparity of knowledge, it is inevitable that there should be differences of opinion. Second, public opinion on foreign affairs changes slowly, more particularly when it is deeply entrenched in the channels of nationalist sentiment. Throughout the nineteenth century the citizens of western nations were being educated in their separate nationalisms, and the four years of war was a period of intensive training along the same lines. It is now fourteen years since the Armistice, but that is too short a time in which to uproot the convictions in which people have been schooled for a

3. Cf. A. Zimmern: "The Influence of Public Opinion on Foreign Policy", *Problems of Peace*, 3rd series, 1929.

century, especially when Protection keeps alive the national jealousies. Third, the traditional separation between domestic and foreign politics means that a government taking part in delicate international negotiations, of which its electorate approves, may be overturned on a domestic issue. So long as home and foreign affairs are regarded as two distinct fields, instead of the same field looked at from different ends, and so long as the domestic side of policy is regarded as more important than the foreign, there can be no guarantee of a close rapport between public opinion and governments on international questions.

The remedy lies with educators and politicians. In schools and universities, historical, political and economic subjects should be taught in a way which illustrates the dwindling importance of nationality in the twentieth century world. "The division of the world into nations, except on cultural grounds," writes Sir Andrew MacFadyean, "is now unreal, and largely meaningless."⁴ That is the lesson that must be taught, not as a separate lesson, but as the inevitable implication of the study of concrete problems.

And in a time of world depression, surely the politicians have a splendid opportunity to educate their electorate on world issues. When times are good, and budget surpluses the rule, it is too much to expect a government to impress upon the public that this prosperity has been due to world factors, and not to their own virtues and skill, but when times are bad, an emphasis on international affairs would not only be valuable educational work, but would at the same time provide good reasons for governmental failures.

(3a) *Protective Tariffs*

It is not my purpose to discuss the direct economic effects of Protection, but to draw attention to those less tangible political consequences which tend to be overlooked in tariff discussions. I want to urge that these political consequences are likely, in the long run, to have important economic repercussions.

If we analyse the motives for Protection, we find that they are only in part economic. In the past perhaps the most common political purpose of tariff-making has been to make a nation as nearly as possible self-supporting in case of war. More recently the emphasis has been shifted to internal political issues. It has been felt that if the state is to regulate the economic process in the interests of social justice; if, for example, it is to fix wages, that such a policy can only operate effectively if the

4. "The State and Economic Life", *International Affairs*, Jan., 1932.

domestic economy can be insulated from the shocks of unpredictable changes in the economic policy of foreign nations.

In democratic countries it is necessary to persuade the general public of the advantages of a Protective policy and the arguments presented on the platform and in the press are always calculated to make a direct emotional appeal. The popular case for Protection always tends to excite strong nationalist feelings. Since competition is regarded as beneficial in one's own country, it is necessary to point out that foreign competition is in a different class, that it is "unfair". No serious attempt is made to define what constitutes unfairness, but in time the constant association of the two words encourages the belief that foreignness is itself unfairness. This means that the foreigner has a lower moral standard in business than one's own countrymen. For example, a recent advertisement for British products, refers with moral indignation to the "insidious propaganda of foreign competitors, which seeks to undermine the reputation of British workmanship". What could be a clearer invitation to examine an economic issue, not from an economic standpoint, but from the emotional bias of an injured national pride? Further, if home products are to be protected it can only be because they are worth protecting. And it may be claimed they are worth protecting for two reasons, because they are intrinsically superior though lacking the meretricious appeal of foreign products, or because the home industries, being more civilised, pay higher wages. In the first case one's own country is technically superior, in the second morally superior. When this second argument is developed a tariff issue becomes doubly embittered by being represented as a contest between different cultures, different attitudes to life. The tariff becomes not only the champion of prosperity but of civilisation.

The outcome of such propaganda, which seeks to reinforce economic motives with political loyalties, is to intensify international resentment and bitterness. It is to develop the psychology of war. It is to destroy the capacity to judge the interests of different nations by a common moral standard. For when the British producer urges his customers to "Buy British", the logical corollary is that the producers of other countries should urge their countrymen not to buy British. But that, presumably, would be unfair competition in the field of propaganda. From whatever aspect we view it, the intensification of national rivalries is the immediate political consequence of Protectionist propaganda.

There is another political consequence not so immediately perceptible. War is the greatest enemy of international trade, and we have assumed that an increase in international trade is the condition of world economic recovery. There already exist institutions—such as the League and the Permanent Court—for the peaceful settlement of disputes. The success of such organs must ultimately depend, not on any supernational sanctions which they may control, but on the degree to which the will to peace among the nations is more potent than the will to war. These institutions are not machines for the manufacture of peace; they are machines which world opinion may use to articulate and define its desire for peace. To complain that the League has failed to settle this or that dispute is as unreasonable as to complain that one's motor car does not run when there is no fuel in the tank. Now if the motive power to drive the machine of peace is the will to peace, the strength of that will depends in turn upon the degree to which men feel that the interests which unite nations are greater than the interests that divide. The assumption, in short, on which the League is built, is that the economic and cultural interdependence of nations should triumph over their political independence. But if the logic of a Protectionist world is accepted, nations are divided in their economic as well as in their political interests. The foundations of the League are smashed into as many pieces as there are Protectionist nations in the world. To expect any international organ of peace to unite groups who are divided not only by political traditions, but by vital economic antagonisms, is to ask for the impossible. "In any future that we can foresee," writes Sir Arthur Salter, "the main occupation and concern of mankind will be the economic struggle; competition between individuals and between groups, whether of the same or different countries, will remain a basic element in human life. The forces so engendered are potentially the strongest in the world, and if they are so developed and directed that their collective might comes in conflict with any human institution, it is difficult to conceive the institution that can withstand the strain."⁵ Every time a tariff wall is strengthened the League of Nations is weakened. Yet surely the prevention of war is the primary political condition of world prosperity.

(3b) *Armaments*

The growth of national armaments, despite disarmament conferences, goes far to substantiate Professor de Madariga's

5. "The Economic Causes of War," in *The Causes of War*, 1932.

argument that in existing conditions every disarmament conference must become an armament conference.⁶

Armaments, moreover, are the natural accompaniment of Protection, for military force is the ultimate sanction of tariffs. If the State is to be made the sustainer and protector of its citizens' economic interests, as well as their political interests, it is inevitable logic that such exclusive economic interests should be grimly defended. Where there is no overriding common interest, the only appeal of the special interest is to force.

I am not primarily concerned with the direct economic expense of armaments, though it is tempting to visualise the increase in economic welfare which a country like Britain could promote, if instead of spending £115,000,000 a year on armaments, she were to devote it to social services. Competition in armaments has more far-reaching economic consequences, since it is perhaps the most potent source of world distrust. This political suspicion is the obverse of the lack of economic confidence. The point is succinctly stated by *The Economist*. "It is just because the problem of disarmament remains so long unsolved that there is a world-wide sense of insecurity, and a sense of insecurity is the exact analogue, in the political and military sphere, of a restriction of credit in the economic and financial sphere—the two disorders clearly spring from one and the same psychological root; from that general failure of nerve from which the world is suffering. It is evident that the world's present nervous breakdown must be treated as a whole. We cannot hope to deal effectively with this or that symptom piecemeal."⁷

IV

I have tried to make a working distinction between economic and political factors, but fully recognise that such a distinction is not logically ultimate. I believe that if we attempt a thorough psychological analysis of the motives behind the two kinds of policy, political and economic, we will find that in the world to-day, those policies which we call political, which are consciously directed to a non-economic end, will generally, though not always, be traceable to a deeper economic motive. Men's motives do not just spring up spontaneously; they are a response to their environment. Human environment is made up of many factors, but the basic factor is always economic, for it is this that

6. See "The Difficulty of Disarming", *Problems of Peace*, 5th series.

7. *The Economist*, December 5th, 1931, quoted by W. G. Moore, *France and Germany*, page 11, 1932.

makes life possible at all. The importance of the economic motive, relative to others, always depends on the urgency of primary economic needs. These needs have seldom clamoured so urgently for satisfaction as to-day. This means that the nationalism which expresses itself in tariffs and armaments would lose much of its vitality if it were not based on the conviction, perhaps not clearly formulated, that the fight between nations is not simply for honour or independence, but for bread. It is due, in other words, to the refusal of both popular and official opinion to accept the two assumptions with which I began this paper, that the injury of one nation is the injury of all, and that the recovery of one will aid the recovery of all. We know that politicians, while paying lip-service to these propositions, do not really believe them, or they could not go on building tariffs and armaments. But do the economists believe that they are wholly, or only half, true? That seems the first question to be settled in any discussion of world recovery.

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FUNDAMENTAL PRESUPPOSITION FOR SUCCESSFUL ECONOMIC PLANNING

- I. Introduction.
- II. Essentials of a Successful Plan and the Purpose of Economic Organization.
- III. Unconscious Planning in Modern Capitalism.
- IV. Planning and Individual Freedom.

I

It is not surprising that, faced with the paradox of widespread poverty in a world of plenty, or at least of potential plenty, many people should be looking for a solution of our present economic disorders along the lines of conscious planning. The observations to be outlined here are not put forward in any spirit of hostility to the idea of planning, my own bias, indeed, so far as I am able to interpret it, being in favour of that idea. Even if it is not quite so disorderly and chaotic as is sometimes alleged, even the most enthusiastic admirers of our present economic organization can scarcely affirm that at the present time it is developing with just that smoothness and ease of movement which we might expect if it were based upon a well-conceived and properly administered plan. The growth of a sentiment in favour of planning is quite a good thing. Even if we confine our attention to the simpler problems of everyday life, experience shows clearly that we are more likely to get what we want, without the waste of unnecessary time and effort, if we plan beforehand the successive steps which are needed to achieve our objective. It is seldom wise, indeed, to have an absolutely rigid plan which cannot be modified and moulded to meet changing circumstances. Even if we can forecast fairly accurately the future trend of events, there will always be some unforeseen or unforeseeable changes which will demand some changes, at least, in the details of our plan. Even the most orderly household routine will be upset in face of fire, earthquake or flood, and though provision for such catastrophes need not normally be made, the wise domestic planner will allow for some measure of adaptation to changing circumstances.

If we leave the simple affairs of the household, and consider the more complex situations of business and general social life, the advantages of planning are still quite obvious. The folly of the man who went to war without counting the cost was

pointed out nearly two thousand years ago, and it is still true that the general who plans best is most likely to win battles. A sporting tour is not likely to prove very successful unless it is carefully planned beforehand, and the success of a scheme of study depends also largely on similar conditions. Successful business men endeavour to adapt their production programmes to their anticipations of changes in conditions in the future, and their success in business corresponds fairly closely to the thoroughness of their plans and their skill in anticipating the future. In all these cases, too, there must, of course, be some elasticity. A business man must always remain master of his plan, instead of allowing it to master him. But insistence on the evils of undue rigidity is quite a different thing from throwing doubts upon the value of the idea of planning. A bad plan or an excessively rigid plan may lead to disappointment, but it is certain that the man who has no plan whatever will lead us nowhere.

It must also be agreed that the fundamental idea of applying the concept of conscious planning to our economic life is a valuable one. One important reason for the recurrent economic dislocations which afflict the world is the absence of any clearly-defined social plan in certain, at least, of the outstanding departments of economic activity. Lacking a clearly-defined and generally-accepted plan, it is not surprising that the economic machine often runs heavily, and sometimes seems to threaten to break down and stop altogether. But the very advantages which might reasonably be anticipated to follow from a successful economic plan make it all the more important that before immersing ourselves in the construction of a detailed programme, we should first consider certain essential preconditions without which no plan, economic or otherwise, can possibly succeed. One important reason why planning has sometimes ended in disappointment is the fact that these essential preconditions have not always been properly understood. Most of them, it will be seen, are obvious enough—some, indeed, are almost platitudinous—but history shows clearly that the logical barriers which ought to prevent thinking men from ignoring obvious first principles are often not nearly high enough to make possible the performance of their proper function.

II

First, then, will be attempted a brief analysis of the conditions which make possible the success of the simpler kinds of

plan to which reference has already been made. These conditions do not ensure success; that depends on the nature of the plan itself, and the extent to which it takes proper account of the objective limits and facts of the situation; but unless these conditions are in a large measure fulfilled, even the most cunningly-devised plan is likely to fail. The first obvious essential for a successful plan is that it must have a purpose, and further, that the purpose shall be known and understood; the extent to which this condition is realized will also, at the same time, determine to a large extent the success with which the plan can be adapted and varied to meet the exigencies of changing conditions. Changes are much more likely to be made intelligently and in the right direction if they are made in the light of some clearly-understood general purpose. Otherwise we shall be apt to mistake mere means for ends in themselves, and in endeavouring to follow the letter of the law which we have laid down for ourselves we may entirely sacrifice its spirit. Much domestic planning, indeed, fails precisely on that account. The planners forget the ultimate purpose of their plan, and fix their attention too narrowly on the means selected for the realization of the plan, forgetting the wider objective which the plan was designed to serve. And in general, it is obviously true that successful planners must know the purpose of their plan, and shall further be successful in getting those who are to co-operate in carrying out the plan to understand its purpose, too, though not necessarily in exhaustive detail. The general aims at defeating the enemy, or putting their army out of action; the management of a sporting tour aims at playing a given number of games with a certain level of skill, and in such a way as to arouse public interest and enthusiasm; the student aims at the accumulating of a body of knowledge, or at the attainment for himself of a position in which he will feel confident in expressing opinions about current problems of a particular kind; the business man aims, in the first place, at selling a certain volume of goods at remunerative prices, and secondly, at securing an adequate profit.

Curious though it may seem, in view of the enormous amount of discussion which has been devoted to economic problems, there is still no universally-accepted answer to the question, What is the proper purpose for a general economic plan? Most economists would say that the purpose of an economic organization, whether planned or not, must be the provision of the maximum average level of economic welfare for the com-

munity as a whole, paying due regard, at the same time, to the advantages of diminishing inequalities in the distribution of income. This, too, no doubt, sounds obvious enough, but, even if we leave out the question of income distribution, about which there are wide differences of opinion, this purpose for economic organization is certainly not universally accepted. Two or three years ago, when it was widely maintained that France was the most prosperous country in the world, the people who took this view clearly had in their minds some objective for an economic organization other than the maximum average level of economic welfare; for, judged by that test, France at that time was definitely poorer than Great Britain and some of the Scandinavian countries. Probably steadiness of employment was the ideal which people had in mind when they envied the alleged prosperity of France, but this was never clearly or definitely enunciated. Steadiness of employment is certainly desirable, but it is clearly a matter of degree how far we should be willing to sacrifice steadiness if as a result we could enjoy other economic advantages. Few people would prefer to our present fluctuations a state of affairs in which everybody was regularly employed, with an average income of only, say, one-tenth of that which is available to-day, but we have seldom faced the question how we should balance the relative importance of fluctuations in the regularity of employment and of a high average level of productivity. Many people in New Zealand talk, indeed, as if the object of our economic organization were the maintenance of a certain number of people employed in farming work, or the encouragement of exports, and the maintenance of a favourable balance of trade; in other countries people are concerned about economic domination, whatever that may mean, and in neither case is there any clear realization that the extent to which these things are important—if, indeed, they are important—must be subordinate to some wider, more fundamental purpose. The clash of ideals involved in deciding whether France or, say, the United States has been the most prosperous country in the world in recent years can be made still more obvious if we consider the difficulties which M. Siegfried, in his brilliant books on the United States and Great Britain, experienced in his endeavours to get inside the American and the British points of view. It is an exaggeration, but a pardonable exaggeration, to say that on the whole the French are not much interested in economic progress. That is one reason why the arguments which to most of the rest of the world appeared

irresistible in favour of a liberal revision of the financial clauses of the Peace Treaties failed for so long to arouse any approving echoes in France. The French were much more interested in other things. More important still is the difficulty arising in regard to income distribution. This, as will be seen later, brings us close to another essential precondition in planning, but it may be noted here that the character of our plan will depend in important respects on the character of the income distribution at which we think it proper to aim. Or the position might be even more serious if it were found that in order to be successful our plan must impose upon people who to-day occupy privileged positions a lowering of their standards, either absolute or relative, such as they would not voluntarily agree to accept. It is, of course, the essential communist thesis that effective economic reconstruction inevitably involves such sacrifices on the part of privileged groups as they will never accept unless under violent compulsion. Whether this view is correct or not, we need not here pause to consider, but it is clear that our thinking about planning will remain muddled unless we take into account not only questions of co-ordination of production, but also of income distribution. If our planning involves, for example, as it very well may do, a broader foundation of education for the whole population, we must be prepared to tolerate a considerable shrinkage in the income differences to which many people have become so accustomed that they now regard them as natural.

So long as this confusion as to the purpose of our economic organization exists, it will be immensely difficult to devise any satisfactory general economic plan. In the absence of general agreement on this question, people will waste much time and temper arguing at cross purposes; there will be great difficulty in making the changes and adaptations in the plan which will be demanded by changing circumstances, and the attempts made to carry out the plan will be less intelligent and effective because people generally will not sufficiently understand the objective at which the plan is aiming.

Successful planning, however, demands much more than a clearly-defined and generally-realized purpose. It also presupposes, in relation to the units whose activities are destined to make the plan effective, a considerable measure of control in so far as their actions impinge upon the plan. Each of us can to a large extent plan his own daily work, because we can control our own movements. A general of a well-disciplined army

has absolute control of his officers and men; the planners of a sporting tour have almost complete control over the members of the team, in so far as their actions affect the progress of the tour. The business man does not wield such complete control over the activities of his employees, but in normal times, if he acts with reasonable care, he can count on being able to determine fairly exactly what each of them is to do. The people who are going to carry out these plans are not perfectly free agents, or, at any rate, they have agreed beforehand to limit their freedom to such an extent that they may safely be considered for the purposes of the plan as being under control.

And further, the successful planner can usually count on a reasonable measure of continuity in the methods of production or activity which he and those under his control will be required to practise. The manager of a football team will not suddenly be called upon in the middle of the tour to stage a cricket match or to play football under entirely new rules. The successful general is usually fairly confident that his adversaries will not be springing any surprises upon him in the way of entirely new methods of attack. The business man cannot be so sure that production methods will not change, but certainly the task of planning is made much easier if such changes as occur are relatively small and gradual. Unchanging production methods are not an essential condition for the success of a plan, but the plan will have a much greater chance of success if this condition is realized.

Even in the simplest cases, then, we see that there are three general conditions which are either essential to the success of a plan or at least make success much more probable: first, a clearly-formulated and understood objective; second, a high degree of control over those actions of the people who are going to carry out the plan which are likely to affect its progress; and third, the absence of violent change in the methods of work which the plan is likely to call for. The confusion arising from lack of agreement about the purpose of economic organization has already been mentioned. Our next task is that of examining how far the other two fundamental conditions are likely to be realized in a general plan for economic development, either national or world-wide, or, what is, in effect, the same thing, we shall examine the difficulties which hamper the successful realization of the plans which are, in fact, implicit, though not always clearly expressed or understood in our existing economic organization.

