MEASUREMENT OF TARIFF LEVELS FOR IRELAND, FOR 1931, 1936, 1938

By W J L Ryan, B A

(Sir Robert Woods Research Lecturer in Economics, Trinity College, Dublin)

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[*N B —The noun "Ireland" and the adjective "Irish" are employed throughout as applying to the 26-county area*]

What Does a Tariff Level Index Measure?

The object, in the determination of tariff levels, is to express the height of tariffs in terms of a single figure, or index Before examining the theoretical and statistical problems involved in the construction of such an index, it is pertinent to inquire what meaning can be attached to it The precise significance of any index, however constructed, will vary according as we are concerned with spatial comparisons, at given points of time between different countries, the index being constructed either from the point of view of an exporting country or of the world economy, or with temporal comparisons for a given importing country. Moreover, as we shall see, the construction of an index must differ according to the end in view If we are primarily concerned with the former, then no index can measure the degree of protection afforded by the different State tariffs Command, 2337 (1905) rightly points out that "the protective effect of a tariff is not necessarily proportionate to the average level of the duties, but also depends on many other factors, such as the comparatively advanced or backward state of the home industries protected "[1] Costs of production of all goods vary widely between countries at any given time The protective effect of an x% *ad valorem* duty will, therefore, vary in a similar fashion. The higher is the cost of production of a given good in an importing country, then the less will be the protective influence exerted by a tariff of given magnitude.[2] Tariff level indices would only measure variations in the degree of protection between countries if the costs of production of the good(s) in question in all these countries were the same. But if this were so, tariffs would be so few that any computation of tariff indices would be unnecessary It is unsatisfactory, therefore, if spatial comparisons are aimed at, to attempt an interpretation from the point of view of the importing country

An alternative, in spatial comparisons, is to approach from the standpoint of the exporting country and inquire if the index measures changes in the degree of obstruction raised against trade. It is true that all import duties involve some degree of obstruction Each posi-

[1] Cmd 2337, 1905 p 292 pp lxxxiv, 41

[2] *Tariff Level Indices* Geneva, 1927 p 10 "A high duty does not necessarily imply the effective protection of a domestic industry by the exclusion of foreign products It may simply indicate a great relative disadvantage in the production of the article protected"
See also "Observations transmitted by Mr T W Page (U S A)" Op cit , p. 35.

tive duty, no matter how small, will affect the pattern of demand in the country imposing it A duty on a final good will change the pattern of consumption, one on an intermediate good will affect the pattern of production through substitution. The extent of these adjustments will depend on the elasticities of demand for, and supply of, the good in question, in so far as these affect its price. If, however, the duty is sufficiently high not only to affect the pattern of demand, but also to exercise a direct protective effect, then the degree of obstruction to trade is suddenly increased. This crucial point will be reached for each good at a different level in different countries. A tariff level index, therefore, will do no more " than give a rough indication of the probable relative order of the magnitude of the obstruction created."[3] We are here examining the reverse of the medal whose obverse we examined above, when we approached the problem from the point of view of the importing country. In each case, the major difficulty in spatial comparisons is the disparity between the economies of the countries concerned These differences prevent the indices from reflecting spatial variations in the degree of protection; they are equally opposed to the indices being used to measure variations in the degree of obstruction to trade.

The objections to these two interpretations of the tariff level index are especially strong when we are attempting spatial comparisons at a given point or over a period of time When we are concerned, however, only with the movements in tariff levels in a single country through a comparatively short period of time, these interpretative problems largely disappear.[4] If the comparison is limited to a sufficiently short period, then it can reasonably be assumed that the basic determinants of cost of production will remain more or less the same Further, it is unlikely that any duty with an avowedly protectionist purpose will be imposed which is not sufficiently high to protect For temporal comparisons, therefore, for one country, the movement of a suitably constructed tariff level index will give a reasonable indication of variations in the degree of protection Our purpose will be to measure the changes which have taken place in the degree of protection offered to Irish industry. Existing techniques will be examined and their applicability to, and suitability for, our specific task assessed

Definitions

The specific and appropriate form of " Tariff Level "[5] is strictly

[3] Loveday *The Measurement of Tariff Levels (Journal of Royal Statistical Society)*, 1929 Vol 92, p 494

[4] Loveday, op cit , p 494

[5] We proceed at once to an examination of the more sophisticated methods of Tariff Level Calculation and their implications The simplest and most obvious method would be to express the total receipts from import duties as a percentage of the total import values This is discarded Its defects are clearly stated in Cmd (2337) 1905 p 289 " [it] would give a wholly misleading result It would show accurately the average *ad valorem* equivalent of rates charged on all goods which succeeded in passing the 'tariff barrier', but would take no account of the rates on the goods stopped by the barrier To take a simple case Suppose a county admits coal free and puts a prohibitive duty on cottons The *ad valorem* equivalent of its duties on both classes of articles calculated on the above principle, would be zero, yet its tariff on the principal article of British export would be protective, and even prohibitive "

Cf also G Haberler *International Trade* (1936), p 356

relative to the viewpoint from which we examine the problem. Perhaps the best definition of a " Tariff Level " from the viewpoint of the world economy is that, given in the League of Nations *Memorandum on Tariff Levels* [6] " The expression ' Tariff Level ' or height of a tariff, as a generic term, is taken to mean a magnitude which is equal to the average of the percentages which the duties imposed by any given country constitute of the values of the commodities which compose the whole catena of goods normally entering into international trade." This definition is perhaps not wholly unambiguous. Its validity may be attacked on the ground that the value of the " whole catena " is not independent of the effects of the different State tariffs The variable, the effects of whose changing values we wish to measure, has not been wholly isolated from our datum position But what Loveday meant was not " total values of the whole catena " but " average values " It is true that even average-prices for each commodity are still contaminated by the intrusion of the effects of different State tariffs, but this intrusion is reduced if the average world price for each commodity is taken, and minimised if the average world export price is adopted If, on the other hand, we are concerned with the viewpoint of either an exporting country or an importing country, this definition must be amended The " whole catena of goods normally entering into international trade " is no longer an appropriate basis. For an exporting country, our basis must be " the whole range of goods normally entering into that country's export trade," and for an importing country, " the whole range of goods normally imported into that country " The construction of such an index involves problems of selection, pricing, choice of duties, averaging and weighting