III

For our present economic organization, obviously faulty as it is, is far from being a planless chaos. It does provide a machinery for the adaptation of the organization of production to changes in the demands of consumers and an examination of the conditions which make it difficult for this machinery to function with perfect smoothness and precision will, at the same time, throw light on the conditions which must, at any rate, be partially fulfilled if any comprehensive plan of economic reconstruction is to be successful. Adaptation of the economic organization to changes in the demands of consumers, on the one side, and to changes in production methods, on the other, is constantly taking place through the operation of variations in relative prices, causing changes in the activities of producers through the medium of variations in profits. If consumers generally demand more of a certain commodity, it is desirable that more of the community's productive forces should be directed towards the production of that commodity. Similarly, if a new invention makes it possible to produce some other commodity more easily than before, it is desirable that rather less than before of the community's productive forces should be directed towards the production of that commodity, the productive forces thus liberated being then available for use in other directions, formerly explored only imperfectly, if at all. These desirable redirections of productive energy are likely to be brought about, though often after much delay and friction, through movements upwards and downwards of the prices of the commodities concerned, these movements serving as signals to producers, indicating when more or less of a certain commodity should be produced. In practice, this system of signals often works very badly. Its indicators are constantly being distorted by defects in our currency system, which in times like the present, for example, have the effect of setting nearly all the signals at danger, so that nearly all producers are induced to believe that it is desirable that they should contract their output. Such a belief may be correct for certain industries, but for industry as a whole it is obviously absurd. The efficiency of the signalling system is also affected by monopolistic interferences and other upsetting influences. It is, however, more important to emphasize the fact that the response of producers to relative price changes is in reality the central kernel, so to speak, of our economic organization, and that, quite apart from all the defects of the mechanism itself, there are

certain difficulties of a still more fundamental nature, which make it unlikely that the machinery will work perfectly smoothly.

These fundamental difficulties are the failure to realize the conditions which were formulated earlier as essential preconditions for successful planning in any field of human activity. Our actions impinge upon the progress of an economic plan in two important departments of our life: first, in the way in which we spend our incomes; and second, in the way in which we choose and carry out our work. A successful economic plan demands a considerable degree of control over our actions in both departments, and it is largely on account of the absence of control of either kind that the organization based upon changes in relative prices and profits has failed to bring satisfactory results in recent years. At the same time, economic planners, so far from being able to count upon a reasonable measure of continuity in methods of production, have been compelled constantly to face the consequences of sudden and violent changes, requiring that the old game should be played according to entirely new rules. These facts must also be considered by anyone attempting to devise an alternative and more effective method of planning.

IV

Obviously, it is much easier to plan for the future if the future is going to be the same as, or very similar to, the past. But when the future changes rapidly, it is difficult to anticipate, firstly, what people are going to demand, and secondly, what will be the most effective way of meeting their demands. The basic facts which make any planning under modern conditions immensely difficult are the instability and variability of demand and the numerous and rapid improvements which have taken place, and are still taking place, in productive technique. The two are, of course, closely associated. Instability of demand means that people switch over their demands suddenly and unpredictably from one class of goods to another. There is no longer, for example, such a need as there was for the production of wool, as people now for many purposes prefer artificial silk; but the transfer of sheep-farmers into the artificial silk industry is by no means an easy matter, especially if the artificial silk industry happens to be developing in some distant country on the other side of the world. Such changes may occur at any time, but their number and importance are not likely to be great except in communities where the standard

of wealth is already fairly high, and especially where it is rising rapidly, both of which conditions were fulfilled in most industrial countries during the last quarter of a century, in spite of the losses inflicted by the war. The successful business man in recent years has had to anticipate how people whose wealth was increasing would spend their increased incomes. It is not surprising that many mistakes were made, for often the people whose wealth was increasing could not themselves have predicted how they were going to spend it. Business men have endeavoured, by means of large-scale advertising, to check the instability of demand, but though many of us apparently do not object to the pressure of advertisement, we still like, at least, to feel that we are free to buy as we choose. We do not like even to feel bound to buy systematically from the same shops, a factor which makes it difficult to eliminate the wastes involved in unco-ordinated retail business, and in particular hampers the development of the co-operative system of retailing. It panders to our sense of power, illusory though, no doubt, it largely is, to feel that we are free to sack our grocer or our butcher. Economic planning would be a much easier thing if we did not insist so strenuously on freedom of choice in the expenditure of our incomes.

The efficiency of economic planning is also diminished by the fact that we like to decide what work we are going to do, and what sort of business, if any, we are going to experiment with. This sort of freedom may be even more illusory than the other, especially in times of depression, but, nevertheless, we cherish our illusions, and like to pretend to ourselves that we are masters of our fate, free agents, and not merely doing what we have been ordered to do. Much of the ill-feeling which sometimes arises in connection with unemployment relief works is undoubtedly traceable to this fact. If a planning authority could tell people exactly what they were to buy, and could order them to do whatever work was regarded as necessary by the planning authority, then the task of planning would be much easier than, in fact, it is, and this is a central and fundamental fact, whether we are thinking in terms of the present economic order or of some substitute for it.

The difficulty of controlling producers arises in its most acute form, indeed, when we begin to think of co-ordinating the economic activities of two or more states. It is the essence of a progressive economic organization that there should be constant fluctuations in the relative distribution of our productive

forces, both of capital and of labour, as between different industries, but public opinion in most countries dislikes such changes, especially when they seem to imply a relative decline in the importance of industries which have been regarded in the past as the main sources of employment. If progress throughout the world, or, to take smaller geographical units, in the British Empire, or in the Pacific Basin, demands such changes, every country is convinced that the changes should be made somewhere else, that within its own borders the *status quo* in this respect should be maintained. Each part of the British Empire is willing to make concessions to the others, but only on condition that none of the industries which it regards as important are disturbed. Such a state of mind obviously stands in the way of any really systematic economic planning, which must inevitably involve some disturbance of vested interests. Similar difficulties would inevitably stand in the way of an economic plan for the Pacific. Vested interests in unequal income distribution further illustrate the same point.

The difficulties of rapid shifts in demand have undoubtedly been much intensified in recent years by the quite unprecedented improvements which have been made in methods of production, in agriculture and transport, as well as in manufacturing. The net result of these improvements has been twofold: first, a great increase in average productivity per head, which in itself has made possible much wider fluctuations in demand; and second, a need much more intense than we have ever known before for rapid transfers of labour and capital from industries which are now overmanned to industries which hitherto have been almost unknown. And the difficulty of deciding which are the new industries to be developed is the same as the difficulty of deciding how people with large incomes are going to spend those larger incomes. We do not need so many coalminers, because oil fuel is cheaper and more efficient, but in what direction the people who profit from the cheaper oil are going to spend their increased incomes, and how to get the coalminers into the industries which are going to meet these increased demands, are problems not to be solved by facile references to economic planning.

It is not, of course, suggested that these changes are not good. It would be very undesirable to discourage them, but it is important to realize that they raise serious difficulties for the economic planner, which people who are enthusiastic about planning must be prepared to face. Nor is it desirable to

exaggerate the importance of the "freedom" which we apparently enjoy in the expenditure of our income, and the inconvenience which would be caused if this "freedom" were to be limited. Freedom, indeed, is one of the numerous words which are used in such widely-varying contexts that it is often difficult to attach any clearly-defined meaning to it. It may well be that sacrifice of freedom in this sense is the essential pre-requisite for the exercise of freedom in other and much more fundamental senses. In some directions, indeed, control of demand would mean merely the exercise of rather more common sense than is at present usually displayed. Similarly, the reluctance of national groups to admit the necessity for a readjustment in the relative importance of the industries which have grown up in the past does not as a rule, in fact, protect them from that necessity. The adjustments must, in any case, be made sooner or later; if they are made unwillingly and under pressure, their consequences are likely to be more unpleasant than if they are carried out deliberately in accordance with a well-devised plan. Certainly, if we approve of planning, we must be prepared to discover that the plan cannot succeed unless we are willing to impose upon ourselves restrictions of a kind which on superficial consideration would appear irksome to some people. Such restrictions may, indeed, turn out to be the price which must be paid for the benefits of economic progress. We may be able to ensure an undisturbed enjoyment of the fruits of increased productivity only if we are willing to take out part of our increased dividends in such ways as are prescribed to us by a central planning authority. Many of the jolts which are still shaking the economic structure of the world are the result of the general reluctance to admit the fact that planning means increased control of individual and group action. People have attempted to carry out various partial plans, but, at the same time, they have insisted upon exercising the same degree of economic freedom as they enjoyed in the past; these two things were incompatible, and the plans broke down. Economic planning may be desirable or even inevitable, but the first lesson to be learned by enthusiastic planners is that we cannot at the same time enjoy the benefits of conscious planning and the fine feelings that go with complete economic freedom.

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THE RATIONALISATION MOVEMENT AND AUSTRALIAN INDUSTRY

- I. The Major Purposes of Rationalisation Abroad.
- II. Resultant Competitive Pressure upon Australian Industries.
 - (i) On Australian Home Market.
 - (ii) On Australian Overseas Markets.
- III. Structural Tendencies in Australian Industries in General.
 - (i) Statistical Measures.
 - (ii) Evidence of Elements of Rationalisation.
- IV. Structural Tendencies in Particular Australian Industries.
 - (i) Statistical Measures.
 - (ii) Evidence of Elements of Rationalisation.
 - (a) Primary and Secondary Concentration of Plant Operation.
 - (b) Concentration of Financial and Administrative Control.
 - (c) Improvements in Technical Processes.
 - (d) Scope for Fuller Rationalisation.

I

In a discussion of the ways in which the progress of rationalisation in other countries may be expected to influence Australian industries, it is important to emphasise the uncertainty of meaning which has gathered around the term rationalisation itself. Are we to consider it merely as minor though multitudinous manifestations of the attempt to achieve technical and operative efficiency in industry, or are we to think of it as a doctrine of comprehensive change in the structure of whole industries?

Most of the current discussion of rationalisation stresses the first rather than the second of these viewpoints. This has at least the merit of being realistic. Much more progress, as might be expected, has been achieved in what might be called the lower than in the higher stages of rationalisation in Europe and America. That is to say, there has been more progress in the drive for waste-eliminating organisation, administration and operation within the business unit than within industries or groups of industries as a whole. But rationalisation is a process with large social purposes. It presses towards a goal of more conscious, co-ordinated national and international planning of economic life. Coherency and unity of purpose may be said to be the keynotes of its more ultimate aims for industry. Neither the one nor the other may yet be a marked feature of the

rationalisation movement in countries outside Germany. None the less, wherever effort is being put forth to secure technical rather than monopolistic advantages by centralised control of production and marketing, combined with a standardising, simplifying and mechanising of processes, we may look for evidence of rationalisation at work.

It is the purpose of this paper to examine some aspects of the influence which the rationalisation movement in other countries is likely to exercise on our own industries. Imitation and suggestion may be expected to be one medium of such influence. But influence will come most powerfully through the pressure felt by our producers, either on the home or export markets; consequent on any competitive advantages gained through rationalisation by industries abroad. It becomes of interest, therefore, to ask which of our existing industries are most open to these influences.

It is possible to urge that this question has only an academic interest because sufficient protection or shelter either is already afforded to our industries or will be as the menace of stiffer competition from imports increases. But is this not precisely the kind of false argument of escape to which Australians are all too ready to resort? It is at least the duty of economists to be eternally protesting against reasoning of this sort. We must assume that, in so far as rationalisation abroad *does* realise progressive economies for overseas producers, it is exercising an influence tempting our own producers to a misuse of the tariff, unless they, too, by their own advance in efficiency, are achieving progressive lowering of costs.

II

In view of the progressive rationalisation of industries in countries abroad—in Germany, the United Kingdom, the United States, France, Belgium, Italy, Holland, Switzerland, and Czecho-Slovakia—a selection, for the purposes of this inquiry, may be made of those Australian industries which are subject to some present degree of competition on our home market from the corresponding industries undergoing rationalisation overseas. This selection is given in Table II. Table III presents in like manner a selection of Australian industries which, for similar reasons, may expect intensified competition on their export markets. Because of the high degree of protection or shelter enjoyed by most of the industries in question, it may be assumed that they command the bulk of the home market for those types

of product for which there is the most considerable demand. The portion of the market served by overseas producers, except where the products are raw or processed materials required for Australian manufacture, will be represented in the demand for a wide variety of specialised products. The demand for these tends to split up into small lots. The varied, specialised and parcel nature of this demand constitutes the main unfettered opportunity for the overseas manufacturer on the Australian market, because it does offer something like an effective bar against Australian manufacturers entering these fields of production. Nevertheless, as will be shown later, there has been a strong disposition, and a rather unwise one, for Australian producers to engross this minor portion of the total home market at a cost in overhead disabilities which were not anticipated.

These considerations of existing and potential command of the Australian market raise fundamental questions. Can further rationalisation of Australian industries enable our producers not only to keep their hold of the major part of the Australian market without resorting to the heights of protection which cancel out protection, but also to appropriate a greater share of the remaining market now served by specialised overseas products? Is it desirable that our producers should pursue this double aim? We may put the question another way by asking whether there are desirable limits to economic autarchy for Australia. The question was given practical and immediate significance at Ottawa. Britain urged upon the Dominions that their tariff rates "should be so graduated as to give British products a reasonable chance of competing on even terms; also that the duties against British products should be fixed for protective purposes no higher than is necessary to give a fair chance to reasonably efficient Dominion industries."¹ The embodiment of this principle in the Ottawa Agreement may be interpreted as a very desirable brake upon excessive economic nationalism in the Dominions.

Answers to questions of this kind will shape themselves, at least partially, by inquiring whether our industries, severally or as a whole, exhibit "reasonable efficiency"; or, if that task be too difficult because "reasonable efficiency" in a Dominion industry is to be gauged by opinion rather than by an objective standard, by asking what conditions in our industries either favour or deter the adoption of those measures of rationalisation which are claimed to increase efficiency elsewhere. It is a

1. Statement of Mr. Stanley Baldwin, leader of the British delegation to the Ottawa Imperial Economic Conference, at Ottawa, July 28, 1932.

preliminary and tentative inquiry of the second kind which is attempted here. It will focus, as far as possible, upon those structural aspects of our industries which reveal the degree of concentration of plant operation, and which may be suspected of having revealed or of being in the way of revealing the optimum magnitude for the unit of operation or control, and upon discernible tendencies towards greater mechanisation and improvements in processes.

III

It is desirable in analysing the structure of any industry to distinguish the degree of concentration represented in the growth of the *number* of larger-scale units from the growth in scale of the largest units. These distinguishable though obviously related forms of concentration we shall call respectively, for the purpose of description, primary and secondary concentration. A further distinction should be drawn between concentration of or within productive units or plants and concentration in the business control of related plants. These several distinctions are relevant to the question how far forces are working for or against greater rationalisation of production and marketing in Australian industries.

For a generalised picture of these structural differences in our industries, as well as for time series which might reveal the tendencies in mechanisation and improvements in processes, the published statistical aids are lamentably inadequate. Such relevant aggregate figures as are available are shown in Table I.² The table presents a better picture in outline of the *growth* of our manufacturing industries (mining, agricultural and other primary industries are not included) than of the factors with which we are here concerned. By comparison of percentage differences as between the earliest and a late year in the period covered, there is certainly suggested (i) a movement away from rather than towards greater primary concentration, as measured by the disparity in the growth of "factories" and employees; (ii) a considerable growth in mechanisation, as measured by the increase of value of plant and machinery and increase of horse-power used; (iii) a very uncertain tendency in "reasonable efficiency", as measured in production values. But the comparison of aggregate "factory" and aggregate employee figures is a highly misleading indicator of trends in concentration. This is so partly because the real degree of concentration is certain

2. Drawn from data in Commonwealth Production Bulletin.

TABLE I

Growth of Australian Manufacturing Industries, 1919-20 to 1930-31

Year.	Number of Factories	Hands Employed	Average Employees per Factory	Value of Output £m	Value of Production (Value Added) £m	Value of Production per Employee £	Net Horse-power used in Factories ,000	Net Horse-power per Employee	Value of Plant and Machinery £m	Value of Land and Buildings £m
1919-20	16,291	376,734	23.1	293	105	278	418	1.1	60	53
1920-21	17,113	386,639	22.6	324	118	305	462	1.2	69	61
1921-22	18,023	395,425	21.9	320	122	309	501	1.3	78	67
1922-23	19,173	412,410	21.4	326	132	321	523	1.3	86	74
1923-24	20,189	429,990	21.3	349	141	328	568	1.4	96	83
1924-25	20,795	439,949	21.2	381	147	334	613	1.4	109	91
1925-26	21,242	450,920	21.2	400	155	344	689	1.5	112	96
1926-27	21,579	452,184	21.7	409	162	359	695	1.5	117	103
1927-28	22,775	449,728	20.4	417	167	371	730	1.6	121	110
1928-29	22,916	450,482	20.1	420	168	373	754	1.7	125	114
1929-30	22,700	419,194	18.5	391	156	372	770	1.8	128	118
1930-31	21,751	338,113	15.1	291	118	350	746	2.3	124	112
Percentage Increase or Decrease 1919-20 to 1928-29	+40.6	+19.5	-13.0	+43.3	+60	+34.1	+80.3	+54.5	+108.3	+115.0

to be obscured by the presence in almost every industry of a cluster of very small units statistically described as though in no realistic sense factories as ordinarily understood; partly because official figures of "factory" returns refer to separate industrial processes, even though they contribute in the same premises to the production of a single finished commodity; and partly because, with the substitution of mechanical for manual operations, the disparity between the growths of aggregate capital, aggregate output and aggregate employees can of itself tell nothing reliable about change in the magnitude of the unit.

If the influence of the growth in numbers of the very smallest units be eliminated from the figures of "factories" as a whole,³ and if the secondary trends be examined in those industries which give the most considerable weighting to total production values, it will be discovered that, from 1919-20 to 1928-29, there has been a definite tendency to *enlargement* of the bigger units, a fact apparently belied by the decreasing figure of average number of employees per factory. We may conclude that there has been more concentration, both primary and secondary, of factories responsible for substantial output during the post-war period than is indicated in the official statistics. The accentuated falling off in the average number of employees per factory for the depression years 1929-30 and 1930-31 certainly has special significance, not because it spells any marked contraction in the capacity magnitude of the larger units, but mainly because of the drastic but temporary laying-off of employees in these units. It will be observed that for 1930-31 the writing down of plant and machinery and of land and building values has been slight compared with the fall in production and output values. This slight recession may, as suggested by the Acting Commonwealth Statistician,⁴ be partly accounted for by the probability that book values had in earlier years been written down by many concerns below their market value. What is more significant, however, is the impossibility of writing down interest commitments on that portion of the increasing values in recent years for these items represented in entirely new equipment. The same difficulty applies to the new installations made in the depression period by establishments which have tried to retain their competitive position by the offer to consumers of new-style products or of lower-priced

3. The proportion of small concerns has been given an adventitious increase in recent years by the inclusion, from 1927-28 onwards, of bakeries, hitherto omitted.

4. Preliminary summary of statistics of manufacturing industries for year ending June, 1931, issued 25th May, 1932.

TABLE II

*Concentration in Australian Industries Subject to Competitive Influence of Overseas Rationalised Industries
Selling on Australian Home Market, 1929-30*

(Neglecting Counter-influences of Protective Tariffs and Bounties. P = Protected for Full Output;
Pp = Protected for Part of Output; S = Sheltered; U = Unsheltered)

Industry		Value of Output £m	Aggregate Employees	No. of Units in Industry	Average Number Employees Per Unit	Modal Interval Employees	101 Employees and Over				51 to 100 Employees				50 Employees and Under			
							Units		Employees		Units		Employees		Units		Employees	
							No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Woolen and Tweed Mills	P	6-961	11,909	59	205	101 and over	28	57	10,796	90-8	11	18-9	766	6-4	14	24-1	347	8-0
Knitting Factories	P	6-525	12,511	268	47	21 to 50	23	8-8	7,404	59-9	22	8-2	1,548	12-8	223	88-2	3,559	27-8
Cotton Mills	P	3-98	1,241	22	56	21 to 50	3	13-6	663	55-0	4	18-1	292	21-1	15	68-3	296	23-9
Boot and Shoe Factories	P	8-842	17,859	344	50	21 to 50	56	16-3	9,920	57-1	51	14-8	3,520	20-2	237	68-9	3,919	22-7
Leather Goods Factories	P	1-823	2,374	124	20	5 to 10	4	3-2	631	26-8	5	4-0	367	15-5	115	92-8	1,371	57-9
Rubber Works	P	6-400	6,961	245	29	Under 4	10	4-1	5,776	83-0	—	—	—	—	215	95-9	1,185	17-0
Match Factories	P	7-47	1,040	7	160	101 and over	3	43-0	850	84-5	2	28-6	165	15-8	2	28-4	25	2
Confectionery Factories	P	6-568	7,309	254	29	Under 4	13	5-1	4,884	66-8	11	4-1	745	10-2	230	90-8	1,680	23-0
Electrical Apparatus Factories	P	3-234	5,669	257	22	Under 4	11	4-3	2,288	40-9	14	5-5	1,101	19-5	232	90-2	2,270	30-4
Paper Mills and Factories	P	3-911	5,204	135	38	21 to 50	11	8-1	2,036	39-1	18	13-3	1,241	23-8	106	78-6	1,927	37-1
Ironworks and Foundries	Pp	13-343	12,781	399	32	5 to 10	35	8-8	7,016	55-0	30	7-5	2,115	17-3	334	83-7	3,650	27-7
Agricultural Implement Works	Pp	2-368	4,479	148	30	Under 4	6	5-4	2,720	60-7	5	3-4	848	7-7	135	91-2	411	31-6
Engineering Works	Pp	9-412	15,487	759	20	Under 4	31	7-7	5,237	41-0	47	1-2	3,308	26-0	321	91-1	4,236	33-0
Galvanised Ironworking Plants	Pp	4-721	6,623	334	20	5 to 10	9	2-7	2,271	34-3	16	4-8	1,071	16-1	309	82-5	3,281	49-6
Brass and Copper Plants	Pp	2-360	2,874	190	15	5 to 10	3	1-5	730	25-4	5	2-5	339	11-8	191	96-0	1,305	62-8
Chemical and Drug Factories	Pp	4-167	5,432	171	20	5 to 10	4	2-3	900	26-2	14	8-2	947	27-6	153	89-5	1,585	46-2
Chemical Fertiliser Works	Pp	5-371	2,277	37	61	101 and over	9	24-3	1,897	61-3	8	21-6	577	25-3	20	54-1	303	13-4
Timber Mills	Pp	9-423	13,742	1,193	12	5 to 10	7	—	1,000	7-2	31	2-7	2,289	16-6	1,130	96-7	10,453	76-2

TABLE III

*Concentration in Australian Industries Subject to Competitive Influence of Overseas Rationalised Industries
Selling on Australian Overseas Markets, 1929-30*

Industry		Value of Exports 1929-31 £m	Aggregate Employees	No. of Units in Industry	Average Number Employees Per Unit	Modal Interval Employees	101 Employees and Over				51 to 100 Employees				50 Employees and Under			
							Units		Employees		Units		Employees		Units		Employees	
							No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Butter, Cheese, and Condensed Milk Factories ..	S	8-975	5,840	509	10	5 to 10	5	1-0	809	16-2	8	1-8	452	8-4	406	97-5	4,028	75-4
Bacon and Ham Fac- tories ..	S	-115	1,710	69	25	5 to 10	4	5-6	511	29-9	8	11-8	574	34-0	57	82-6	626	96-1
Tinned Meat Works	P	-143	4,355	34	128	101 and over	14	41-1	3,894	89-4	4	11-8	234	5-4	16	47-1	227	5-2
Tinned Fruit and Jam Factories ..	P	-610	4,497	77	58	5 to 10	11	14-3	3,147	70-0	9	17-7	618	14-0	57	66-0	732	16-0
Dried Fruit Plants	Pp	2-250	947	53	16	11 to 20	—	—	—	—	1	1-9	53	6-2	52	98-1	794	98-8
Flour Mills ..	Sp	3-514	3,362	162	20	5 to 10	1	-6	180	5-5	13	8-0	871	26-4	145	91-4	1,311	68-1
Biscuit Factories ..	P	-082	3,360	68	78	5 to 10 11 to 20 Under 4 5 to 10	7	14-6	2,726	75-1	7	14-1	479	13-2	34	70-8	425	11-7
Soap and Candle Fac- tories ..	P	-260	2,162	90	24	5 to 10	6	6-7	1,344	62-1	7	7-8	447	2-1	77	85-8	371	35-8
Boot and Shoe Fac- tories ..	P	-021	17,359	844	50	21 to 50	58	18-3	9,920	57-1	51	14-8	3,520	20-2	237	68-9	3,919	22-7
Rubber Goods Works	P	-048	6,061	245	29	Under 4	10	4-1	5,778	83-0	—	—	—	—	215	96-9	1,185	17-0
Tanneries ..	Pp	-387	3,535	143	26	5 to 10	6	4-2	1,044	29-0	16	9-8	975	27-0	123	86-0	1,566	44-0
Chemical Fertiliser Works ..	Pp	-006	2,277	37	61	101 and over	9	24-3	1,397	61-3	8	21-3	577	25-3	20	54-1	303	13-4
Timber Mills ..	Pp	-323	13,742	1,168	12	5 to 10	7	-6	1,000	7-3	31	2-7	3,289	16-6	1,130	96-7	10,453	76-2
Metal Extraction Works ..	U	5-025	4,967	39	181	5 to 10 101 and over 5 to 10	11	28-0	4,531	91-2	2	5-2	155	3-1	25	65-8	231	5-7
Coal Mines*	S	-413	23,461	185	128	5 to 10	58	31-3	20,377	86-8	21	11-8	1,471	6-3	106	57-4	1,333	6-9

*The employment figures for coal mining represent the numbers of men still "attached" to coal mines in 1929. Actually, on account of the extended stoppage in that year, only 14,577 were employed.

commodities produced by new machinery or more massive operations. There has been some tendency thus to counter the increasing ratio of overhead charges by a larger output, and to depend upon such advantages as may accrue from greater turnover at lower selling prices as a substitute for disappearing normal profits on lower output.

IV.

We may now turn to a more particularised picture of the structure of our industries. Tables II and III are intended to show the degree of concentration in Australian industries likely to be affected on their home and export markets respectively by stronger competitive power accruing to similar industries already strongly under the influence of the rationalisation movement overseas. Again, we meet with the limitations of statistical aids. Little significance, for instance, is to be attached to the absolute number of units of production or "plants" or to the absolute number of employees in each industry, except in so far as the latter figure suggests the relative importance of the industry as a source of employment in the national economy. Nor is much importance to be given to the average number of employees per unit, save as a very uncertain index by which to compare industries by average size of unit, and as an aid in conjunction with the modal interval in the distribution series of units arranged according to number of workers employed. Our official publications do not show the spread of units, in terms of employees, in the interval "101 and over". In the absence of this subdivision of the interval, it is difficult to get an adequate picture of the degree of secondary concentration. Only a rough measure may be made by the percentage columns in the tables.

If we relied solely on these figures, it would be inferred that only five of the industries concerned—woollen and tweed textiles, matches, chemical fertilisers, metals and tinned meats—have as their most representative plants those which employ over 100 workers. With no industries having a modal interval of from 51 to 100 employees, and only four of from 21 to 50, it might be thought that the *typical* unit in the majority of the industries is a small one employing under 20 people (about half of them with between five and ten employees), whilst at the other extreme the typical unit in less than half a dozen is relatively large. Whatever degree of truth is in these inferences is made less sure by the classification of widely different types of commodity production in the same group, an arrangement which

obscures the importance of some units of large scale in certain industries. Thus the figures are particularly misleading for the group "Ironworks and Foundries", which includes the great iron and steel enterprises at Newcastle and Port Kembla, with about 4000 and 1000 employees respectively; for "Agricultural Implements", in which the predominant enterprise employs approximately 2000 people; for "Rubber Goods", with one factory alone employing over 1000; and for "Coal",⁵ in which one N.S.W. mine, in normal conditions, has 1165 employees, and 36 others, each with a working staff ranging from 200 to 800. Much the same assertion may be made of all the remaining groups.⁶

Despite the imperfections of the statistical aids, they may—and, indeed, must—be used in conjunction with general observation and inquiry in appraising the factors here being discussed. Statistics suggest, and observation confirms, a considerable though somewhat lessening degree of primary concentration, *i.e.*, percentage of all units in the larger employment intervals, at the present stage, as compared with the immediate post-war years, in the development of our economy in (i) woollen and tweed mills, (ii) match factories, (iii) tinned meat works, (iv) coal mines, (v) metal extraction works, (vi) chemical fertiliser works, (vii) boot and shoe factories, (viii) biscuit factories, and (ix) canned fruit and jam factories. There is suggested also a considerable degree of secondary concentration, *i.e.*, percentage of all workers concentrated in the largest units in (i) tinned meat works, (ii) metal extraction works, (iii) woollen and tweed mills, (iv) coal mines, (v) match factories, (vi) rubber goods factories, (vii) biscuit factories, (viii) canned fruit and jam factories, (ix) confectionery factories, (x) soap and candle factories, (xi) chemical fertiliser works, (xii) knitting factories, (xiii) agricultural implement works, (xiv) cotton mills, and (xv) iron and steel works. In all of these instances more than half the employees of the industry are concentrated in plants employing over 100 people. The nature of the production of an industry will, of course, determine whether a given number of workers employed makes a unit large, medium size or small. Thus a coal mine with 100 employees would not be large in the present stage of the development of the coal industry, whereas

5. The modal intervals for Coal Mining were worked out from the data contained in the Mining Inspectors' district reports included in the Annual Report of the Mines Department of N.S.W. for 1929.

6. Other interesting examples: At least half a dozen woollen and tweed mills have working forces ranging from 400 to 800; at least three knitting factories with from 550 to 900; one cotton mill with nearly 500; one confectionery factory with nearly 300, another with nearly 600, another with over 700, and the largest with nearly 2,000; one galvanized iron working plant with over 450, another with over 870.

a flour mill or a dried fruits packing factory with a similar number would be very large.

Rationalisation, as a movement towards elimination of redundant productive capacity within industries, implies increased and more deliberate concentration, both primary and secondary. The possibility of increased concentration and control of productive capacity will be conditioned by factors peculiar to each industry. In Australia further primary concentration in all the industries which have exhibited it already in considerable degree will first be countered by geographical requirements. In most cases there is the desirability of having plants, in view of transport costs, at points most convenient for the distribution of the product throughout several metropolitan or large town centres, and the territory most readily served by them. This will apply more particularly to woollen and tweed mills, chemical fertiliser works, and, to a lesser extent, to boot and shoe factories, biscuit factories, match factories and jam factories. Other industries will find themselves obliged to have plants at separated sources of their raw materials. This will apply particularly to coal mines, metal extraction works, tinned meat and meat freezing works, canned fruit factories, timber mills, butter and cheese factories, dried fruit grading, processing and packing sheds and factories, and other industries of like nature. Yet, despite these geographical requirements, there is evident scope for elimination of redundant units, particularly with boot and shoe factories, coal mines, timber mills, butter factories, and dried fruit packing sheds.

Another factor countering the tendency to primary concentration will be the extent to which the tendency has already gone, as indicated by the absolute number of units in the industry and the proportion represented by the larger size. Thus there is little scope in the match industry, in which there are only seven factories, one of very large scale with about 650 employees, and two others with about 100 each. On the other hand, there is apparently plenty of scope yet for an increase of larger units, with displacement of smaller, in woollen and tweed mills, and in many industries tempting to the small would-be producer, such as the making of confectionery, knitted goods, wearing apparel of all kinds, and some rubber products.

As to secondary concentration, which may arise from the expansion of already substantially big units or from the amalgamation of a number, both big and little, a factor of importance likely to hinder further development will be the uncer-

tainty how far the initial costs of scrapping some plants, or the transfer of their equipment to one centre, or the installation of larger-scale new equipment in one centre, will lead to the appropriating of a larger share of the market, permit the substitution of mass for "jobbing" methods of production, and not create conditions for the emergence of those overhead costs peculiar to great size. The uncertainty is a very real factor in Australian conditions of manufacturing, because the wide variety of consumption which marks our high standard of living tempts the producer seeking to enlarge the scale of his operations to widen their range at the same time. That is to say, whilst seeking on the one hand to achieve the economies of larger output, he tends, on the other hand, to spread his capital resources over equipment for the production of a variety of articles. If he does not succeed in relatively short time in appropriating a larger share of the demand for most of these varieties, he finds himself loaded with a costly equipment suited probably for mass production but used only for the "jobbing" work of small and perhaps intermittent orders. In these conditions overhead costs become a menace which smaller units, with a narrower range of operations and output, may escape.

There can be no doubt that the contraction of demand which has been a feature of business in the last two and a half years has sharpened difficulties of this kind for the largest enterprises in many of our industries. Old doubts have become new certainties. One of these has been concerned with the wisdom of building up businesses to a size which, even in palmier times, threatens to be unmanageable, or at least which induces wastes of either inadequate co-ordination or its opposite expressed in excessive supervision, record-keeping, accounting systems, and the like. In other words, it has been found possible to carry secondary concentration too far in Australia. This is because overhead may grow to proportions difficult to adjust not only to these recent conditions of sharp falling off in demand and price, but also to a demand ordinarily so split geographically and in variety as to give better opportunities in many industries to producers of small and middling size.

These considerations will not apply to all industries in equal degree. In the iron and steel industry, for instance, the requirements of technique have driven organisation very far in secondary concentration, but wisdom has dictated a narrowing of the range of the products of the steel rolling mills to a limited number of "bread and butter" lines. This limitation or range has

not been noticeable, nor perhaps so possible in view of the dominance of style changes, in the rubber industry, where likewise secondary concentration has proceeded very far. Agricultural implement making occupies a position somewhere between the iron and steel industry on the one hand and the rubber industry on the other. The tendency to enlargement of the very few big knitting factories possibly carries with it dangers in view of the low overheads possible to the numerous small "family" factories which have been springing up rapidly. The same note may be sounded about the confectionery industry. The larger engineering and foundry establishments appear also to be facing the dilemma of mounting overhead, with inability to make an industry ill-fitted for large output of standardised products narrow its range of jobbing operations.

The discussion so far has been concerned with the question of concentration of plant operation rather than with concentration of financial and administrative control. These two sorts of concentration are distinguishable, for the reason that the former may be an internal adjustment of several processes in the one enterprise, whereas the latter implies the unifying of control of processes of two or more separate enterprises. In recent years there has been a noticeable movement towards organic fusion of industrial undertakings in Australia. The industries in which this tendency has been most noticeable have been rubber, iron and steel, fertilisers, coal, cement, salt, textiles, distilleries, glue and gelatine, electrical goods, gypsum products, and newspapers. Prime objectives of these mergers have been the reduction of over-capacity, more even distribution of the work of units, machinery and employees, a consequent reduction of overhead, and a stabilising of the market. The amalgamations in most of these groups have been too recent to permit conclusions as to their effect upon over-capacity, particularly as the depression has augmented capacity in almost every industry. The chief result so far has probably been to strengthen the competitive position of the combined concerns. But this advantage has not been attained to the degree of expectations in some cases because the agreement binding members of the combine has permitted a measure of internal competition between units, and in others the agreement has obliged the uneconomical buying of raw materials by one unit from another unit in the same organisation. Furthermore, in several of the industries concerned new independents have not refrained from entering the field, even though several of the formidable combinations are able to

claim that their plants could, in their respective spheres, meet the whole of the requirements of the Commonwealth.

The amalgamations of recent years cannot be said to have gained an overwhelming conviction that large-scale industrial structure in Australia makes easy the path to conquest of the market. The difficulties which have surrounded the management of the largest concerns in the present period of abnormal business conditions have revealed certain weaknesses of large-scale structure as such. In so far as the appreciation of these weaknesses becomes more widespread, it is likely that the general movement towards larger-scale will become more discriminating, and perhaps less rapid, in any period of general recovery which may lie ahead.

It is doubtful how far the increases of figures of horse-power used or of value of plant and machinery in Australian manufacturing during the post-war period (see Table I) may be read as evidence of rationalisation. Growth of machinery which takes over manual operations and gradually alters the ratio of mechanical and manual factors has become a normal accompaniment of the changes in twentieth century technique. What, then, among these changes can be said to be distinctively evidence of rationalisation? It is very difficult to give a convincing answer. All one may venture to say is that, in so far as rationalisation means a more conscious, deliberate and aggressive attempt to eliminate wasteful methods, involving a new spirit of scientific initiative, any *marked* improvement in technical processes in a short period may suggest evidence of its existence in an industry.