Problem of Selection

Underlying these specific problems there is one general problem, the major problem of selection, which is as follows For a given State, at each point of time, we have the actual rates of duty chargeable on defined goods on their importation, we also know the quantity and the value of the importation of each good in each year Now, if the lists of commodities taxed were identical in all countries or in each country, at all times, the problem of measuring spatial or temporal variations in the index would be comparatively simple It would only involve problems similar to those arising in the compilation, for example, of a cost of living index number But this is not so. The list of tariffed commodities varies considerably from one country to another, and the variations are equally wide for one country at different periods of time. Hence it is necessary " to project the conception of the tariff beyond the lists of goods actually taxed," [7] by all countries or any one country at any given time

The particular plane on to which we project the conception of the tariff, *i.e.* the viewpoint from which the selection is made, will depend on the precise purpose of our study, it will vary according as we approach our task from the point of view of the exporting country, the world economy or the importing country. The first of these was the viewpoint adopted in Command 2337 (1905), and in the " Survey of Overseas Markets," undertaken by the Committee on Industry and Trade in 1925. The purpose of these studies was to attempt to measure

[6] *Tariff Level Indices* L of N Geneva 1927 pp. 11-12

[7] Loveday op. cit., p 489

the changes that had taken place in the obstructions raised by foreign countries to the entry of the main categories of British exports The Board of Trade Study of 1905 concluded that the best method was " to calculate approximately the mean *ad valorem* equivalent of the import duties imposed by each country on the main classes of manufactures which are exported from the United Kingdom *to all destinations* and not solely to the particular market under consideration "[8] The same procedure was adopted by the Balfour Committee in 1925 Approached then from the point of view of the exporting country, the appropriate plane or common basis or denominator, is the main classes of exports from the country in question to all destinations The memorandum on *Tariff Level Indices*, issued by the League of Nations in 1927, adopted the viewpoint of the world economy, it set out to measure the effects of the tariff policies of all governments in the world economy In this study, the principles underlying the methods used in the two British studies examined above, were extended to indices intended to be of world and not only of local significance The common basis chosen was a representative selection of all the goods which entered into world trade,[9] and not merely of those appearing in British exports. The tariff level index will obviously depend on both the average rate of duty and the number of commodities subjected to duty and on the weighting system adopted. The number of dutiable goods varies within wide limits between different countries. Consequently, if the indices computed are to be consistent for purposes of comparison, the " representative selection " must contain all commodities of sufficient importance that are taxed in any of the countries examined As Loveday points out,[10] goods untaxed in all countries can be excluded, since the object is not to measure the absolute height of the tariffs, their exclusion will have no influence whatever on the comparability of the indices

If it is intended to measure the changes in the height of the tariffs imposed by an importing country, then neither of the planes of projection examined above is suitable Here, the purpose is to measure temporal variations in the tariff level Hence, if the indices, once computed, are to be comparable through time, the common basis adopted should contain the maximum number of commodities taxed during the period If this requirement should make the computation impossibly laborious, then this list containing the greatest number of tariffed commodities must be subjected to a process of selection, and the most important commodity(s) under each reference number in the customs tariff can be taken

Choice of Duties

Once the plane on to which the conception of the tariff is to be projected has been chosen, *i e* once the list of goods that is to form the basis for the analysis has been decided upon, there remain a number of further problems The first of these is that arising from the choice of duties. Should *ad valorem* or specific duties be chosen? Should specific duties be adopted as the basis, and the tariff level expressed as

[8] Cmd 2337 1905 p 289

[9] In method B, 14 export countries were selected and for each about 20 of its most important export commodities were chosen The total was 278 See *Tariff Level Indices* p 4

[10] Loveday, op cit , p 495

an average amount per 100 lbs weight of import? Or should *ad valorem* duties be taken, and the index expressed as an average rate? Now, as Loveday points out,[11] specific duties possess certain advantages Since the majority of duties are specific, especially in those countries that have pursued, for a comparatively long period, a policy of tariff protection, if they are chosen as basis the burden of computation is eased It would only be necessary to compute the prices of those goods to which *ad valorem* duties apply Such practical advantages are important, but it is difficult to agree with Loveday that they are of sufficient importance to favour the choice of specific duties, if the object is to make a simple international comparison for one year In such a calculation, specific duties must be expressed as a sum per *fixed* weight of the commodity, for example, as so much per 100 lbs weight Now, import quantities may be expressed in terms of numbers, volume, weight, area or length, and the task of expressing numbers of pigs, gallons of whiskey, linear feet of timber or square yards of carpet in terms of weight avoirdupois and adjusting the specific duties accordingly, is bound to be laborious Further, the weighting system must be expressed in the same terms, and if we are dealing with several countries, the weighted average amount for each must be expressed in terms of a single currency There are, therefore, overwhelming difficulties in the way of using specific duties as a basis even for simple international comparisons for a single year If the construction of a time index is aimed at, specific duties are completely unsuitable, because their significance as protective devices varies as prices change, when prices fall, the burden of specific duties rises and vice versa In making temporal comparisons for one country or all countries, *ad valorem* duties must be used Fortunately, in the Irish customs tariff, most of the duties are *ad valorem* When *ad valorem* duties are chosen as base, specific duties must be converted to an *ad valorem* basis This gives rise to the problem of pricing—the problem of determining what prices will be chosen as a basis for this conversion This is considered in a later paragraph