Judged by such a test, Australian industries present a mixed picture. A large range of our industries have, since the war, shown no marked changes in the ratio of mechanical equipment and labour employed. Amongst these are to be found those industries in which the scope for mechanical processes or their extension is not great—such as the processing of dried fruits, the canning of fresh fruits and meats, and the manufacture of biscuits, chemicals and drugs, soap and candles, and leather goods. The range also covers such industries as boots and shoes, confectionery, flour, fertilisers, paper, matches and engineering. The mechanical operations in some of these industries are fairly extensive, and in some instances intricate, but they have not undergone, or have not needed to undergo, much adaptation, even, as in the case of boots and shoes, in the face of frequent style changes. Amongst the industries, on the other hand, which

have shown considerable technical change over a short period are first the textile group—woollens and tweeds, and cotton and knitted goods—which, together with rubber shoe manufacture, have had to make constant and costly adjustments in machine equipment. Here, as in certain sections of the boot and shoe industry, competitive opportunities have lain in following and fostering rapid style changes, but at greater equipment expense because of the nature of the processes. New and costly installations have also been a feature of the larger iron and steel enterprises which have sought to keep abreast of the latest developments in blast-furnaces, coke-ovens and the like in Europe and America. And there has, within recent years, been a marked progress in other metal extraction industries—new engineering developments at Broken Hill, including a combined electrical power installation based on the newest European uses of the Diesel engine, new technical methods on the Mt. Isa lead-zinc-silver ore field, and new ways of handling copper ores in Tasmania. A few of the largest N.S.W. coal mines have shown a similar tendency, though coal mining generally in Australia has tended to become less rather than more mechanised. Finally, there deserve mention the noticeable development in technical refinements in butter manufacture and the successful progress in kiln seasoning by some enterprises in saw milling. The improvements in butter manufacture have not involved much expensive mechanisation; those in saw milling have done so. Both industries, however, may fairly be credited with showing something of the rationalising spirit.

Another, and perhaps even more significant evidence, of rationalising procedure in the Commonwealth in the post-war years is to be found in the steady but unobtrusive work of the Standards Association of Australia. The problem of evolving standards and more simplified practice for general acceptance in Australian industries has proved a very stubborn one; but progress, though unequal as between different industries, has been substantial in some directions, notably, in steel rails and structural sections, cement and electrical equipment. The engineering industry is at a focal point in this movement, but, as the general service nature of the industry in Australia imposes natural limits to specialisation, the adoption of standardisation and simplification may be expected to be slow and gradual. The engineering industry in Germany, it may be remarked, by adapting its technique to provide other industries with the technical means for rationalisation, has been of fundamental importance

to the movement in that country. Most of the advanced mechanical equipment required by industries in Australia is imported, and to that degree the engineering industry in this country need not be expected in any advance of rationalisation to play quite the important role of its counterpart in the older industrial countries; but its importance in this respect may be expected to increase rather than diminish.

Certain tentative conclusions may be drawn from the foregoing discussion. The first is that competitive pressure from overseas has in Australia produced a discernible movement towards greater concentration and improvements in technical processes in unequal degree in different industries. In some, however, there has in both or either of these respects been a noticeable lag, not always justified by necessity. In some, the effort by leading enterprises to build up large units in order to achieve larger output has been frustrated by too wide a spread in the range of operation. This has been as much a result of mutual competition between Australian producers as a result of competition from abroad. It does throw considerable doubt on the policy of attempting to appropriate too much, whether by a few Australian producers as against the rest, or by all Australian producers as against those overseas. It may further be concluded that the rationalisation movement in other countries will continue to exercise a competitive pressure on our industries, and that this, on the whole, is a desirable thing from the national standpoint, because it presses towards "reasonable efficiency". The fundamental conclusion, however, is that industrial rationalisation for Australia needs to be concerned as much about the optimum distribution of overseas and local service of our internal market as it does about structural and technical questions.

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THE CRISIS IN NEW ZEALAND¹

- I. The Situation prior to the Crisis.
- II. The Onset of Depression.
- III. Internal Aggravating Factors.
- IV. Measures of Readjustment taken prior to 1932.
- V. The Economic Report.
- VI. Readjustment still Incomplete.

I

The situation in New Zealand prior to the depression was characterized by the following conditions:—

- (1) A national income of £186 millions in 1925-26 and £150 millions in 1928-29, or about £100 per head of population. This figure is equal to the corresponding Australian figure.
- (2) Annual overseas interest obligations increasing from about £5 millions in 1921-22 to £8½ millions in 1929-30, on account of general government and local body indebtedness; or an average of £5½ per head. One-sixth of the total figure is accounted for by local body debt. The corresponding Australian figure was £4½ per head, one-twentieth being accounted for by local body interest obligations.
- (3) Annual net new overseas borrowings of about £6 millions, or £4 per head. The corresponding Australian figure was about £5 per head. These borrowings kept business on a high level, helped to sustain prices, and augmented the national income.
- (4) The difference between external credits and debits was in the case of New Zealand met by an annual excess of exports over imports averaging some £3 millions, though this difference was subject to fluctuations (due to the greater sensitiveness of export prices) within the normal limits of about plus £11 millions and minus £4 millions annually.
- (5) Such a state of balance in the New Zealand Consolidated Fund that on only one occasion since the late 'eighties did the published figures show an excess of

1. The figures quoted in this article are drawn from official information; notably the Australian Commonwealth and New Zealand Official Year Books, the New Zealand Monthly and the Australian Quarterly Abstracts of Statistics, and the Report of the Economic Committee, 1932. The writer is indebted to Professor H. Belshaw, Auckland University College, for a number of helpful suggestions.

payments over receipts up till the year ended 31st March, 1929. In Australia, on the other hand, the national accounts had been showing a tendency not to balance for some time past.

II

On this situation there impinged the following influences, mostly originating overseas:—

- (1) A sharp fall in commodity prices, increasing the real burden of fixed money indebtedness and other contractual obligations expressed in terms of money.
- (2) A greater fall in the prices of exportable goods than in the prices of imports:—

Index Number (Wholesale)

(1909-13 = 1000)

Year.	General.	Imported Goods.	Exportable Goods.
1924	1634	1534	1788
1925	1627	1516	1893
1926	1553	1437	1540
1927	1478	1876	1525
1928	1492	1846	1683
1929	1488	1342	1623
1930	1449	1332	1288
1931	1836	1309	984
1932 (June) . .	1299	1288	849

These drops over the last two years would have been about 10% greater but for the exchange movement, whereby £110 New Zealand roughly equal £100 (sterling) to-day. The drop in the prices of imported goods has been retarded also nearly a further 100 points because of the enormous increases in the tariff on petrol, wheat, flour, and smaller increases in respect of practically the whole range of imported goods.

The fall in prices of New Zealand exports was not, however, as great as the corresponding fall in Australia, the fall to first quarter, 1932, since 1926-27 being 42% in the case of Australia (in Australian currency) and 40% in the case of New Zealand (New Zealand currency). In terms of sterling, the falls have been 63% Australia and 45% New Zealand.

This maladjustment led to:—

(a) Serious financial difficulties for the producers for export, who, to the extent of some 95% of the exports, are farmers.

The following figures (base 1914 = 1000), if anything, paint the picture of the farmer a little too rosy, as there is reason to suppose the returns to the farmer have fallen more sharply than the index number of export prices because of the sluggishness of costs of processing and transporting farm produce between the time the goods leave the farmer and the time they are shipped for export. It is unfortunate that fuller details are not available as regards these latter costs.

Calendar Year.	Index Number of Farm Costs (including wages).	Index of Export Prices of all Pastoral and Dairy Produce.	Male Adult Money Wages.	Retail Prices.
1924	1586	1649	1533	1567
1925	1582	1747	1556	1599
1926	1555	1407	1579	1608
1927	1574	1396	1604	1594
1928	1642	1548	1656	1602
1929	1636	1492	1658	1599
1930	1628	1168	1665	1562
1931	1490	881	1542	1447

The fundamental cause of the depression in New Zealand is stated in the Economic Report² to be the "fall in export prices, combined with the failure of other prices, including interest, rents, wages, fees, taxes, and other payments for services, to fall in sympathy. These differences in price movements are due, in the main, to the retarding influence on some prices of contract, agreement or custom." Thus the farmer or business man whose products are falling in price is faced with interest payments which are fixed for a considerable period, while changes in the wages and salaries paid to his employees tend to lag behind changes in the prices of his goods. "Hence, profit margins shrink rapidly, and may disappear. This leads to a further curtailment of demand, so that a further fall in prices is necessary if output is to find a market. Since profit is the mainspring of enterprise and productive effort, production must fall off and unemployment increase. Hence, the only way in which economic recovery can take place is to cause the profits of enterprise to emerge or increase. Practically this means that a readjustment must occur between selling prices and costs."

There has been a consequent weakening of the security of mortgages and embarrassment of the stock and station agents and other institutions bound up with rural finance.

It is clear that the depression fell with greatest severity on the pastoral farmers and the wage-earners who lost their jobs, and to a lesser degree on the recipients of business profits

2. Economic Report, par. 9.

(especially in the luxury trades); while (except where substantial concessions were made to debtors, and except to the extent that the creditor class has been loaded with extra taxation to meet budget deficits and unemployment charges), until the passing of the National Expenditure Adjustment Act, 1932, making further cuts in wages, interest and rents, the recipients of fixed incomes have actually benefited from the circumstances which brought ruin to others. The wheat farmers have also been in a favoured position, because the price of their product has been substantially maintained by the sliding scale of import duties, while their costs have declined fairly sharply.

(b) A temporary depletion of the London balances of the six commercial banks operating in New Zealand, leading to a raising of the exchange rates and other devices to adjust the volume of imports to the altered conditions. Incidental effects have also ensued. There has been an increase in the money burden in New Zealand of fixed money interest and capital obligations abroad, accompanied by some relief to export producers. There has, however, been an increase in the cost in New Zealand currency of imports into New Zealand.

(c) An almost complete drying up in London during 1931 of the sources of loan funds. This closing of the London market to new loans came much later than in the case of Australia.

(d) A sharp fall in national income.

(e) Emergence of Government deficits, despite strenuous efforts towards economy. In the year ended 31st March, 1930, there was recorded an excess of receipts over expenditure amounting to .15 millions. In the next year there was an excess of expenditure amounting to 1.63 millions, and in the year ended 31st March, 1932, an excess of expenditure amounting to 2.14 millions.

(f) Other evidences of acute depression are as follow:—

	1924	1925	1926	1927	1928	1929	1930	1931
Unemployed on Registers, mid-June	560	493	2,247	2,462	3,313	3,431	5,448	44,521 ^a
Building permits in principal towns, £m	d	d	9.7	9.0	8.6	8.9	6.0	2.5
Mortgages registered ^b , £m	41.1	47.1	40.0	33.2	33.6	39.8	30.6	13.4
Mortgages discharged ^b , £m	29.7	34.0	29.2	24.0	25.3	28.3	20.6	10.1
Land Transfers, £m	34.0	35.5	33.3	29.6	30.5	32.1	25.3	13.8
Totalizator Investments ^c , £m	7.7	8.4	8.6	7.6	7.6	7.2	7.5	5.3
Percentage of free to fixed Deposits, Dec. quarter, %	124	121	110	88	75	74	57	47
Bank debits, weekly average, £m	d	d	d	d	19.1 ^e	22.0	20.1	15.8
Average of 25 share prices in January (par=100) ..		199	205	204	213	231	195	152
Value of production ^b , £m	118.1	111.7	112.1	119.9	125.3	118.2	97.9	90.3 ^f
Estimated national income, £m	142.0	136.0	138.0	144.0	150.0	142.0	120.0	110.0

a The 1932 figure was 54,140.

b Year ended 31st March following.

c Year ended 31st July.

d Not available.

e Last nine months only.

f Preliminary estimate.

III

There have also been the following amongst other internal obstacles to recovery:—

1. Past borrowing, notably for transport services,³ for hydro-electric development, and for advances on real estate in excess of the real requirements of the Dominion. Local body indebtedness in New Zealand increased from £26·19 millions on 31/3/21 to £65·69 millions on 31/3/31; while general Government indebtedness increased in the same decade from £206 millions to £276 millions. This condition will be remedied gradually as population increases, but it adds appreciably to the problem of readjustment on account of the additional burden of debt and maintenance involved.

2. Over-capitalization of many industries (notably farming) on the basis of the high price-levels prevailing a decade back.

3. Virtual exhaustion of fruitful avenues of capital expenditure, due to a failure in the post-war period to realize the merits of a (admittedly difficult) policy of saving up capital works in times of general prosperity, to be prosecuted with exceptional vigour in times of general depression. For some years prior to the depression it had been recognized that there must be a gradual "tapering off" of borrowing. A problem of transferring labour from capital works would therefore have arisen sooner or later, even if the price fall had not supervened.

4. Rigidity of interest rates, rents, and other long-period contractual charges. "Over recent years the burden of interest payments on the taxpayer has been increasing in four separate ways, which are cumulative in their effects. This burden has increased:—

- (i) By the rapid increase of debts.
- (ii) By the renewals of debt at higher rates of interest not wholly offset by other renewals at lower rates.
- (iii) By the declining interest-earning capacity of public works, due in part to the recent expenditure of heavy sums on new works which fail to meet their interest bill.
- (iv) By the fall in prices, which means that more produce must be sold to meet the interest bill.⁴

3. See Neale, *Economic Record*, May, 1931, pages 71-81. See Tocker, *Economic Record*, Nov. 1931, pages 244-245. See Smith, *Economic Record*, May, 1932, pages 55-59.

4. *Economic Report*, par. 35.

5. Rigidity of wage rates and working conditions. In 1930, adult male wages were 66½% and retail prices only 56% above 1914 levels. The Economic Report says:—

“In some cases working conditions exert a more powerful influence in keeping up costs than does the level of money wages. At a time when all sections of the community are revising standards that were economically possible only in the period of high export prices and heavy overseas borrowing, a revision of regulations governing working conditions in industry is appropriate. It is not suggested that free competition without any intermediary regulating authority should be restored. What is required is a relaxation of the rigid conditions that the community could afford in the days of prosperity, but cannot afford now.”⁵

6. Protection of uneconomic industries. At one time, wheat and flour were receiving a tariff protection of the order of 100%, and the present figure is not far below this. Recent official investigations of certain manufacturing industries have also caused some uneasiness as to whether the community is not paying too dearly for the protection it affords certain secondary industries.⁶

It is not, of course, suggested that the whole of the protective tariff should be abolished overnight, as that would doubtless involve serious unemployment. Many protected industries are, however, beyond doubt a national incubus, and the policy of treating the assistance of immigration as a capital expenditure in the past has simply meant that a liability has been treated as an asset.

7. Increase in unemployment (and consequent necessity for relief taxation) due to:

- (a) Depletion of certain natural resources, *e.g.*, timber, kauri gum.
- (b) Technological changes.
- (c) Petering out of loan expenditure, due to causes (1) and (3) above.
- (d) The depressing effect of falling prices.

With a view to evolving a plan of action, the Government called a joint conference of representatives of the three main political parties in August, 1931. No report resulted, the sole outcome being the formation of a Coalition Government of the Reform and United Parties, whose position was confirmed at the general election of December, 1931, with Labour as the official Opposition.

5. *Ibidem*, par. 101.

6. See for example Report of the Committee of Inquiry into the Footwear Industry. (1929, H.44A).

The end of 1931 marks a convenient dividing line, since it was early in 1932 that the "Economic Committee" and the National Expenditure Adjustment Commission were set up. Up till the end of 1931 the following measures of readjustment (some of them automatic) had been effected since 1928:—

- (i) A fall in internal prices and in the cost of living of the order of 10%.
- (ii) A rise in the exchange rate to 10%, bringing relief to export producers.
- (iii) A contraction of imports from £45 m. to £24 m., under the influence of (a) banking policy as regards interest and exchange rates, (b) increased tariffs.
- (iv) A general reduction in wages of 10%, ordered by the Arbitration Court on 29/5/31 under Part II of the Finance Act (No. 1), 1931. Previously most awards had had a currency of some three years or more.
- (v) A reduction of 10% in wages and salaries in the Public Service, and other economies in public expenditure, under the Finance Acts, 1931.
- (vi) The passage of legislation to enable mortgagors to secure relief from both interest and principal under certain conditions, and special consideration to mortgagors by all State lending departments. These provisions were extended by the Mortgagors' and Tenants' Relief Act, 1932.
- (vii) Taxation relief and increased subsidies to the farming industry.
- (viii) A reduction, late in 1931, of interest on Government and local-body loans for new issues, and on bank overdraft and deposit rates.
- (ix) Special taxation on gilt-edged income.
- (x) Increased land development and settlement, and unemployment relief.
- (xi) Legislation for a co-ordination of transport to limit unnecessary and wasteful competition, and the placing of the railways under a non-political board. (Cf. Footnote 3, p. 121.)
- (xii) The utilization of reserve funds and raids on certain special funds, *e.g.*, the Main Highways Fund, built up largely from the ear-marked proceeds of motorists' taxation.
- (xiii) The raising of special taxation for unemployment relief.

In December, 1931, the Government found itself faced with some difficulty in the matter of meeting its loan obligations in London. The more rapid fall of export prices than of import prices, in the face of the relative inertia of the volume of exports and of imports, had depleted the London balances of the banks that operate in New Zealand, and the gap could not be filled by new borrowings. The position was complicated by the fact that a considerable amount of exchange business was passing not through the banks but through the "outside market". And so, on 1st January, 1932, a system of exchange control was brought into operation, all exports being effected under licence, and the proceeds realized in London being rationed by the banks, who were during the six months the pool lasted accorded a monopoly of exchange business. This amounted to a virtual pegging down of the New Zealand-London exchange at the existing level of 10%.

In the meantime, early in February, 1932, a committee of four economists and the Secretary of the Treasury had been set up to inquire into certain aspects of the economic and budgetary situation in New Zealand. The Economic Committee presented a comprehensive report on the 24th February, twelve days after appointment. The report considered that the measures of readjustment so far adopted were inadequate, assuming (as the members, not without reason, believed they were justified in doing) that export prices would not rise, a resumption of overseas borrowing was not likely, and any substantial increase in production per head was not to be looked for.⁷

The recommendations of the report may be considered under six main heads:—

A. Compulsory "cuts" in internal interest and rents of 20% and/or special taxation of investment incomes, this finding being based mainly on the injustice caused by the change in the purchasing power of money affecting all unmodified creditor-debtor relations that had not subsisted for at least fifteen years, on the danger of wholesale insolvencies if some relief was not given to debtors, on the intolerable, growing, real (as distinct from money) burden of fixed charges on industry generally, and on the impracticability of making any further "cuts" in wages so long as the wage-earner knew that one class in the community (people with titles to fixed money amounts) was actually benefiting from the circumstances which were spelling disaster to many. A somewhat similar recommendation was

7. Economic Report, par. 46.

made by a majority of the members of the National Expenditure Commission in their Interim Report:—

“Private compositions affecting both principal and interest are being arranged daily, but, in our view, a general change such as is contemplated cannot be left altogether to natural economic forces to bring about, as such a policy may under present conditions be too slow in operation, and may not result in an equal all-round adjustment. Mortgagees and others whose incomes are derived from fixed investments cannot hope to escape a comparable and equitable contribution to the general sacrifice.”

The urgency of these considerations was deemed to outweigh any adverse effects that might arise incidentally through impairment of confidence in the “sanctity of contract”.⁸

The Economic Committee, however, omitted to consider the alternative of a cut in capital obligations without a cut in interest rates, nor did it consider adequately the inequities involved in cutting internal but not external interest rates. The Committee's contention, moreover, that the positions of the mortgagee and the debenture holder are identical with that of the landlord ignores one or two quite important differences, *e.g.*, the landlord's investment depreciates in money value along with the fall in prices, while the other creditor's investments (apart from default) remain steady in money value, and therefore appreciate in real value.⁹

Such cuts, to the extent that they had not already been voluntarily conceded, were virtually made compulsory by the National Expenditure Adjustment Act passed during the 1932 Emergency Session of the New Zealand Parliament. Under this Act a standard rate of reduction of interest and rents is to operate until the 1st April, 1935; also on dividends on preference shares (during the three financial years commencing with that beginning during 1932). The following exemptions are, however, provided:—

- (a) Rents payable under lease or licence of Crown lands or of other lands administered by a Land Board, if such rent is fixed by reference to the capital value of the lands, and does not exceed 5% thereof.
- (b) Interest on contracts entered into after 1st April, 1932.
- (c) Interest on deposits or advances repayable on demand.

8. Economic Report, Section X; National Expenditure Commission's Interim Report (1932, B-4), pages 16 and 17.

9. Economic Report, par. 95.

This standard rate of cut is 20% of the rate prescribed by the contract if entered into within the five years ended on 1st January, 1930, and in other cases 20% of what the rate would have been had the contract been entered into on that date. Power exists for any aggrieved creditors to apply to the Court for exemption on the grounds of hardship, etc. No cut is to be made that reduces ground rents below 5% per annum of the unimproved value of the land. No cut is in general to be made that brings the net interest below:—

- (a) Six-and-a-half per cent. on chattel mortgages.
- (b) Four-and-a-half per cent. on income tax free company debentures.
- (c) Five per cent. on other mortgages and on preference shares.

Why these qualifications were introduced was probably on the assumption that if such low rates were prescribed by the contract already a substantial concession existed in favour of the debtor. But this reasoning overlooks that sometimes other considerations affecting the contract may render such a low rate no concession at all, *e.g.*, where the debtor has submitted to an unduly high capitalization in the case of vendors' mortgages or some other onerous conditions.

The inclusion of preference shares was an afterthought, and aroused some opposition. Clearly, they are on the border line between debentures (subject to the cut) and ordinary shares (subject to no cut except automatically in so far as there has been a decline in industrial profits). To have maintained cumulative preference dividends while debenture interest was cut and ordinary dividends had more or less vanished would have created an anomaly. Yet the effect in those relatively few cases that exist where profits have been maintained has certainly been to penalize the preference shareholders in favour of the ordinary shareholders, unless the aggrieved shareholders have been able to secure exemption from the Court under the "hardship" clause. In good times, when the ordinary shareholders may be receiving from 10% to 15% dividend, there is no suggestion of increasing the preference shareholder's return; he received a limited return in good times so as to be assured of a reasonable return in bad times. There is the further point that the capital value of a mortgage remains nearly the same because it will eventually fall due at par, whereas a reduction in the rate of interest on preference shares amounts to partial confiscation of capital through reduction in value, a preference

share being at no time redeemable at par. Here, again, the point seems to emerge that an all-round scaling down of capital obligations would probably have been more equitable than interest "cuts". A hint of this problem is contained in Section 166 of the National Expenditure Commission's Interim Report (1932 B-4), which states *inter alia*:—

"Cognizance must be taken of the fact that the burden imposed by mortgage charges based on inflated values is impossible. A reduction of interest, necessary as it may be in the meantime, is merely a palliative, and in many cases will prove futile. The all-important question of capital values is involved. A reduction in the rate of interest from (say) 7 to even 4 per cent. is not going to help a borrower who has a mortgage of £10,000 on a property which to-day will not produce sufficient to enable him to pay the reduced rate on £5,000, or even less."

The Governor-General has also by Order-in-Council authorised by the Act prescribed low maximum rates of interest on income payable on deposits with savings banks, with buildings and investment societies, and with trading companies. Without such a provision, the difficulties in the way of making reduced rates of interest effective would have been very great. Even so, difficulties exist in that the bank rates of interest were left unaffected, as, indeed (being mostly at call), they needs must have been. The commercial banks have, however, voluntarily reduced their rates by $\frac{1}{2}$ % per annum, following a previous $\frac{1}{2}$ % reduction a year or so back.

By way of further exception, on virtually all receipts for interest payable in New Zealand derived from current debentures or other securities issued by the Government, the State Advances Department, the Rural Intermediate Credit Board, or any local authority, there is imposed a special stamp duty of 10%. Local authorities, after the deduction of 5% of the proceeds for administrative expenses, are entitled to receive the net proceeds of this new stamp duty. Where this stamp duty is imposed, the previous 2d. flat rate duty on receipts for interest is abolished.

Why a 10% cut rather than a 20% cut was imposed in this case has not been satisfactorily explained.

The position of tenants and mortgagors was further alleviated by the Mortgagors and Tenants' Relief Act, 1932. This Act extends the previous year's provisions for postponement of action against (and other relief of) mortgagors in the following respects, *inter alia*:—

- (i) By enabling a mortgagor to apply to the Court for relief, notwithstanding that the mortgagee may not have given notice of intention to exercise power of sale, etc.
- (ii) By extending to all classes of mortgage last year's special provisions relating to farm mortgages in respect of postponements, reductions and remissions of interest payments and postponement of principal repayments.
- (iii) By extending the powers to give relief on table mortgages.
- (iv) By enabling the Court in its discretion to release mortgagors of land from their obligations under the "personal covenant".

The Act also grants relief to lessees by way of remission or reduction of rent, and in a number of other ways amends the previous legislation in connection with the relief of debtors.

The legislation, while assisting the position of existing debtors, and imposing on the creditor class a measure of sacrifice comparable with that made by other classes, has undoubtedly made it more difficult for new mortgages, etc., to be raised.

B. Further cuts in wages of 10%, so as to bring about a reduction in real income received by the wage and salary-earning class, thus making it bear some proportion of the real fall in national income, estimated to be between 10% and 15%.¹⁰

Pursuant to this recommendation, the National Expenditure Adjustment Act, 1932, made a cut in public servants', etc., wages and salaries, in addition to the 1931 cut, such that the majority of such employees sustained an aggregate cut of 19% (slightly less in the case of the lower-paid ranks, slightly more in the case of very highly-paid officers). Although an Act of 1931 gave power for general reductions in wages to be amended by the Arbitration Court not more frequently than once in six months, and although the possibility of reducing award wages is facilitated by the more elastic provisions of the Industrial Conciliation and Arbitration Act, 1932 [see (c) below], this second "cut" has not been applied to award wages or to more than a section of other wage and salary earners in the less prosperous industries. A further cut in award wages of some 6% (this will be increased when the full effects of the rent, etc., cuts manifest themselves) is already justified by the recent falls in retail prices, assuming that the emergency unemployment

10. See Cocker, *Economic Record*, May, 1932, pages 110-112.

charge of 5% on wages and other income is a fair charge for the worker to bear personally, and the absence of such a further general cut is undoubtedly hindering in many industries a solution of the problem of getting production costs down to a level more commensurate with the fall in wholesale prices, and contains elements of irritation and danger to industrial peace, as under the new conditions wage reductions are likely to be effected in piecemeal fashion, in accordance not so much with economic needs as with the relative bargaining strengths of the parties. Against this must be set the fact that many concerns are not working full time; also cases of wages being paid in excess of award rates are much less numerous now than two or three years ago.

C. Relaxation of the past rigid working conditions.¹¹ See point III (5) above.

This position was met (though perhaps not in a manner that would earn the universal approval of the members of the Economic Committee) by the Industrial Conciliation and Arbitration Amendment Act, 1932. In the past, generally speaking, every dispute has had to be referred to a Conciliation Council before going to the Arbitration Court; but, in practice, settlement by the Court has been the rule, for, if no settlement is arrived at by the Conciliation Council, the dispute previously went automatically to the Court for settlement. Now, however, reference to the Court in the event of failure of the Conciliation Council to reach a settlement is to take place only if the assessors are virtually unanimous that the dispute should be so referred; in any other case where settlement is not arrived at, existing awards or industrial agreements affecting the parties to the dispute automatically lapse in most cases after a stated period of time. In other words, conciliation and compulsory arbitration is replaced by compulsory conciliation and voluntary arbitration.

The Court is now given power, if it thinks fit, to grant an application for exemption from the terms of a settlement if the application is filed by or on behalf of an employer, union, or association affected at any time within a month of the dispute being settled before a conciliation council.

Power is given for the provisions of any existing awards or agreements to be reviewed, provided that they have been in force at the date of application for not less than six months, and that they have an unexpired term of not less than three months.

11. Economic Report, Section XI.

Previously it was virtually impossible to vary an award during its currency except in so far as 1931 legislation had permitted general "cuts" in wages to be applied not more frequently than once in six months.

A further provision of the 1932 Act is that unless the Court considers circumstances are inappropriate it is in every future award to provide for the establishment by mutual arrangement between the parties of "Industrial Committees" representative of employers and workers in the industry throughout the district covered by the award, with the object of promoting harmonious working of the award or agreement, assisting in settlement of any dispute (rates of pay and hours excepted) that might arise thereunder, and of dealing with any new matters arising from time to time that are not covered by the award or agreement.

It is too soon to say yet how far the adoption of (a) to (c) has affected retail price levels and production costs.

D. Bridging the gap between the Consolidated Fund receipts and payments¹² within the next year or so by some or all of the following devices:—

- (1) Modification and extension of existing tax rates.
- (2) Exploration of new forms of taxation—the "sales" tax is especially mentioned, not without some misgivings. The Government has, however, announced that it will call a halt in taxation increases for the nonce.
- (3) Treasury Bills.
- (4) Additional "economies", some of which are suggested in the Report, but which field has been more fully explored by the National Expenditure Commission, many of the recommendations of whose interim report found expression in the legislation of the 1932 Emergency Session, notably curtailments of pensions, raising the school age from five to six, raids on special funds, etc. Other recommendations of the Interim Report have not yet been fully adopted, notably, those in favour of reducing the number and curtailing the privileges of members of Parliament, closer scrutiny of permanent appropriations, etc.

E. As regards local body matters, the Economic Report¹³ expects that much would result from a Commission set up to

12. Economic Report, Section XII.

13. Economic Report, Section XIII.

examine such questions as compulsory mergers of small, contiguous local districts, other economies, etc., etc. So far, however, the Government has made no move to set up such a Commission.

F. Raising exchange rates from the present 10% to an unspecified higher level; thus maintaining the money value of securities and other assets, scaling down the real burden of internal fixed money indebtedness, reducing without industrial friction real wages and other costs, thus incidentally tending to alleviate the unemployment problem), shifting part of the burden from the pastoral farmers and the stock and station agents to other classes in the community, and checking the further prospective fall (by repercussion) in the incomes of the rest of the community.¹⁴ Mr. Park (Secretary to the Treasury) dissented from this particular recommendation, and it has been freely criticized in other directions, notably, on the following grounds:—

- (1) The danger of using currency manipulation as an instrument of political policy.
- (2) The beneficial results of the higher exchange in so far as they affect the budget are less immediate and certain than the adverse effects, and in the transition period the Treasury might be seriously embarrassed. Professor Murphy writes on this point:—¹⁵

“The additional expense to the public authorities would begin at once, whereas the increased direct taxation would not begin to bring in a return until about a year after the exchange bonus materializes at a higher income level. And in any case there can be no proof other than that of experience that aggregate national income would be increased by such a policy, especially when the indirect reactions of depreciation in damaging import and other business activities are taken into account.”

There can be no doubt, however, that a rise of the exchanges would give some check to the loss in national income by repercussion that is otherwise inevitable.

- (3) If the exchanges were pegged at a high level, the inevitable effect would be to create, at least temporarily, another problem in the shape of an undue building up of the London funds of the banks. These could only be used to pay off some of New Zealand's overseas debt

14. Economic Report, Sections VIII and IX.

15. N.Z. Financial Times, July, 1932, pages 1 and 2.

(but that would entail a certain amount of antedating of internal taxation in New Zealand), to transfer to New Zealand some of the loans at present domiciled abroad, or if a bad season supervened in Australia might be used to expand advances in Australia to an extent not possible if Australian and New Zealand banking were entirely independent.

- (4) The Report perhaps does not sufficiently recognize the facts that unless the exchanges were permanently stabilized at a high level:
- (a) Importing houses would have to set up substantial reserves in their books against exchange appreciation.
 - (b) The uncertainty of the situation would tend to hamper trade.
 - (c) After a certain point is reached, a raising of the exchanges tends to increase more than proportionately the danger of our goods meeting exchange dumping duties abroad. It might be contended that as Britain buys some 80% of New Zealand's exports, and as Britain's policy in the past has been opposed to duties, this objection is of little practical importance; but against this must be set the fact that Britain's tariff policy is now in the melting pot.
 - (d) Secondary industries would acquire a vested interest in the high rate.

Several of these objections would, however, disappear if the New Zealand currency were permanently devaluated in terms of sterling.

The recommendations of the Economic Report in relation to the exchanges have not been adopted.

- (5) The Report did not foresee the easing of the situation that took place later through the raising of a £5 m. loan on the London market.

VI

Under the following heads action seems, however, still to be called for:—

- (1) Further lightening the burden on the pastoral farmers. Farm products are, however, notoriously subject to wide price fluctuations, and a case can be made out for

relieving the farmer, not of the whole burden, but only such portion thereof as he could not have been by reasonable foresight expected to provide against.

- (2) Balancing the budget. This point is fully covered in Mr. Holt's paper, and I shall not weary you with traversing similar ground. It remains to be seen whether the final report of the "Economy Commission" will suggest real economies to bridge the gap, and at the same time not aggravate the unemployment problem. The question of economies in local body administration will also have to be tackled.
- (3) Removing the burden of uneconomic industries, both primary and secondary.
- (4) Finding a solution of the unemployment problem.¹⁶

In the last few years unemployment in New Zealand, in common with other countries, has assumed serious proportions. A committee was set up in 1928 to investigate the problem, and, following on the presentation of its report, an Unemployment Act was placed on the statute-book during the 1930 session of Parliament.¹⁷

Most of the schemes are of the nature of palliatives rather than direct attacks on the unemployment problem, and many of the jobs have become increasingly wasteful as the passage of time has made the finding of really economic work more and more difficult. The Unemployment Amendment Act of 1932, however, provides for the taking over by the Government of suitable land for the settlement of unemployed workers and their families, the intention being to erect cottages and small buildings on areas from two acres upward, sustenance allowances being paid while the settlers are establishing themselves.

E. P. NEALE.

Auckland.

16. Dr. Neale's paper contained a brief description of the unemployment measures adopted by New Zealand. These have been outlined in recent issues of the *Economic Record*, to which reference is made in footnote 17 below. To save space, this part of Dr. Neale's paper has been greatly abridged (Editor).

17. See Fisher, *Economic Record*, November, 1929, pages 369-372; Paisley, *Economic Record*, November, 1930, pages 288-290; Lawn, *Economic Record*, November, 1931, pages 304-307; Campbell, *Economic Record*, May, 1932, pages 101-104.

SOME PROBLEMS OF DAIRY MARKETING¹

- I. Introduction.
- II. Seasonal Price Fluctuations.
- III. Seasonal Flow of Supplies from New Zealand.
- IV. Trends in Dairy Produce Prices.
- V. Origin of Dairy Produce imported into the United Kingdom.
- VI. Potential Supplies of Butter and Cheese.

I

In the present paper it is intended to examine some of the factors which are operating at present, and which are likely to operate in the future, on the markets for dairy produce. It will be obvious by the nature of the subject that it will be impossible to do more than deal briefly with such topics as are discussed, and further, that the method of attack will be selective rather than exhaustive. While incidental reference will be made to world conditions as such, the main purpose of the paper is to analyse New Zealand conditions in the light of world conditions, and to make some comments on the practical policies adopted with reference to marketing of New Zealand butter and cheese. One further comment is needed with reference to the method adopted herein before attacking the subject proper. Criticism may be levelled at the importance which is attached to conditions in the English market, but it is submitted that with prohibitive tariffs in Canada, the United States of America and Germany (although in the last country the tariff may be temporary), the sole available market of any size is England. Consequently, any major effects arising out of conditions of supply will be observed in that market. As far as Australia and New Zealand are concerned, England is practically the sole market of any importance. Any changes which are to react on the conditions in these two countries will be traced in the English market.

II

It is not the whole truth to say that the prices of butter and cheese on the London market determine the profitableness of the New Zealand dairy farm. Nevertheless, since there is a very considerable lag in internal costs of dairy farming, the effects of price changes are magnified considerably in the ulti-

1. In collecting data for this paper the writer has received valued assistance from Sir William Hunt and Mr. McKellar, of Wright, Stephenson & Co, and from Messrs. Brasch and Pottinger, of the New Zealand Dairy Board.

mate net income of the farmer. Further, since New Zealand has very considerable interest obligations overseas, approximating to 30% of the value of exports in 1931, and since butter and cheese represent 32.3%, 36.4%, 40.7% and 43.0% of the total exports in 1928, 1929, 1930 and 1931 respectively, the importance of butter and cheese prices in the financial position of New Zealand is very great.

It is proposed to examine, in the first place, the seasonal changes in price. The following table shows the average monthly prices of butter and cheese for the ten years 1922 to 1931:—

TABLE I

Seasonal Variations in Price

Table showing the monthly average prices for the ten years 1922-31 of New Zealand butter and cheese on the London market

(In shillings per cwt.)

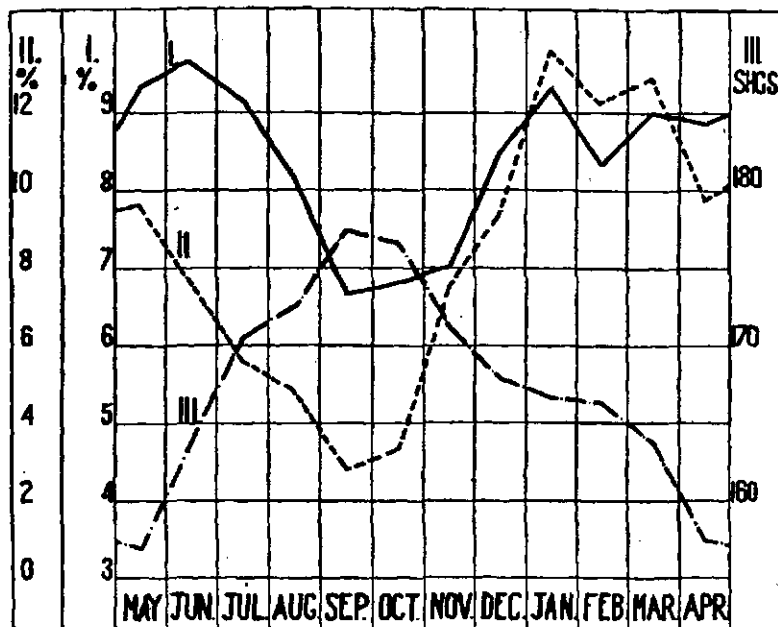
Month	Butter	Cheese
January ..	166.9s.	94.3
February ..	166.5	93.7
March	163.7	92.4
April	157.4	87.8
May	157.2	84.0
June	164.2	87.2
July	170.7	90.3
August	172.9	91.2
September ..	177.7	94.0
October	176.3	95.8
November ..	171.1	95.0
December ..	168.2	92.1

The above table is illustrated in graphical form in Graphs 1 and 2. The figures show unmistakable seasonal trends. In each case the lowest month is May, with a marked tendency to rise to September in the case of butter, and October in the case of cheese.