The existence of fiscal duties introduces a further difficulty[12] Loveday examines the question of their position in the index at some length He analyses two arguments put forward for their exclusion The first is that fiscal duties should not be included because they are not protective This, however, rests on a fallacious interpretation of what a tariff level index measures, when calculated from the viewpoint of the world economy as a whole, and must therefore be rejected The second argument holds that fiscal duties obstruct trade in a different manner and to a less extent than other duties This argument rests on two assumptions (*a*) That all duties on goods not produced in a country are deemed to be fiscal, and (*b*) that all duties balanced by an equivalent excise duty are taken as being fiscal in character Now assumption (*b*) is normally valid, but (*a*) seldom so Many circumstances arise to render it invalid if the customs tariff is rapidly extended, the majority of the duties would be fiscal on this view, or if the sole producer in a protected industry went bankrupt a duty that was manifestly protective would be assumed to be fiscal The narrower assumption that only duties on goods that *cannot* be produced in the country in question are fiscal, is no more satisfactory With modern

[11] Loveday op cit, p 500

[12] Para 9 is a Summary of Loveday's argument Cf Loveday, op cit, pp 501-2

productive techniques, very few goods would fall into this category. To assume that the Irish duties on dried fruits are protective would seem rather unrealistic Loveday is " compelled, therefore, to employ as the criterion for determining whether a duty is fiscal in nature, or not, either the intentions of the legislator or simply, the existence or non-existence of a complementary excise duty " The difficulties in the way of ascertaining the intentions of legislators in all the countries included in the calculation would seem to be insuperable, since such intentions are seldom clearly stated The second criterion seems, at first sight, more satisfactory Customs duties balanced by countervailing excise duties seem to obstruct trade in a manner different from ordinary customs duties trade is obstructed to the extent to which the consequent rise in price limits demand But this difference is merely superficial, for duties on goods not domestically produced obstruct trade in the same way The demand for goods subject to a complementary excise tax is usually inelastic within a fairly wide price range, but this is a no more valid criterion for exclusion or inclusion of such goods in our calculation Loveday concludes that " the whole thesis in favour of omitting fiscal duties thus proves on analysis [to be] extremely difficult to substantiate ". Despite the above arguments to the contrary, however, he decides in favour of excluding commodities such as tobacco and alcohol, which are normally taxed for fiscal purposes, or normally subjected to excise duties or a government monopoly. His reasons are that such duties are intended to produce maximum revenue and are therefore designed to hinder trade to the least possible extent. Further, if such duties are included, they distort the index, and this may lead to misunderstanding and undue mistrust

While there is much to be said for Loveday's compromise solution, it would seem preferable to adhere to the only conclusion that is logically defensible, viz., that fiscal duties should be included, when the prime objects of the study are international comparisons. Care must be taken in interpreting the indices so calculated, however, for the differences between them may merely reflect differences in public financial policy. Fiscal duties are a part of the revenue raising machinery of a state If revenue is not raised by such indirect taxation, then it must be raised in some other way Fiscal duties obstruct trade by raising prices and therefore limiting demand, the same amount raised by way of a purchase tax will obstruct trade in a similar way. Let us, by way of example, take two countries A and B, each initially with a low general tariff, suppose that in A the major part of the revenue is raised by high import duties on a narrow range of necessities and conventional necessities, and that in B the bulk of the revenue comes from a purchase tax imposed on all goods whether domestically produced or imported. This tax in B will afford no differential advantage to home production, but it will effectively hinder trade Now, if we compute a tariff level index for each, that for A will be much higher than that for B, but we cannot deduce from this that the difference between the two indices is a true measure of the height of the barriers raised by A relative to those raised by B. Indeed, the whole question of fiscal duties impinges on a much wider problem, a tariff level index will possess meaning, and spatial comparisons will be valid, only if tariffs are the sole or major method, in all countries, of obstructing trade When obstructive trade policies and public financial practices differ widely from one state to another,

comparison is impossible [13] If the object of a tariff level calculation is to measure the height of the barriers raised by other countries against exports from a given country, then fiscal duties give rise to no problems They must be included in the calculations

Many of the difficulties which confronted Loveday arise in a much less acute form for us, for we approach from an entirely different point of view—that of the importing country Our purpose is to construct an index that will measure the changes in the degree of protection afforded by the Irish customs tariff The period over which the calculation is made is 1924 to 1938. By the Finance Act of 1923 (No 21 of 1923), the United Kingdom revenue duties and the protective McKenna duties were applied *en bloc* to Ireland The granting of a small protective margin to the Irish tobacco and sugar confectionery industries was inherent in this procedure, and some progress towards adjustment to the new conditions had taken place by 1924 This list[14] remained unchanged throughout the period with the exception of the addition of mineral hydrocarbon oils Now, if we include these goods in our select list, there will be an artificial element in our calculation The computation made for the year 1924 will be meaningless our numerator will consist of a comparatively short list of goods subject to high duties, plus a much larger number subject to zero rates The resultant average can have no more than an arithmetical significance [15] The case for complete exclusion of the fiscal duties is not, however, wholly satisfactory. The rates of duty on these commodities did not remain constant throughout our period for example, the customs duty on tea fell from 5d. to 2d per lb., the duties on coffee, cocoa, wines, cider and perry and tobacco were increased, the duty on sugar was reduced. In addition, the excise taxes on sugar and tobacco were manipulated and other measures adopted, to encourage the home production of beet sugar and native tobaccos If all these commodities are excluded, the resultant indices would reflect movements relative to an unstable base The index, so calculated, would reflect changes in the height of the obstructions raised, over and above the changing heights resulting from these predominantly revenue duties On balance, however, we feel that it is preferable to exclude these fiscal duties It is felt that the slight loss of temporal comparability which is involved in this procedure, is a lesser evil than the artificiality that would result if fiscal duties were included Our select list is, accordingly, made from the goods taxed after 1924, the index for 1924 will be zero Our indices will reflect variations in the degree of protection relative to 1924