It should be noted that the general trends of the seasonal price curves are similar whatever the country of origin of the produce, with the following exceptions:—Some Northern Hemisphere butter, particularly Danish, tends to approximate the price of colonial frozen butter in May, June and July progressively, and to diverge therefrom till January. From which month to May the divergence tends to grow smaller. A similar fact is observable with regard to Canadian Cheese. Both these

cases indicate a wider seasonal swing in the prices of the commodities of these countries than in the prices of Southern Hemisphere products. This divergence probably reflects a demand factor. Fresh, spreadable Danish butter is always in demand in certain areas, and during the northern winter the supply is insufficient to satisfy the demand at the prices necessary to

CHART I
MONTHLY PRICES OF BUTTER AND IMPORTS,
GREAT BRITAIN



The following curves are represented:—

- I. Percentage of total annual imports of butter entering each month.
- II. Percentage of annual import from New Zealand entering each month.
- III. Monthly prices.

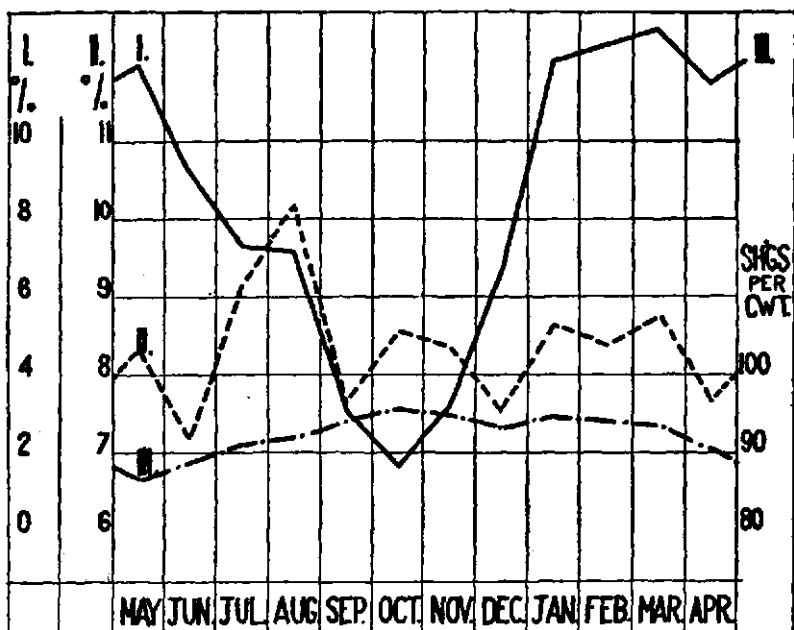
clear the product in the flush months. The fact of the divergence of Canadian cheese suggests also a qualitative difference from the New Zealand product.²

It will be seen from Graph No. 1 that there is a very distinct inverse correlation between the price curve of New Zealand butter and that of the total supply of butter. This is what

2. New Zealand cheese is of the cheddar variety and hence does not compete with the hard cheese of the Continent. Its main competitors are the Canadian and English cheddars. Australian cheddars, while potentially important competitors, are not at present of such a volume as to warrant special mention.

might be expected. Despite distinct preferences by certain consumptive areas or classes, butter from each country does compete with butter from all other countries. When compared with the curve of New Zealand supply, the fact that there is some positive correlation between January and May suggests that there are countervailing factors operating. There are, of course, the increasing supplies of new season's butter from the Northern Hemisphere. The more negative correlation from June to De-

CHART II
MONTHLY PRICES OF CHEESE AND IMPORTS,
GREAT BRITAIN



The following curves are represented:—

- I. Percentage of annual import of cheese from New Zealand entering each month.
- II. Percentage of annual import from New Zealand and Canada entering each month.
- III. Monthly prices.

ember is a reflection of the decline of Northern Hemisphere butter, and of the fact that till October Southern Hemisphere supplies are at their lowest ebb, the new season's supplies coming on the market in October. There seems little connection between the total supply of cheddar cheeses from New Zealand and Canada and the price level of New Zealand cheddars, but

there is evidence of inverse correlation between the supply and price of New Zealand cheddars.

The above discussion has shown that the seasonal swing in prices is definitely connected with the relative plenty and relative scarcity of the products on the market. The time required for Southern Hemisphere butter to reach the market results in a temporary glut in the months of May, June and July, and a temporary scarcity in August, September and October. This whole discussion raises the important question of the flow of supplies on to the English market.

III

The following table shows the monthly distribution of the production of butter and cheese in New Zealand. The figures for 1922 to 1931 only are given, as the general curve of production has been practically identical over the past ten years:—

TABLE II

Monthly Production of Dairy Produce in New Zealand
Table showing the monthly production of butter and cheese as a percentage of annual supply for the decade 1922-31

	Butter	Cheese
January	13·4	14·8
February	10·8	12·1
March	9·2	10·8
April	6·5	8·5
May	4·1	5·8
June	1·4	2·0
July	·8	·4
August	3·0	·7
September	7·2	4·2
October	12·0	9·8
November	15·1	14·2
December	16·6	16·7

Allowing for a lag of two months necessary for the produce to arrive in England, the production curve and the imports curve follow almost identical contours in the periods 1922-25. However, the curve of imports into England for the period 1928-31, while agreeing with that of the period 1922-25 for the months of December to March, the flush months of the year as far as New Zealand supplies are concerned, is much flatter than that of the earlier period from April to November. In the years 1922-25, only 11·7% of the annual butter supply and 17·0% of the annual cheese supply was available in the period

from July to October. In these years only 6.3% of the annual butter supplies were available over the months of August, September and October, and 5.5% of the annual cheese supply during the months of September, October and November. Now this smallness in supply coincides with the period when there is a marked reduction in the quantity of Northern Hemisphere butter. Consequently there is always a rise in price during these months.

The Dairy Control Board of New Zealand, recognizing the seasonal nature of the price variations, have endeavoured to smooth out the supply curve during the months indicated above. The results of their policy from 1928 to 1931 are shown in the following table:—

TABLE III

Showing the change in supply of New Zealand butter and cheese on the English market at particular periods during 1922-25 and 1928-31

(The figures quoted show the percentage of annual supply available in the months indicated)

	Butter	
	1922-1925	1928-1931
June to October	11.7%	19.0%
August to October	6.3%	13.4%
	Cheese	
	1922-1925	1928-1931
June to October	17.0%	18.9%
September to November	5.5%	10.1%

Note.—Total cheese is total Canada and New Zealand.

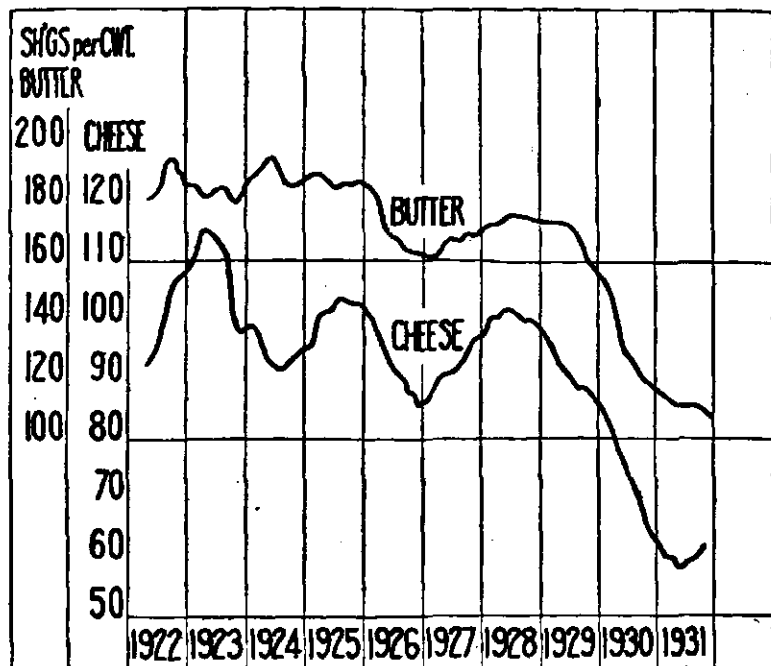
Any policy which aims at the orderly marketing of New Zealand butter and cheese must aim not merely at smoothing the New Zealand supply curve, but also at some smoothing of the total supply curve. To do so involves some reduction of New Zealand supplies in the flush months of imports, namely, December to March, and an increase in the imports from July to October. This, of course, involves many factors of practical detail, the merits of which it is not proposed to discuss fully here. For example, it would involve not only increased storage

capacity in New Zealand, but also considerable finance for the period of storing. Further, it would involve greater co-ordination of marketing policy than is apparent to-day.

It is extremely difficult to state the extent to which the policy of the New Zealand Dairy Control Board has resulted in a smoothing out of seasonal price fluctuations. When compared with the seasonal fluctuations between 1922 and 1925, there was some smoothing between 1925 and 1929 in the case of

CHART III

THIRTEEN MONTHLY MOVING AVERAGES OF LONDON PRICES OF BUTTER AND CHEESE—MAY, 1922—DECEMBER, 1931



butter, and between 1925 and 1930 in the case of cheese. However, it is difficult to say whether the fluctuations in the earlier period were due to a marketing policy (or to a lack of policy) or to general uncertainty on the market. It is probable that the smoothing out of New Zealand supplies as described above has had some smoothing tendency on prices.

IV

Long-term price trends are important in adequate survey of the market for butter and cheese. The accompanying graph

(No. 3) shows the trends of butter and cheese prices over the past ten years. They are constructed on a thirteen-monthly moving average of prices. A very interesting fact, for which adequate details are not at present available, is that the prices of butter and cheese tended to move in opposite direction between 1922 and 1925. This probably reflects a supply factor. The following table gives index numbers of total imports, and of imports of New Zealand butter and cheese into Great Britain during the period 1922-31:—

TABLE IV
Index Numbers of Imports of Butter and Cheese to England,
1922-31

(Base: Annual Average for 1922-31 = 100)

Year	Butter	
	Total Imports	N.Z. Imports
1922	72	85
1923	85	87
1924	89	83
1925	96	96
1926	97	89
1927	98	97
1928	103	98
1929	107	101
1930	113	120
1931	135	148

Year	Cheese	
	Total Imports	N.Z. Imports
1922	90	82
1923	96	88
1924	96	94
1925	105	87
1926	102	96
1927	100	103
1928	102	99
1929	102	114
1930	116	125
1931	98	109

It will be noted that cheese imports have been relatively stable over the past ten years. There is some evidence of a rise in the standard of living in the immediate post-war years, with a consequent increase in the demand for butter. Relative to

this increased demand, butter tended to be in short supply till 1925. Butter consumption, on the other hand, increased considerably between 1922 and 1925, after which the rate of progress was much less rapid. The increased supply would naturally offset any tendency to rising prices in 1923. In 1924, since the imports (excluding Irish butter, which is included as an import for the first time in 1924) are considerably lower than in 1923, the decreased supply would tend to cause a smaller fall in butter prices than would otherwise have taken place. Cheese tended to be more profitable in 1922 and 1923 than butter, and butter than cheese in 1924. This is associated, as noted above, with a steadiness in the supply of cheese and a falling off in the supply of butter in this latter year. The above deductions are admittedly meagre, but are sufficient for our present purpose.

From 1925 the contour of the curves of butter and cheese is practically identical. Early 1927 witnessed a low level, while 1928 showed the highest price in recent years. However, it is noticeable that while cheese rose in 1928 to the price received in 1925, butter did not reach to within 10s. per cwt. of the price of 1925. (Discussion is, of course, on the basis of the thirteen-monthly moving average of prices.) It is also rather significant that this upset the normal ratio between butter and cheese prices, and provided a stimulus to cheese making in the 1929-30 season. Cheese then fell at a greater rate than butter, and hence the reverse tendency was noticeable, namely, a change to butter making. Since New Zealand provides the major portion of the cheddar cheese supply of Great Britain, the effect of these changes can be best studied in New Zealand.

However, while dual plant factories, the majority of which are situated in Taranaki, do endeavour to manufacture the product which at the time is more profitable, a fairly detailed statistical investigation failed to give any really definite results as to the amount of change in price relationship between butter and cheese, which has proved necessary to cause a change from butter to cheese making or *vice versa*.

V

It is next proposed to analyse briefly the origin of the butter and cheese imports to Great Britain. Tables V and VI show the percentage distribution of butter and cheese imports from 1903 to 1931.

It must be remembered that while cheese imports have increased by about 18% since 1913, and by about 11% since 1923, butter imports have increased by 60% since 1913 and by about 48% since 1923. Further, there has been little fluctuation in the quantity of cheese imported over the past twenty-nine years, if we exclude the war years. On the other hand, butter imports have very steadily increased, the average increase being about 5% per annum. (N.B.: Throughout this paper, unless expressly stated, cheese refers to New Zealand and Canadian cheese.)

As far as butter is concerned, increased supplies have been received from all countries. Table V, showing the percentage distribution of butter supplies, reveals several interesting facts:

1. The steady increase in Australian supply since 1927, reflecting a movement in Australia towards dairying.
2. The decline in the relative importance of Danish supply in post-war years.
3. Omitting Russia, the steadiness of the proportion of about 45% of Baltic butter arriving on the English market since 1924.
4. The slow but steady increase of the percentage of New Zealand butter imported.

With reference to cheese (see Table VI), the fact that Continental cheese does not directly compete with Canadian and New Zealand cheddars makes any general statement difficult. The relative decline in Canadian cheese, and the relatively great increase in the proportion of New Zealand cheese, are the outstanding features. However, the cessation of the export of fresh milk from Canada to the United States, consequent on the raising of the U.S.A. tariff, has already resulted in an increase in factory production; and though this increase has mainly affected butter making, it is bound ultimately to affect cheese production. Hence the predominance of New Zealand in the London market is bound to be challenged in the near future if conditions remain unaltered. While it would be incorrect to say that Canada can immediately increase the supply of 62,695 tons which she provided in 1925, the fact that between 1924 and 1928 she supplied on an average about 45,000 tons, while the supply was about 10,000 tons less in 1930 and 1931, suggests potentialities of immense importance when discussing the practical operations of dairy marketing.

VI

It seems fitting at this stage to analyze the potential supplies of butter and cheese to the English market. Criticism may be levelled at this continued concentration on the English market, but, as before pointed out, the United Kingdom market forms by far the largest market for the world's surplus dairy produce in normal times, while to-day it is practically the sole important market. The only other large market in normal times is Germany. While the present restrictions on imports through prohibitive tariffs may be only temporary, it still remains a fact that European countries cannot compete with the new world in arable farming, but they can effectively compete in dairy marketing. Further, it has always been the policy of Germany to stimulate her agricultural production, and it is fair to surmise that the stimulus to expansion given by the tariff, coupled with the increase due to greater attention to grassland farming and artificial fertilizers, will result in a very great increase in home-produced dairy produce in Germany in the near future. Hence it is maintained that conditions in the United Kingdom are the vital considerations when discussing the future of the world's dairy products.

The first fact of importance is the tremendous increase in the butter marketed and consumed in the United Kingdom over the past ten years. The Empire Marketing Board in a recent weekly circular indicated that, though the increase in the consumption of butter was about 1 lb. per head of the population between 1907 and 1925, reaching about 15½ lb. per head in the latter year, the fall in price since 1925 has stimulated consumption till it is in 1931 20½ lb. per head of the population of Great Britain. There has been concurrent with this a decrease in margarine consumption, suggesting that the increase in butter consumption is largely a price factor. Consequently, it seems reasonable to assume that, failing a very substantial rise in the general price level, the present quantities can be consumed only at prices ranging from 95s. to 110s. per hundredweight.

Recent reports of the Empire Marketing Board indicate considerable development in practically all the countries exporting dairy produce. Though the total quantity imported has increased, most countries have maintained their share of the import market. The above remarks apply chiefly to butter. Norway, Sweden, Finland, Estonia and Latvia have all devoted much attention to dairying. Some of these countries appear as

exporting countries for the first time in the last year or two, and in every case there has been a marked expansion of export surplus. Russia, according to a recent Empire Marketing Board report, expected in 1929 to have 1,845 additional creameries in operation within the next year or two. Danish potential production is by no means lessened. This development of dairying is largely because of the increasing inability to compete with the new world in the production of arable products. Further, there is a greater time lag in a change from dairying to arable than from arable to dairying. This is largely due to the fact that dairying involves much more fixed capital, not only on the farm in the way of milking and other machinery and buildings, dairying cattle, and so on, but also in the manufacturing plants necessary to process the raw material, and also to the time necessary to raise dairy stock.

The extent of the investment of capital in fixed plant is such that change from dairying to arable requires a much more prolonged and more decided movement of prices in favour of the latter than a movement in the opposite direction. Hence the conclusion is that in the immediate future—and such a period would embrace the next decade at least—definitely-increased production of butter can be expected in the northern European countries. This is more likely in view of the fact that recent development in the technique of grassland farming and of fertilizing have resulted in the postponement of the point of diminishing returns to investment of capital in dairying. Hence, as these northern European countries develop, they are bound to be influenced by these improvements in technique.

Australia, too, is an important consideration. Large areas are being devoted to dairying, and the increase from 47,000 tons in 1930 to 77,000 tons in 1931, and to 100,000 tons (according to an official estimate) in 1932, with every indication of a continuance of the increase, suggests that Australian butter will be a very serious competitor on the English market in the future.

It has already been indicated that Canada, because of the prohibitive tariff on fresh milk and cream imported into the U.S.A., has had to concentrate on dairy manufacture. The tariff policy of Canada itself has also aimed at stimulating dairying. These factors have been felt chiefly in the Maritime and Upper St. Lawrence areas. Further, the increased expansion of dairying areas in the Middle West has been so important that for some considerable period in the last two years the weekly circulars of the Empire Marketing Board have given

details of the expansion of output in these areas. Again, the Prairie Provinces, under the urge of low prices for arable products, although not particularly suited to dairying, are devoting considerable attention to dairy farming as a sideline to arable farming. That is to say, mixed farming is increasing. This last development may, of course, be temporary. The development in the Middle West and the Prairie Provinces is chiefly in butter production, and Canada appeared as an exporter of butter last year for the first time for many years.

Again, Argentine production is increasing, and it is rather significant that some of the other South American republics, which have not previously appeared as exporters of butter, exported small but significant amounts last year. Finally, the increasing supplies from South Africa and Rhodesia, and the fact that both of these countries have recently instituted Dairy Control Boards, is indicative of trends of development in the butter industry. The Kenya Colony, although at present exporting very small amounts of butter, is said to have good prospects in this line of production.

As far as New Zealand is concerned, the production of butter was 87,000, 98,000 and 101,000 tons in 1929, 1930 and 1931 respectively, despite a steady fall in production per cow (due largely to a temporary reduction in the use of fertilizers on account of the depression). This suggests that with a return to normal conditions the output of butter will increase enormously in a few years time.

In summary, it can be seen that the potential supplies of butter in the very near future are very much greater than at present, and even assuming a rise in the general price level, it seems improbable that butter prices will rise comparably with general prices. Limiting factors to this conclusion are, of course, either increased consumption of butter in Great Britain and/or further markets for butter. As to the former, authoritative opinion believes that at prices ranging between 95s. and 110s., which are believed to be the lowest at which dairying can be carried on at the general level of prices in most countries, the point of consumptive satiety has been reached.

Even assuming a tariff in favour of the Dominions on butter imported into the United Kingdom, it appears that this will not cause any very great fall in the quantity of butter imported. In fact, the present 10% duty on Danish butter has not been borne by the English consumer at all. The Danes have so far borne all the duty themselves.

Summing up the above arguments, it is very likely that the quantities of butter on the English market will very materially increase within the next few years. This increased import can be consumed only at a very substantial reduction in price. Such a reduction in price will cause considerable hardship on account of the very large amounts of capital invested in the dairy industry, and the consequent reduced capacity of farmers to change to more remunerative branches of farming.

As to cheese, the position is different. New Zealand and Canada, though capable of expansion, and with the probable increasing competition from Australia, are supplying all the demands. However, the very small increase in cheddar cheese consumption in the last decade suggests that the demand for cheese is much more elastic than the demand for butter, and that increasing quantities of supply will involve a more than proportionate fall in price.

It remains to indicate why butter rather than cheese has increased in supply. Cheese making involves (1) a supply of whole milk, necessitating the situation of factories near the source of supply, and (2) an efficient transport system to convey the whole milk to the factory. In other words, cheese making involves a fairly well-developed area and a large number of factories. Hence the ultimate capital cost of cheese making is higher than butter making, in which, with the development of the cream separator, the factory can be situated much further from the source of supply. Consequently, fewer factories are needed, the size of the factory can be much greater, the economies of large-scale production are possible, and the cost per unit of output is therefore less. Further, because of the smaller bulk of the raw material, butter making does not involve such a development of transport facilities and roading as cheese making. It is for the above reasons that butter making has been undertaken rather than cheese making in the lesser-developed countries.

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INTERNATIONAL RESEARCHES INTO RELATIVE COSTS OF MAINTENANCE OF DIFFERENT FAMILIES

- I. Relative Food Requirements.
- II. Relative Housing Requirements.
- III. Relative Clothing Requirements.
- IV. Relative Requirements of Fuel and Lighting, Furniture and Furnishings, and Miscellaneous Items.
- V. Relative General Requirements.

I

Most of the authoritative scales of the relative food requirements of men, women and children of various ages are shown in the writer's pamphlet entitled *Food*, published in 1920. Portions of this table were reproduced in the *Federal Basic Wage Commission Report of 1920*.¹ For example, the requirements of man and wife only as a percentage of the requirements of the domestic unit used by the Basic Wage Commission of 1920, viz., man, wife, boy aged 3½ years, girl aged 7 years and boy aged 10½ years, are calculated from the above-mentioned table as follows:—

Engel	57%
Rubner	61%
Atwater	55%
Zuntz	52%
American Household	54%
Langworthy	55%
Knibbs	55% ²
Lusk	47%

Modern British opinion seems to be well represented by the writings of Professor Starling, who was one of the representatives of the United Kingdom on the Inter-Allied Food Commission set up during the Great War. "There is no doubt," said Starling, "that the allowance for children by Atwater was too low, but if we exclude the well-fed and over-exercised school-boys of the wealthier classes the values given by Lusk may be accepted as sufficient to secure full health and development in the great masses of the population."³

1. See also *The National Diet*, by D. T. Sawkins, Govt. Printer, Sydney, 1922. Table VIII, p. 21.

2. *Expenditure on Living in the Commonwealth*, Nov., 1918, by G. H. Knibbs Melbourne, 1918, p. 28.

3. *The Feeding of Nations*, by E. H. Starling, Longmans, 1919.

But it must be admitted that although the American Household scale, used by the United States Bureau of Labour Statistics, is at least twenty-five, and that of Professor Lusk, of Cornell University, U.S.A., more than ten years old, there is still no consensus on this question. Engel's "quot" scale was used in the analysis of budget inquiries made in Switzerland in 1912, in Hungary in 1917, and in Belgium in 1921. Atwater's was used by Mr. Rowntree for his investigations in York in 1901, and in a *Japanese inquiry in 1920-21*. Lusk's was adopted by the Inter-Allied Scientific Food Commission of 1918, on which Professor Lusk was one of the American representatives, for converting the populations of different countries to "equivalent" adult males.

It was pointed out in 1922, in *The National Diet*, that the finding of the Committee of the Royal Society of Great Britain in 1917 as to the average gross ration of the British population before the war, viz., 4009 calories per man, would have fallen to 3700 calories per man had Lusk's coefficients been used.⁴ A parallel observation is made in the report of the Swedish Family Budget Inquiry of 1923:—" . . . the nutritive value of the foodstuffs consumed by the working-class households covered was 3410 net calories per day per unit of consumption (i.e., average adult male's consumption) on the American scale. If the so-called German scale had been used instead, the result would have been 4370 net calories."⁵ The author of this report, however, did not thus make fair use of the so-called German scale, which is a scale based on the relative requirements of other groups of commodities as well as food. The range of scientific results as regards food requirements which can be derived by using the different scales is, therefore, less than he suggests. But it remains considerable.

The American Household scale was again used in the U.S. budget inquiry of 1918-19, in some eight inquiries in Sweden, Denmark, and Norway between 1915 and 1922, in the *South African inquiry of 1925*, and in the inquiry into the standard of living of employees of the Ford Motor Co. in 1929.^{5a} The German scale mentioned above, modified, has been applied in some seven European inquiries carried out between 1907 and 1922.

It is, therefore, clear that no scale has world-wide acceptance. If it be conceded, as held by the Basic Wage Commission

4. *Op. cit.*, p. 10.

5. *International Labour Review*, October, 1926, p. 506.

5a. *International Inquiry into Costs of Living, I.L.O.*, Geneva, 1931 [Series N (Statistics) No. 17.]

of 1920, that the Lusk coefficients used by the Inter-Allied Food Commission are rather high for Australian children under five years of age, and if we take Atwater's or Langworthy's coefficient of 40 instead of Lusk's 50 for the child aged $3\frac{1}{2}$ years, while retaining the Lusk figures for children of five years and upwards, we find 49% as the percentage to be applied to the requirements of the five-membered family, with children of the specified ages, in order to reach the requirements of man and wife only.

This seems to be about the lowest percentage applicable under Australian conditions. Rubner's scale gives 61%. Atwater's, favoured by the Basic Wage Commission, gives a mid-way figure, viz., 55%. We thus have three percentages, viz., 49%, 55%, 61%, which may be taken as fairly representing the range of reasonable adaptation of the cost of food for the Australian five-membered family used by the Basic Wage Commission to the cost for man and wife only. Ranges may be calculated in like manner for families of other sizes and ages of children.

II

A report entitled *Methods of Conducting Family Budget Inquiries*, published by the International Labour Office in 1926, states that "very few attempts have been made to construct scales of housing requirements", and quotes only one—and that without recommendation—viz., the scale used by Professor Bowley in his book *Livelihood and Poverty*, the figures being:—

Adults	100
Boys, 14-18	75
Girls, 14-16	75
Children, 5-14	50
Children under 5	25

It may be noted that while using this scale in a more recent book for the purpose of providing "a mechanical test"⁶ of the average number of persons per house and per room, the authors state that they omit certain derived percentages "because an aggregate of equivalents adults in many households is a conception whose usefulness is debatable".⁷

Setting out a standard budget in 1919 for a family of five persons, the United States Bureau of Labour Statistics took one

6. *Has Poverty Diminished?*, by Bowley and Hogg, London, 1925, p. 5.

7. *Has Poverty Diminished?*, by Bowley and Hogg, London, 1925, p. 40.

room per person as the minimum allowance. The Basic Wage Commission in 1920 and the N.S.W. Industrial Commission in 1926 allowed a five-roomed house to a five-membered family, i.e., an average of one room per person. Mr. Justice Heydon, of N.S.W., in his judgment of February, 1914, said:—"With a family of, say, two children, there should be, as they begin to grow up, a sitting room, one sleeping room for the parents and one for the children." The qualification "as they begin to grow up" may perhaps be regarded as implying that before they begin to grow up a sleeping room for the children would be superfluous. The allowance for man and wife only would then be three rooms, including the kitchen. On the other hand, the N.S.W. Industrial Commission in 1929 retained the four-roomed house for two smaller domestic units, viz., man and wife only, and a little later, man, wife and one child.

The average usage of the community is important here, as in connection with other elements of the cost of living. A table introduced in the report of the Commonwealth Census of 1921 shows the distribution of houses of various sizes according to the number of inmates.⁸ It appears that, in New South Wales as a whole, dwellings with one inmate had on an average 3.1 rooms; dwellings with two inmates had on an average 4.4 rooms; with three inmates, 4.8 rooms; with four inmates, 5 rooms; with five inmates, 5.2 rooms; with six inmates, 5.4 rooms; with seven inmates, 5.5 rooms; with eight inmates, 5.7 rooms; etc.

Thus, after reaching 4.8 rooms for three inmates, each additional inmate was associated with an average addition of about one-fifth of a room. This sequence was followed very closely up to twelve inmates, who occupied dwellings containing on an average 6.6 rooms. After this point, the average rises rapidly, but it becomes increasingly unreliable, because of the small numbers from which it is calculated.

The average number of inmates per dwelling in N.S.W. was 4.52, and the average number of rooms per dwelling was 4.97; so on a general average ten persons occupied very approximately eleven rooms.

The foregoing figures furnish two ways of looking at the question of the proper housing allowance for a family. Working from the general average, six persons might be allowed 6.6 rooms, five persons 5.5 rooms, and so on. On the other hand, the actual distribution of dwellings according to inmates shows households of six persons occupying dwellings of various sizes

8. *Census of the Commonwealth, 1921, p. 1736.*

averaging 5.4 rooms each, households of five persons in dwellings averaging 5.2 rooms each, and so on.

Comparing the allowances for smaller households, we have for two inmates, by the general average 2.2 rooms, by actual usage predominantly 4 and 5 rooms, with an average of 4.4 rooms; for three inmates, by the general average 3.3 rooms, by actual usage predominantly 5 and 4 rooms, with an average of 4.8 rooms; for four inmates, by the general average 4.4 rooms, by actual usage predominantly 5 and 4 rooms, with an average of 5.0 rooms.

Relatively to the general average regarded as a standard there is a good deal of overcrowding on the one hand, and sparse occupation on the other. If we calculate either a coefficient or a factor of correlation between the number of inmates and the number of rooms occupied by them, both the coefficient and the factor of correlation work out at about 0.4 (rather less than more). As a general rule, coefficients above 0.7 give almost certain evidence of correlation, and those above 0.5 are usually significant, while coefficients under 0.3 are usually regarded as giving very little indication of any definite connection between the variable quantities considered. Statistical theory thus suggests that there is no marked degree of correlation, at any rate, over the whole field, between the number of inmates and the number of rooms in the dwellings occupied by the population.

In an important section of the field, however, as has already been noticed, it appears that an increase or decrease of one in the number of inmates is associated with an increase or decrease of about one-fifth of a room in the average number of rooms occupied.

The gap between this variation of one-fifth or 0.2 of a room and the general average of 1.1 room per inmate shows how the community departs from what may, perhaps, be regarded as a communistic allowance. Constraints clearly exist. In every group of dwellings with a given number of inmates, either the four-roomed (for one inmate), or the five-roomed (for two to ten inmates), or the six-roomed (for eleven or more inmates) dwelling predominates; indeed, 72% of the occupied private dwellings in New South Wales in 1921 were of one or other of these sizes.

This predominance of the house of about five rooms, and lack of marked correlation between number of inmates and

number of rooms, is a phenomenon which is not peculiar to New South Wales or Australia. *Has Poverty Diminished?*, by Bowley and Hogg, already quoted, includes a series of double tabulations of houses occupied by working-class families in several English towns in the year 1924. In Northampton, 76% of the houses covered by the author's inquiry had 5 rooms; in Warrington 68% had either 4 or 5 rooms; in Reading 62% had 5 rooms. In Bolton conditions were not so satisfactory. There 53% of the houses contained 3 rooms, and those of 4 and 5 rooms formed 44% of the total. Stanley, in the centre of a busy coalfield, was a comparatively poor specimen. Nearly 20% of the houses covered by the inquiry had 2 rooms, 40% had 3 rooms, 30% had 4 rooms, and those of 5 rooms and more formed rather less than 10% of the total.

In all these towns, however, the size which was predominant generally was also in almost every case predominant whatever the number of inmates. And both the coefficient and factor of correlation were less, if anything, than the corresponding quantities given above for the case of New South Wales.

Knowledge of these constraints and usages of the community, and of the difficulty of applying in the case of the housing allowance for man and wife only, a *general* average allowance, or, indeed, any set of theoretical coefficients of housing requirements according to age and sex, has, perhaps, been an important factor in recent decisions of industrial authorities who have had to award housing allowances for smaller domestic units.

It may be worth while to pursue the calculation by the theoretical method in order to perceive its effects. Using Professor Bowley's scale of housing requirements, the Board of Trade's family of four becomes approximately 2.8 "equivalent adults" as against 2 "equivalent adults" for man and wife only. The old allowance of 4 rooms for the Board of Trade's family, thus adapted to the smaller domestic unit, reduces to 2.9 rooms. Similarly, the Industrial Commission's 1926 family of 5 becomes 3.25 "equivalent adults" by Professor Bowley's scale, and the result of adapting the corresponding allowance of 5 rooms is, for man and wife, 3.1 rooms. Both these results were rejected. Alternatively, the general average allowance of 1.1 room per inmate was also rejected.

III.

There are greater difficulties in the way of establishing a scale for clothing than for food. In the case of food there is the quantitative test of physiological requirements according to sex and age, the result of researches by scientists from Quetelet onwards. But in the case of clothing no attempt has been made to construct a test of physiological requirements. Science gives no clear lead as to relative merits, quantitatively set out, of, for example, undergarments of wool, wool and cotton, or cotton, under specified meteorological conditions for a specified type of population. The only method of approach to this problem so far available is that of discovering the existing usages of the community.

The discovery of usages has been attempted in two ways: first, by oral evidence; secondly, by systematic household budget inquiries. That the results obtained by the way of oral evidence are apt not to be generally acceptable is made clear by the following criticism of the Report of the Basic Wage Commission of 1920. In delivering judgment in the Gas Employees' case, September, 1921, Mr. Justice Powers, President of the Commonwealth Arbitration Court, said: "It is difficult to know why the Commission proposed £8 suits for basic wage men, when workers and men in banks and elsewhere can get suits much cheaper." The learned judge then quoted advertisements of cheaper suits "by a leading tailoring establishment and by one of the largest business establishments in Melbourne".⁹

The second method, that of systematic budget inquiry, has not been much exploited in Australia. The Commonwealth Statistician's small budget inquiries of 1911 and 1913 were not analysed so as to show any scale of relative consumption of clothing by individuals. A very limited budget inquiry in Western Australia in 1917 gave an average cost for a woman exceeding that of a man by 67 per cent., and the average cost for a child as little more than one-fifth of the cost for a woman. On the basis of the results of these very doubtful Western Australian collections (made during the holiday season round about Christmas), a family of man, wife and three average children would reduce to about 3·4 "equivalent adult males"; man, wife and two children to about 3·0; and man and wife only to nearly 2·7 of the same unit.

9. C.A.R., Vol. 15, p. 354.

The only scale based on actual budget inquiries which was considered worth mentioning by the International Labour Office in its recent Report on Methods of Conducting Budget Inquiries¹⁰ was that derived by the United States Bureau of Labour Statistics from the inquiry of 1918-19, which included nearly 13,000 American families. The yearly expenditure and relative figures were as follows:—

Average Expenditure on Clothing in U.S.A., 1918-19

Status and Age	Males		Females	
	Yearly Expenditure	Relative Figures	Yearly Expenditure	Relative Figures
	\$		\$	
Parents	71.4	100	63.6	89
Children 15 years and over	81.8	115	96.6	135
" 12 and under 15	47.1	66	49.9	70
" 8 " " 12	39.4	55	39.3	55
" 4 " " 8	31.3	44	32.5	46
" under 4	22.1	31	23.7	33

These figures include the average saving effected by such passing on of clothing as occurred in the whole group of families reviewed. Some correction would be needed if the figures were compounded for the case of a family of different size. Neglecting such correction, we find for two parents and three average children under 14 years of age the coefficient 3.33; for two parents and two average children, 2.85; and for two parents only, 1.89, the cost for the average male parent being taken as the unit. The average expenditure per individual is shown to be greatest in the case of female children aged 15 and over, being then 52 per cent. greater than that of the mother, and the average expenditure, even of male children over the age of 15, exceeds that of either the father or the mother.

At first sight, the expenditure of children over 15 years of age may seem irrelevant to the problem which faces industrial authorities, for the limiting age of the average dependent child has usually been put at about 14 years in determining the living and basic wages. But on closer consideration it would appear that the high expenditure of the youth of both sexes must at some stage begin to decline, and must ultimately reach the lower level of parents' expenditure. The question, then, is at what age above 15 years the actual maximum is reached, and, further, how many years after that maximum point the lower parents' level is reached.

10. *Studies and Reports, Series N, No. 9, Geneva, 1926.*

So concerned with this aspect was the Osaka Municipal Bureau of Labour Research in 1919-20 that while they accepted in a modified form the food scale of the United States Bureau of Labour Statistics, as well as the American scales for other expenditure, they rejected the American clothing scale. They constructed a special scale as follows:—

Japanese Scale of Relative Clothing Requirements, 1919-20

Age last Birthday in Years	Males	Females
1 - 10	20	30
11 - 15	30	60
16 - 20	50	90*
21 - 25	70	30
26 - 30	100*	60
31 - 45	70	40
46 - 60	60	40
61 - 75	40	40
75 - 90	30	10

*Maxima at these ages.