The existence of a preferential system introduces a further complication If both the full and preferential duties are effective, then maximum and minimum tariff indices must be calculated If the case of Ireland, at all times, but especially between 1924 and 1931, the imperial preferential duty was the only effective one, because of the preponderant importance of the United Kingdom and the Dominions

[13] For a further examination of this problem see para 25

[14] The main items on the list are tobacco, wines, spirits, beer, tea, coffee, sugar, cocoa, cinematograph films, dried fruit This list agrees substantially with the enumeration of revenue duties given by the Minister for Finance (Mr MacEntee) in the Dail on 12th May, 1938 See official Debates, vol 71 c 879

[15] See Observations transmitted by Dr E Trendelenburg (Germany), *Tariff Level Indices*, p 27

as suppliers of Irish imports For Ireland, therefore, only the preferential rate will be used, and a single tariff level index calculated for certain years The case for this procedure is further strengthened by the fact that the preference rate was usually fixed at an " effective " level—at a level which gave considerable protection to the particular Irish industry—the general rate being fixed at a prohibitive level

Problem of Pricing

It has been argued above (para 9) that *ad valorem* duties constitute the only feasible basis of summation for a tariff level index The adoption of this basis involves the conversion of specific duties to *ad valorem* This brings us to the problems of prices[16] Should import prices, export prices or market prices be chosen as a basis for this conversion? Import prices possess certain advantages If they are chosen, then the difficulty of marrying the commodity to the rate largely disappears Customs administration will demand that the trade statistics of the importing country will closely follow the classifications of its customs tariff The import prices for each tariffed commodity can, therefore easily be calculated Import prices are also a more realistic basis, for it is on the basis of such prices that *ad valorem* duties are usually calculated Import prices are inclusive of insurance and freight to the frontier of the importing country, and they therefore form a sounder basis for the calculation of the tariff level The good affected by the duty is not the good at either its point of production or of exportation, but the good at its point of importation A bale of cotton at Memphis or f o.b Charleston, and the same bale c i f Manchester, can scarcely be regarded as the same economic good, for the value of the latter has been enhanced by the accretion of space-time utilities Price at the point of importation is not, of course, an ideal basis, for the protective effect of the tariff will depend on price at the point of consumption The price quotation at the consumption point may be less than the import price plus duty, plus normal distribution costs, because of the contraction in traders margins But the difficulties in the way of realising this ideal base are insuperable, and we must be content with import prices While the adoption of any basis other than consumption price is unrealistic, the element of unrealism is least in import prices But import prices suffer from four important disadvantages First, no prices will exist for commodities whose import is prohibited by an excessively high tariff Import values will only be available if the tariff is not high enough to be prohibitive And, indeed, it is only if the duty allows the importation of a substantial quantity of the good in question that the import price will be significant Secondly, import values are influenced by the type of duty which is imposed The import prices which will be used must necessarily be the average of trade statistics or tariff schedule groupings If the duty is specific, then there will be a tendency for the better qualities of the good to be imported, the average value will consequently be enhanced No such distortion of the pattern of quality of the imports will take place where *ad valorem* duties rule A tariff level index would, therefore, understate the true position Thirdly, if we are aiming at international comparisons, there is the difficulty that no two sets of national import statistics are the same The difficulty involved in reconciling the different national import categories are

[16] For a full examination of prices, see Loveday, op cit , pp 497-500

well-nigh insuperable Fourthly, the most serious disadvantage from which import prices suffer lies in the fact that they are largely influenced by state tariffs An import duty obstructs trade, and many circumstances can be envisaged in which it would be beneficial to the exporter to reduce his prices in order to gain entry to the protected market For example, if a duty has been newly imposed, an exporter might continue his exports at a reduced price to preserve the goodwill for his commodity, if it is his intention ultimately to open a branch factory behind the tariff wall Or again, if an exporter wishes to produce at the most efficient technical level, he may indulge in price discrimination between different markets in order to dispose of optimum output The price at which he will sell in any particular export market will depend largely on the size of the tariff which his products have to surmount There is good reason, then, for abandoning import prices as our basis if we are approaching the problem from the point of view of an exporting country, or if we are analysing the behaviour of all Governments in the world economy. As we shall see later, however, the objections against the use of import prices are not so strong when we are dealing with the changes through time in tariff level for one country

Export prices were adopted as the basis for the partial studies of 1904 and 1925 in the United Kingdom, and for the general study undertaken by the League of Nations in 1927 Export values are largely free from the disadvantages that are inherent in the use of import prices They are not affected by prohibitive duties, nor influenced directly by the type of duty imposed If typical world export values or the average values of all exports from an important exporting country are taken, they are unaffected by the tariffs of any particular country, and the difficulty of reconciling divergent national import statistics does not arise Export values for our purpose suffer, however, from several disadvantages In the first place, the standard of accuracy of export statistics is likely to be below that of import statistics There is a definite incentive to the customs authorities in an important country to ensure that import values are, at the least, not underestimated There is no such incentive to accuracy in export values, except in a country with strict exchange control If the list of commodities chosen is large enough, however, the underestimations will probably cancel out against the overestimations There is no reason to assume a persistent trend in either of these directions except where there is exchange control Secondly, the composition of an export class varies from year to year with changing world conditions In calclulating the average price of an export class, we must, therefore, be sure that the year in question is in some sense typical Thirdly, if specific duties are converted to an *ad valorem* basis by expressing them as a percentage of the export price, the height of the tariff level will be overestimated The degree of overestimation will be the greater, the greater is the margin between the export price and the corresponding import price The degree of overestimation can be reduced either by correcting export prices, which are f o b export point, for insurance and freight to port of entry, or by recalculating *ad valorem* duties, normally based on landed price, on the basis of the export price Fourthly, and lastly, considerable difficulty is likely to arise in marrying the export categories to the customs tariffs of the importing countries Despite these objections, export values are the basis normally

employed in international tariff level comparisons We can briefly dispose of the third possible basis. market prices This method was adopted in the Study undertaken by the Austrian Committee of the International Chamber of Commerce, in 1927 [17] The object of this study was to calculate the average duties imposed on the entry of Austrian goods into her principal markets The authors used, as their basis, export price quotations that were furnished by the leading merchants and manufacturers for export in Austria This method involves the choice of specific commodities rather than small groups. The magnitude of the work involved makes it impossible to use it for international comparisons, since there is no world market for manufactured goods as for certain raw and semi-finished goods. The labour involved is still very considerable even if we are only concerned with making temporal comparisons for a single country

Our task is to construct a tariff level index for Ireland In expressing specific duties as *ad valorem* percentages, we can choose[18] one of three possible bases import prices, export prices, and market prices, whose advantages and disadvantages have been examined in the previous paragraph Market values can be rejected because of the labour which their use entails The choice then lies between average United Kingdom export values and Irish import values The most serious objection to the use of export values is, as we have seen, the fact that they are unrealistic; they make no allowance for the enhancement of value through the accretion of space-time utilities, and it is on the basis of the value, so enhanced, that the duty is calculated In the specific case which concerns us, however, the margin between the two sets of prices is likely to be small because of the proximity of Ireland to the United Kingdom. Further in a study concerned only with Ireland, the difficulties in the way of a happy marriage between export and import statistics are small Irish trade statistics are very similar to those of the United Kingdom, especially for the period 1924-1931 Thereafter, marital quarrels arise, and the Irish import statistics become more detailed and elaborate as the tariff schedule is extended The difficulties of reconciliation that arise, however, after 1931, are by no means insuperable, settlement is facilitated by the happy marriage that existed in the previous period To the extent, however, that British exports to Ireland in any export class differ in quality or design from British exports in the same class to other countries, the average export value used will cloak these differences and will, therefore, in some degree be unrealistic Import prices, however, cannot be completely ruled out In the case of Ireland, the distortion of average import values due to specific duties is small, because most of the Irish protective duties were *ad valorem* Specific duties in Ireland, were imposed on live animals, newspapers and books, rubber boots and shoes, glass bottles, butter, some clay products, cheese, minimum duties on clothing, eggs, fish, flowers, raw and preserved fruit, lime, matches, meat extracts, milk whole or dried, rice, soups, sauces, seeds, sugar confectionery, vegetables, wool and yeast. In addition there are a small number of products on which a duty of each type is levied, only the higher of the two being effective The most important of the specific duties are, of course, the revenue duties, but goods sub-

[17] Zollhohe und Warenwerte, Wien, 1927, quoted Loveday, p 498

[18] The same choice exists for duties expressed *ad valorem* If any basis other than import prices is chosen, then *ad valorem* duties must be recalculated

ject to such duties have been excluded on grounds explained earlier. It is true that if import values are taken, they will include the effects of the reactions of British exporters to Irish tariffs But our purpose is primarily to measure tariff changes which can be interpreted as reflecting variations in the degree of protection afforded Irish industry, it is not to measure the effects of the tariff on the policies pursued by British export industries If, as a result of the imposition of a duty, a British exporter reduces his prices in the Irish market, then it is the price so reduced that must be taken as our basis, for that is the price at which he competes with the protected Irish industry On balance, therefore, it seems that Irish import prices will provide a more reasonable basis for our computation If, for any good, the Irish import duty is prohibitive and no importation takes place, this lacuna can be filled by taking the average British export price of that good to all destinations, and increasing it by a suitable amount to allow for the transport and insurance charges etc, that would be incurred if it was to arrive at the point of importation into Ireland

Weighting and Averaging

We have now examined the problems of interpretation, selection, pricing and choice of duties, that arise in the calculation of a tariff level index The possible solutions to these problems, in general, have been indicated, and, in particular, the solution to each which seems appropriate to our special study There remains only one important problem the problem of weighting The precise importance of each good on our selected list has still to be determined, and the significance of each will vary accordingly as we approach the problem from the point of view of the exporting country, the importing country or the world economy as a whole Now, the difficulty here is that the tariffs themselves modify the magnitude of value on which the system of weights will be based For this reason, for an import country, it would be absurd to take current value-totals as our basis The completeness of this absurdity can be seen in the extreme case where a tariff is sufficiently high to prohibit importation if a current value basis were adopted the weighting attributed to such a tariff would be zero Some basis more permanent than this must be found The ideal base would be the values of trade passing on our chosen plane of reference (i e whether the point of reference is the exporting country, the importing country or the world economy as a whole) under conditions of perfectly Free Trade. If we approach the problem from the point of view of the world economy, then this ideal base is completely unattainable, since Free Trade on a world wide scale never has existed, and never seems likely to be allowed to exist The choice of base here is necessarily arbitrary and the relativity of the results much greater, since the pattern of trade existing in the year or period chosen as base will be the resultant of all the tariffs imposed prior to that date or period For international comparisons the best weights are probably those based either on the value of world production or on the value of world exports of each commodity, in each year for which an index is calculated If our plane of reference is an exporting country, then suitable weights would be those based either on the values of each commodity exported to all destinations or on total world production or world trade figures In both the above cases, the weighting systems are not free from the effects of tariffs, but in them the effects of individual state tariffs are generalised, and therefore

minimised, and this is probably the best that can be achieved in the circumstances