One might be inclined to reject this scale offhand on the ground that it is Oriental. But its parallelism in certain respects with the American scale is most interesting. For example, the female over 16 and under 21 has a coefficient of 90, and, taking a rough average for females of higher ages, it appears that to the ages of probable parenthood there corresponds an average coefficient of about 60. Thus, as in the American scale, female children over 16 years of age require 50 per cent. more than the mother.

The more closely the Japanese scale is scanned the more clearly it appears as a scale constructed by rational human beings. It seems undeniable that the advance to and the descent from the maximum clothing requirement are on these lines, both for males and females. It may be that some modifications are needed—possibly for ages 21-25, as compared with ages 26-30—to adjust the Japanese table to Australian usage. Broadly viewed, however, this scale seems to represent better than any other scale hitherto constructed the relative requirements of clothing by human beings according to age and sex.

If the Japanese table be applied to the family of two parents and three children, we may for illustration take the case of the age of the father being between 31 and 45, and that of the mother between 26 and 30. With three average children under age 14 the total coefficient would be, roundly, 230; with two

children, about 200. As regard man and wife only, the recently-constituted unit of this type might have a coefficient of 180 or 190, *i.e.*, nearly as much as man, wife and two children. On the other hand, if the marriage were of long duration, so that all the children had passed the age of dependence, the coefficient might be 100 or 110. If the marriage had been sterile, involuntarily or voluntarily, the coefficient might range from 100 to 190.

For an industrial tribunal seeking the cost of requirements of man and wife only, the choice for basic-wage purposes between what might appear to be the two main types, *viz.*, the lately-married couple and the Darby and Joan type, would seem to be mainly a matter of sociological attitude. The relative proportions of various types are roughly ascertainable. At the Census of 1921 about 22 per cent. of Australian wives had been married for less than five years, and about 5 per cent. had been married for less than a year. On the other hand, 34 per cent. of families in which both parents were living had no children under the age of 14. So it seems that at least 80 per cent. of the married couples having no dependent children belonged either to the voluntarily or involuntarily sterile class, or to the class with superannuated children. Put the other way, the conclusion is that not so many as 20 per cent. of the married couples having no dependent children can be set down as recently-married people who are able and willing to fulfil the function of parenthood.

The Japanese clothing table, quoted above, forms a first-class effort to comprehend from one point of view the changes in the standard of living of a human being during the progress of life. While the mind of the inquirer has been set upon finding workable statistical averages, little thought has been taken in budget inquiries of the continual flux in the standard of living of a family during the various stages of its development. And when the budget inquiries have been limited to families containing children, it has been impossible to derive therefrom information as to the change in the young people's standard of living, and in the correlated standards of value which they set for themselves, in the beginning and early years of the married state.

The dynamic development comprises a series of phases which the static average either obliterates or ignores. The most reputable clothing scale based on Western usage so far constructed,

the American clothing scale, suffers from this defect. A static average of \$71 per annum is set down for a male parent and a static average of \$64 per annum for a female parent. These "parents" are not mere husbands and wives. In every budget from which this scale was calculated they were parents of exactly three children, no more, no less, although the ages of the children varied from family to family. "In order that the data presented might be as uniform as possible, families having three children under 15 years of age were selected, and in order to show enough cases to make the figures authoritative, data from a number of cities have been combined."¹¹ Thus runs the published preface to the tables of clothing expenditure. No similar sorting and exclusion of data was regarded as necessary in the case of food. But if the precaution of excluding the clothing budgets of all families but those with three children had not been taken, the objection could have been raised that the resulting average costs were not necessarily applicable either absolutely or relatively to the individuals of the family of man, wife and three children. As the family of five was the standard family for which "minimum quantity budgets" were then being constructed in America, it was important that this objection should be avoided.¹²

Under the same apprehension, it would be important to treat only the budgets of families consisting of man, wife and two children, if the objective were a standard clothing scale for a family of that size. Similarly for the case of man, wife and one child and the case of man and wife only. A series of static averages of clothing costs for the male parent or husband would thus be derived, and a corresponding series for the other parent or wife. The final term of the series would be the cost for the bachelor in the one series and the spinster in the other, and the quantities might be expected to show an orderly decrease as the number of children increased, although age would possibly be a disturbing factor in the transition from bachelor to married man without children.

The following figures, extracted from three quantity and cost budgets prepared by the United States Bureau of Labour Statistics, may serve to illustrate the suggested movements of the static averages. These budgets were designed for the main-

11. *Monthly Labour Review*, U.S. Bureau of Statistics, Nov., 1919, p. 1.

12. *Monthly Labour Review*, United States Bureau of Labour Statistics, Dec., 1919, p. 22; June, 1920, p. 1, etc.

In an attempt to choose a typical family of a given size, wage authorities and budget inquirers have sometimes specified sex and age for the children. The inquiry into Government employees' costs at Washington just mentioned is an example. Of great interest to Australians is the choice of the Federal Basic Wage Commission of 1920, who took the children as a boy aged $3\frac{1}{2}$ years, a girl aged 7 and a boy aged $10\frac{1}{2}$.

Is this a typical family of three children? To include a child aged $10\frac{1}{2}$ years, the duration of marriage of the parents would usually be little less than about $11\frac{1}{2}$ years, and one of the late Sir George Knibbs' tables shows that families of approximately this standing contained *on an average* at least $4\frac{1}{2}$, not 3, living children.¹⁵ The inference is that the gap between the ages of successive children in a typical family was in 1911 far less than the $3\frac{1}{2}$ years assumed in the Commission's family. Although since 1911 the average number of children per family has fallen, the statistics indicate that the gap between the ages of successive children is not appreciably greater now than it was then. The typical gap is still probably between 2 and $2\frac{1}{2}$ years.

Further, the alternation of sex assumed in the Commission's family is probably not typical. In a three-child family the possible arrangements according to sex, M indicating male and F female, are:—

1	M M M
2	M M F
3	M F M
4	M F F
5	F M M
6	F M F
7	F F M
8	F F F

The Commission scheduled the individual requirements of its selection of children, and deducted about 5% from the total cost of clothing for the family as an allowance for passing on of clothes. But in all possible arrangements of sex but (3), the Commission's arrangement, and (6), which is similar, a greater measure of passing on of clothing is practicable, and in cases (1) and (8) a still greater measure. These alternative arrangements, assuming a binomial distribution, have three

15. *The Mathematical Theory of Population*. Census of the Commonwealth of Australia, 1911, Vol. I, Appendix A, p. 236.

times the frequency of the Commission's arrangement, and recent research suggests that arrangements (1) and (8) are, in fact, more frequent than would be expected under a binomial distribution.¹⁶ Moreover, an age gap of 2 to 2½ years implies a much greater practicability of passing on clothing than the assumed gap of 3½ years. These considerations indicate that if 5% is a valid deduction in the case of the family selected by the Basic Wage Commission, a higher percentage would more usually be applicable to real families containing three dependent children.

IV.

No attempt has so far been made to construct a scale of requirements of items other than food, housing and clothing according to sex, age or conjugal condition. In the report of 1926, already quoted, the International Labour Office suggested that annual expenditure on fuel and light, furniture and furnishings, might be regarded as being on about the same scale for sex and age as the expenditure for housing accommodation. As a very large part of the expenditure on these residual items is incurred for common rather than individual use and advantage, it seems impossible to construct a scale for these items on the lines of the scales proposed for food and clothing.

V.

The coefficient or scale system in its existing state of incompleteness has been shown to be very valuable in the case of food, but of doubtful applicability in the cases of housing and clothing. If doubt is reasonable in these cases, it is at least equally reasonable in the case of the remaining items, which consist largely of items for common use and advantage, although containing some items for individual purposes. All but those optimists who hope and then believe that errors always balance one another and never accumulate, may, therefore, tend to doubt the applicability of general scales or coefficients for the purpose of reducing the whole cost of living for a family of one size to the corresponding cost for a family of another size. However, certain scales have been constructed, not with the idea of going to the extreme point of adapting to a family of a different size a cost of living calculated for guidance in fixing minimum wages,

16. *Statistical Methods for Research Workers*, R. A. Fisher, 3rd Edition, 1930, Sec. 18, Ex. 6.

but as tentative devices for reducing to a common basis the information collected in family budget inquiries.

The difficulty of the problem is explained in the above-mentioned publication, *Methods of Conducting Family Budget Inquiries*,¹⁷ as follows:—"The incomparability . . . could be avoided by collecting data *only from families of a given size*. Such a method is, however, impracticable, especially in view of the difficulty experienced in certain countries of obtaining an adequate number of budgets, even if families of different size are included." One may repeat here what has been said above with regard to clothing, viz., that if such method were adopted the results obtained would be truly applicable only to families and members of families of the particular size chosen. The report continues:—"The alternative is to adopt some unit of consumption and to reduce the consumption of families of different sizes to terms of the unit chosen. The unit may be, for example, the consumption of an adult man, an infant, or a family of given size."

Further discussion in the report shows that this "alternative" to the "impracticable" is, in short, impossible, although, it must be admitted, this conclusion is not there so baldly stated. However, in a recent review of the results of the Swedish family budget inquiry of 1923 by Dr. Cederblad, of the Social Board, Stockholm, the following passage occurs:—

" . . . the number of units of consumption should not be used as an indication of the size of the family, but the *families should instead be classified in natural groups*; for instance, childless families, families with one, two or three children, families with one grown-up child, etc. This method achieves two purposes. In the first place, as long as the *question of the most suitable manner of reducing families of different size in terms of a common unit has not been solved*, or in other words, as long as the most suitable scale of units has not been found, it is desirable, wherever possible, to avoid using such scales in the compilation of the data. . . . Secondly, if the different types of families in a given class—for instance, of the working class—are arranged according to the age of the eldest child, *a picture is given of the chronological development of a working class family*."¹⁸

17. International Labour Office, *Studies and Reports*, Series N, No. 9, Geneva, 1926, p. 45 et seq.

18. *International Labour Review*, October, 1926, p. 496.

Notwithstanding these objections, it seems desirable to present the general scales for inspection.

The two scales of general requirements which have been published are the German scale and the American "ammain" scale. In the report, quoted above, of the International Labour Office an "Australian Scale based on other groups of commodities as well as food" is set down¹⁹ as derived from the Commonwealth Bureau's Labour and Industrial Branch Report, No. 4. But this is an error. That scale was constructed for expenditure on food only, and was used in the report on the budget inquiry of November, 1913.²⁰ Indeed, the Commonwealth Statistician (the late Sir George Knibbs) then said: "It is not practicable to obtain similar results for sex and age classes in regard to expenditure on items other than food, owing to the difficulty in computing any satisfactory system of weights accurately denoting the extent to which the various items are used or consumed by persons in the various classes."

The German scale was drawn up by the German Statistical Office for use in its family budget inquiry of 1907. "It is based not only on food consumption but, to a certain extent, on other groups of expenditure."²¹ But the extent to which it is based on other groups of expenditure is not at all clear. It was subsequently modified by including ages 15 to 19, and is now as follows:—

German Scale

(Based on other groups of commodities as well as food)

Age in Years	Coefficient of Requirement	
	Male and Female	
Under 4	10	
4 and under 7	20	
7 " " 10	30	
10 " " 13	40	
13 " " 15	50	
15 " " 17	70	60
17 " " 19	90	70
19 and over	100	80

Weighting the coefficients for children under 14 according to their frequency in New South Wales at the Census, 1921, the

19. *Op. cit.*, p. 48.

20. Commonwealth Bureau of Census and Statistics, *Labour and Industrial Branch Report*, No. 4, p. 28.

21. *Methods of Conducting Family Budget Inquiries*, *op. cit.*, p. 50.

coefficient for the average child works out at 25. The coefficients for "domestic units" of various sizes work out as follows, taking the children as average children:—

Man and Wife	180
Man, Wife and one Child	205
Man, Wife and two Children	230
Man, Wife and three Children	255

The American scale of "ammains" was produced by Mr. Edgar Sydenstricker, of the United States Public Health Service, Washington, D.C., and Mr. Willford I. King, of the National Bureau of Economic Research, New York, N.Y., in 1921, as a result of their investigations of the incomes and expenditures of cotton-mill employees in South Carolina.²² These investigators published two scales, one of "fammain" and the other of "ammains". The word "fammain" is explained by them as a condensation of the phrase "food for adult male maintenance", and is defined "for any given class of people as a demand for food of a money value equal to that demand by the average male in the given class at the age when the expense for his food reaches a maximum".

The word "ammain" is similarly explained as an abbreviation of the phrase "adult male maintenance", and is defined in corresponding terms. The "ammain" scale is a combination of the "fammain" scale with another scale computed by the authors to represent relative expenditures on articles purchased for individual use.

It is admitted that in the "ammain" scale resulting from this combination "a number of important items of expenditure, such as rent, fuel, light and furniture, are omitted from consideration", but it is indicated that house rents in mill villages rarely amount to over 5% of the family income, and that generally such articles or services purchased for *common consumption* "form but a relatively small fraction of the total living expense of mill families". The authors think that, although the scales are derived exclusively from mill employees' budgets, they nevertheless have a general value, and, indeed, that, if applied to other groups of the American population, "the chances are that the actual errors thus arising would be so trivial that they might safely be ignored". The following table is a condensation of the originals, in which the coefficients are given to three significant figures:—

²² *Journal of Political Economy*, Vol. XXIX, 1921, pp. 571-584.

American Scales of "Ammains" and "Fammains"

Age in Years	Ammains		Fammains	
	Male	Female	Male	Female
Under 1	22	22	28	27
1	24	24	30	29
4	33	33	41	40
7	40	40	48	46
10	47	45	56	52
13	59	55	69	62
16	81	70	90	76
19	96	78	98	84
22	99	79	100	86
25	100	79	100	86
30	97	78	100	86
35	95	76	100	86
40	93	74	100	86
45	92	72	99	85
50	89	69	98	84
55	85	67	96	82
60	81	66	95	81
65	79	64	93	79
70	77	63	92	78
75	75	62	91	77
80	74	62	90	77

Applying these coefficients to children in New South Wales according to their frequency at various ages under 14 years, the coefficient for the average child under age 14 works out as follows:—

Average Child under Age 14

	Male	Female
Ammains	38.4	37.7
Fammains	46.6	44.0

In applying the "ammain" coefficients to husband and wife or parents, there is the difficulty of choosing the ages. (This is relatively unimportant in the case of "fammains".) As regards the group man and wife only, it has already been pointed out that less than one-fifth of these are of recent constitution, while four-fifths either are so far sterile (involuntarily or voluntarily) or have been constituted for such a time that the one or more surviving children they have had have passed the age of dependence. It has not been clearly determined by the authorities concerned with the "cost of living" whether the average age or the predominant age of all these should be taken, or whether sociological considerations indicate that the recently-constituted type or the type with one or more superannuated children should be the point of concentration of industrial justice.

Similarly, the group man, wife and one child may be divided into the recently constituted, the now sterile (involuntarily or voluntarily) and those with superannuated children (all but one). This is, of course, not a perfect classification, for birth control may be operated with longer or shorter lapses, and not always to the extremity of complete sterility after a certain point. If the choice fall upon the recently-constituted type in the case of each domestic group considered the average age will increase more rapidly as one passes from the group man and wife to the group man, wife and one child, and so on, than if all members of each group be included.

Avoiding these difficulties momentarily in order to get a rough and tentative result from the "ammain" scales, one may take, merely as an example, 35 years as the husband or male parent's age and 30 years as the wife or female parent's age. Other ages can, of course, be taken as desired. However, the results with these particular ages are as follows, assuming average children:—

Man and Wife	173
Man, Wife and one Child	211
Man, Wife and two Children	249
Man, Wife and three Children	287

In the way of applying these or similar figures to the cost of living as a whole, an outstanding difficulty remains—the matter of rent, fuel and light and furnishings—expenditure regarded by the authors of this scale of "ammains" as not incurred for individual consumption. Far from forming a mere 5% of the total, as in the case of the South Carolina mill employees, these items amount to something in the neighbourhood of 30% of the total cost of living for Australian basic and living wage earners, as hitherto determined by the industrial tribunals for families consisting of husband and wife, and none, one, two, or three children (except in rural areas of low rentals).

The "ammain" scale, therefore, can hardly be applicable, as it stands, to Australian conditions. A tentative adjustment of it to take account of the high proportion of expenditure accountable in New South Wales to rent, fuel and light, furniture and furnishings, may be made as follows:—

Let it be assumed that at present or during a recent period the cost of living for a man, wife and three children is made up of 35 units of money for rent, fuel and light, furniture and furnishings, and other items for common use and advantage,

and 65 units of money for all other items. The proportion cannot, of course, be exactly stated, but, if desired, adjacent proportions can be tried and the final results compared. The "ammain" scale may tentatively be applied to the 65 units of other expenditure to adapt it to families containing man, wife, and two children, one child, no child, etc. As regards the items rent, etc., covered by the 35 units of money, perhaps the suggestion of the International Labour Office that expenditure on fuel and light and furnishings, etc., is proportional to expenditure on shelter may tentatively be accepted. It remains, then, to devise an acceptable scale for rent or shelter, according to size of family. An attempt to do this by taking account of the housing constraints which are shown by the statistics to exist in Australia is shown on the following schedule. The scale of total expenditure according to size of family would then be as follows:—

Tentative Scale of General Requirements
(According to Size of Family)

Family	Shelter, Fuel and Light, Furniture and Furnishings, etc.	All other Items (by "Ammain" Scale)	Total
Man, Wife, 3 Children	35	65	100
" " 2 "	33	56	89
" " 1 Child ..	31	48	79
Man and Wife only ..	30	39	69

A comparison may now be made of the "ammain" scale, thus modified, with the original "ammain" scale and with the German scale.

*Comparison of Scales of General Requirements According to
Size of Family*

Family	General Requirements according to:			
	American "Ammain" Scale	Modified "Ammain" Scale	German Scale	"Modammain" Scale
Man, Wife, 3 Children	100	100	100	100
" " 2 "	87	89	90	90
" " 1 Child ..	74	79	80	80
Man and Wife only ..	60	69	71	70

No solution can be claimed as anything more than a round approximation. It is curious that the "Ammain" scale, when

adjusted for the high expenditure in Australia on housing, is, for practical purposes, identical with the German scale. The round figures shown in the last column as the "Modammain" scale may serve for Australia. They do, indeed, fit remarkably well the findings of the New South Wales industrial authorities and that of the Federal Basic Wage Commission for man and wife only and with one, two, and three children respectively.

Nevertheless, although the effect of passing on of clothing may possibly be sufficiently represented in these scales—the "Ammain" scale was derived by analysis of actual expenditures incurred by the families investigated—two questions at least seem to remain outstanding: first, the variation of the static averages for parents (or husband or wife) according to size of family; secondly, the question whether, in a particular family or "domestic unit", the recently-constituted type should be chosen in preference to the type with superannuated children, or *vice versa*, or whether an inclusive average should be accepted for the group of each size.

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