We are approaching the construction of the index from the viewpoint of an importing country, and consequently none of the above weighting systems is suitable Current Irish import value-totals cannot be used, for obvious reasons The ideal weights would be those based on the value composition of total imports which would have existed in each year if free trade conditions had persisted uninterruptedly until that time, this is manifestly impossible When dealing, however, with variations in the tariff level for a single country through time, a weighting system based on the actual value of imports on the selected list in a " normal " year, i e , a year when tariff protection was at a minimum or practicaly non-existent, seems the only practicable basis, even though such a basis suffers from the defect that it makes no allowance for " natural " variations in the trade pattern In the case of Ireland, such a year, more or less " normal " in character, can be found The year 1924 marked the mild beginning of the protectionist era in Ireland, and it was also the first year for which full import and export statistics are available By the Finance Act of that year, tariffs were imposed on sugar confectionery, candles, boots and shoes, certain empty glass bottles, and soap and soap substitutes The likelihood of the imposition of these duties was widely appreciated, and this, together with the fact that the duties did not come into force immediately, but over a period extending from 26th April to 1st July, 1924, meant that a considerable amount of forestalling took place It is probable that the amounts imported before the duties became effective, taken with the diminished import of these goods in the latter half of 1924, were approximately equal to the import that would have taken place had no such duties been imposed However, since 1924 is the first year for which the appropriate statistics are available for the Twenty-Six County area, we have little choice While 1924 may not be perfectly representative of the distribution of Irish imports under free trade conditions, it is, at least, more representative of such conditions than the statistics for any subsequent year We used the 1924 weights for each of the years for which a tariff level index was calculated Now, as was seen earlier, the ideal weights would be those based on the value-distribution of imports in each year for which a tariff level was calculated if perfectly free trade conditions had existed up to that date The validity of the choice of 1924 as the basis for the system of weights, therefore, depends on its relation to the ideal If, subsequently to 1924, tastes, techniques and wants, and all the other basic determinants of demand and supply and, therefore, of price, had remained stable, the actual and the ideal would coincide, and no element of unrealism would be contained in the calculation. This, unfortunately, is very far from being the case. Between 1924 and 1938 (the latest year for which a calculation is made) many changes took place. The harnessing of the Shannon for the generation of electricity facilitated the satisfaction of a whole range of wants Electrical apparatus of all kinds was demanded. Improvements in production technique made possible the partial democratisation of the motor car, road passenger and goods traffic expanded, the consumption of oil and petrol rose rapidly The film and the cheap magazine popularised the use of cosmetics and perfumery The improvements in advertising technique made possible the successful invention of new ailments, and patent medicines became

staple articles of consumption The list of such changes is almost infinite In addition there was the intervention of the world depression For all these reasons, therefore, there is the danger that the results of our calculations will reflect our assumption that 1924 is a normal year, every bit as much as reflecting the movements in the degree of protection. It is conceivable, of course, that a set of weights could be constructed, taking 1924 as a basis, and making some allowance for all the above factors making for change, but it would be fatuous to imagine that a system of weights so arbitrarily arrived at could have any significance

There remains the problem of averaging, to which there is only one valid solution,—and that is the use of the weighted arithmetic mean. The geometric mean is to be preferred where its use is possible, for it does not attach the same importance, as does the arithmetic, to exceptional outside rates Arithmetic averages only give a true picture of the magnitudes of their elements if the latter are fairly homogeneous For our study, however, the geometric mean is ruled out, since the duties on some of the commodities in our selected list will be zero in certain years In Table I the results of the above examination of methods, etc, are summarised

TABLE I

Plane of reference (1)	Selection appropriate to (1) (2)	Prices (3)	Duties (4)	Averaging (5)	Weighting System (6)
1 World Economy	Goods selected for their importance in international trade Goods untaxed in all countries excluded	Average world Export prices	Fiscal duties included	Geometric mean to be preferred but where zero duties appear, the Arithmetic mean must be employed	Value composition of total world Exports
2 Exporting Country	Main classes of exports from the country in question Goods untaxed by *all* the importing countries are excluded	Average export prices of exporting country	Fiscal duties included		Value composition of the country's exports to all destinations
3 Importing Country	Main classes of imports entering the country in a "normal" year For temporal comparisons, goods untaxed in all years excluded	Current import prices where import is not so small as to render them unrealistic	Fiscal duties excluded		Value composition of imports in a "normal" year

Specific duties converted to an *ad valorem* basis

The ideal basis would be the values of trade passing on our chosen plane under conditions of perfectly free trade

Calculation of Tariff Level Indices for Ireland

(19) Tariff level indices have been calculated for Ireland for the years, 1931, 1935 and 1938 The 1931 computation was for the 28th December of that year, and was intended to measure the effects of the policy of selective protection pursued by the Cumann na nGaedheal

Government during its period of office The year 1936 was chosen as marking, more or less, the zenith of tariff protection of the Fianna Fáil régime, the calculation for 1938 (December 1st) was made in an attempt to measure the effects, if any, upon the tariff level of the Anglo-Irish Trade Agreement of that year The techniques employed were as follows since the year 1936 was that of maximum protection a list of all the goods (or classes of goods) tariffed in that year was made out, and to this list were added a few commodities that first became liable to duty between 1936 and 1938 From this, a select list was chosen, including only those goods the import of which exceeded £10,000 in the year 1924 This select list contained 45 commodities subject to a specific duty, and 116 commodities (or classes of commodities) subject to *ad valorem* duties Where an *ad valorem* duty exists, it is possible to take import classes, provided that the same *ad valorem* duty applies to all goods included within the class As explained earlier, the list did not include goods subject to revenue duties. Current average import prices were adopted as the basis for the conversion of specific duties to *ad valorem* Preferential duties were employed in all cases For certain goods—for example, matches and table waters,—the difference between the customs and excise duty was taken as being equal to the protective element For sports goods and boots and shoes, considerable difficulty was experienced in integrating the tariff reference numbers with the 1924 statistics, which were much less specialised, it was found necessary to estimate the over-all average *ad valorem* duty on the total imports of each The weights used for each year were the values of the importation of each good or class of good in the calendar year 1924

Applying the above methods, the computed tariff level indices were as follows 1931, 9%, 1936, 45%, 1938, 35% The figure for 1936 seemed astonishingly high It must be remembered, however, that, in the first place, it applies only to the tariff level on our select list of goods,[19] and secondly, that it represents the " potential " height of the tariff wall—i e, the height that would obtain if no mollification of the tariff burden were legally possible The duties imposed on the goods on our list were not enforced on all such goods imported - 65 of the goods or classes of goods on the list were admissible free of duty by virtue of Ordinary licensing provisions, as recommended by the Minister for Industry and Commerce, and 16 on the recommendation of the Minister for Agriculture. Further, it is possible—indeed, probable and likely,—that in the attempt to reconcile the 1936 tariff category with the appropriate 1924 import class, on occasions the duty was applied to a wider class of goods than was proper This may have happened in the case, for example, of wearing apparel, machinery, hollow-ware of iron and steel, etc, stationery, clay, paper and wood manufactures It will be noted that the imports in 1924 of these classes, (and therefore our weights) are substantial, and this would make for an overstatement of our " potential " tariff level index. Nevertheless, all the influences at work do not point in this direction.

[19] It must be emphasized that the list includes only those goods on which a duty is imposed at importation It does not include goods whose import is prohibited except under licence, and on which no duty is imposed, e g wheat, wheaten flour and meal, certain wheat products, maize and maize products, oats, hay, straw, a wide range of feeding stuffs, (Agric Prod (Cereals) Act, 1933, etc) of fish, live pigs, raw onions (Agric Prod (Regulation of Imp) Act)

A number of goods on the select list were subject to Quota orders,[20] made under the Control of Imports Act, 1934 The majority of these goods, as well as being quoted, were subject to a duty on importation, but that duty, where a quota exists, obviously understates the degree of protection offered to the industries concerned In addition, the importation of some goods,—e g , bacon, butter, cheese, certain pulps and juices, and fruits preserved in water (without the addition of sugar or other sweetening matter), and grass seed—is prohibited by the Agricultural Products (Regulation of Import) Act, 1938, except under licence granted by the Minister of Agriculture, and, of course, the fact that in our computation, no account is taken of the wastage in time, money and temper occasioned by any protective system, also makes for underestimation Unfortunately, no more can be done than to state the considerations making for under or over-estimation respectively There is no way of expressing quantitatively the strength of the forces working in either direction, and so striking a balance that would enable us to say that our index for 1936 was definitely an overestimation or vice versa

The 10% reduction in the index for 1938 as compared with that for 1936 is equally surprising, and it seems most unlikely that that fall was wholly due to the Anglo-Irish Trade Agreement of 1938 We found that there were four main influences at work between 1936 and 1938, making for a fall in the index The first and most important was the abolition of certain duties, notably the abolition of those on bacon and hams, flax ply yarns and grass seed, imported from the United Kingdom or from Canada This factor would account for about 7% of the reduction in the index Secondly, certain duties were reduced—e g , the duties on wool and worsted tissues, certain types of wearing apparel, and touring cars imported from the United Kingdom and Canada These reductions would explain a further 3½% The third influence at work was the rise in the average import price of certain goods subject to a specific duty, notably the increase in the average import price of butter These price increases accounted for a further 1½%[21] Lastly the abolition of the Irish emergency duties, following upon the Trade Agreement, would account for slightly over ½%. These four factors taken together, would have accounted for a reduction of 12½% The principal factor operating in the opposite direction was the imposition of new duties, such impositons were equivalent to an increase in the index of over 2%. The net effect was the decrease in the tariff level index of 10% from 45% in 1936 to 35% in 1938

The indices as they have been calculated here include variations in the degree of protection brought about by changes in the prices of commodities subject to specific duties, as well as those due to variations

[20] The following goods were subject to Quota Orders 1936-1938 —Certain tyres and tubes for motor cars, motor cycles, bicycles (Nos 1, 2, 14, 15, 19), Rubber and leather boots and shoes (3, 4, 29), sugar (5), Rubber proofed piece-goods and garments (6, 7), Motor cars, chassis, bodies and shells (8, 9, 10, 25), Coal, etc. (11), Silk and Art Silk hose and half hose (12), Certain woollen piece-goods (13), Superphosphates (16), Oranges (17), Tomatoes (20), Soap (21); Candles (22), Raw onions (23) Perambulators (24), Brushes (26, 27, 28), Cement (30), Bulbs (31), Marble chippings (32)

[21] This may have been due solely to the general upward movement in prices in the immediate pre-war period or it may have been helped by an increase in the average quality of the import in each category of goods affected

in the duties themselves. We can eliminate the influence of price changes by making the calculations on the basis of prices ruling in the base year, and the resulting indices will reflect changes in the tariff level due to purely legislative measures.[22] As was to be expected from the predominance of *ad valorem* duties in the Irish tariff, the results obtained by this method were more or less the same as those arrived at above. They were 1931, 9%, 1936, 43%, and 1938, 35%.

Comparisons with Other Countries

In our calculations so far we have adopted as our point of reference, Ireland as an importing country. We have measured the increases that have taken place in the height of the tariffs imposed on a select list of goods imported into Ireland. A more interesting study would be to ascertain the relative height of tariffs in Ireland as compared with those of other governments. The volume of physical labour involved in making such comparisons makes the task well nigh impossible for the individual worker. Fortunately, such a study has been made for 19 countries for 1937.[23] The authors of this publication point out that discussions on tariff problems are usually carried on in an atmosphere either of pure theory or of sectional politics: in the former, the subject is exposed by a cold, cruel-to-be-kind light, in the latter, heat alone is generated. The study aims to bridge this gap by creating a temperate zone of reasonably accurate statistical data. It concentrates on ascertaining the necessary basic information but holds out hopes of the appearance, at some future date, of an interpretative supplement. The select list of goods, which formed the basis for the study, was taken from *Wholesale Prices*, a publication of the Bureau of Labor Statistics, in which the commodities, arranged in ten groups, are graded according to their relative importance in the consumption of the United States. This select list includes the most important commodities in each group, and constitutes over 70% of the total list for 1937. The original intention was to include at least 70% of each group in the chosen list, but where this requirement would have meant overlapping between groups or where its realisation would not have added appreciably to the accuracy of the result, it was waived. As far as possible, each product included was a fair representative of a considerably larger number of products in its own class.[24] Goods which had a limited movement in international trade were excluded; e.g. whole milk, gas, electricity. A small number of goods was arbitrarily added because of their commercial importance, e.g. rayon, whiskey, radios, etc. The commodities finally included are enumerated in an appendix to this paper.[25] Each commodity on the select list was weighted on the basis of its total value in the combined exports and imports of both the United States and the United Kingdom. This value, for each good, was expressed as a percentage of the total value of the trade of the two countries in the whole group of commodities in the list. The total value of the goods on select list was arbitrarily

[22] A calculation of this nature was made for Australia by John G. Crawford. See *Economic Record*, December, 1934, p. 213.

[23] *How High are United States Tariffs?* American Tariff League, Inc. 1942.

[24] For example, "canned peaches" was included as being a fair representative of all canned fruits. This class is, in most tariffs, subject to the same or a similar rate.

[25] Appendix A.

fixed at $100,000,000, and the value of each commodity determined on the basis of the above percentages This gave value weights for use with *ad valorem* duties When the unit price of each commodity was calculated, it was possible to compute the quantity of each good included in the cargo This provided volume weights for use with specific duties Much attention was lavished on the ascertainment of the true price of each commodity The authors examined the defects of both import and export prices, and decided not to rely on any one source for the prices to be used Since prices are of basic importance in the calculation, it was felt that complete reliance on one source might lead to the adoption of an unrepresentative price, and so seriously distort the true picture Five prices were worked out for each commodity United Kingdom export and import prices, United States import and export prices, and the Bureau of Labor Wholesale prices The prices actually used were obtained by averaging either the import or export prices or both for U K and U S A The Bureau of Labor price statistics were used for checking purposes Wherever export prices were used, 5% was arbitrarily added to cover freight and insurance to the point of import The weighted arithmetic average was calculated for each group and for all groups for each country

The select list, prices and weights were used in making a calculation for Ireland, that would be comparable with the figures for 19 other countries, given in this publication The results are set out in Table II The figures show the relative height of tariff in the several countries based only on the published rates of duty They reflect the relative degree to which each country obstructs inter-regional trade by the use of the tariff weapon In Table III, the index for each country is expressed as a percentage of that for Ireland The difference between the percentage for Ireland in Table II for 1937 (79%-84%), and the percentage for 1936 in our temporal comparison (45%), is due to at least three causes In the first place, the list of commodities which forms the basis for the former calculation, includes all those commodities which are subject to revenue duties in Ireland, viz, tobacco, wines, spirits, tea, coffee, cocoa, sugar, films, dried fruits, hydrocarbon oils, these are excluded from the latter This is the most important cause of the discrepancy Secondly the weighting systems are dissimilar. Thirdly, the unit prices used for each good are not the same in the two calculations.

Conclusions.

In conclusion, we may point out that the quantity of salt with which any tariff level calculation must be accepted, cannot be overestimated. The selection of the goods, or classes of goods, to be included is, at least, partially arbitrary Some embarrassingly wide assumptions have to be made in fitting the duties for our chosen year to the import categories in the base year. There is the problem of finding a valid weighting system, no claim is made to a fully satisfactory solution in the above attempt It must also be emphasised that the index does not measure changes in the degree of protection from all causes, but only from tariffs Since the first world war, the preponderant importance, as a protective instrument, of the tariff, has diminished The common characteristic of the methods developed in the inter-war period, is that, in the case of imports, they do not seek to influence what is the most important sphere of free economic com-

petition, viz., the price mechanism, as every tariff does, but that they seek in a much more drastic fashion to exclude foreign supplies, and so to protect home industry. If the whole trade of a country were determined by such devices, then even if tariffs existed as well, an investigation into tariff levels would be meaningless and futile In Ireland, in the period under consideration, the tariff remained the principal protective device, but compulsory milling regulations, quotas, import licences, and, in a few cases, import monopolies, were used. For each quota or prohibition (or any restrictive measure other than the tariff), there must exist an *ad valorem* or specific duty that would lead to exactly the same degree of restriction in imports If such tariff equivalent could be calculated, then all could be reduced to a common basis, and our tariff level index could be comprehensive To express quantitative restrictions in terms of customs duties might be possible if we had a precise knowledge of all the elements that constitute the conditions of demand and conditions of supply of each good whose import is obstructed But such precise knowledge of these constituents does not exist and is not likely to be available within the foreseeable future One is, unfortunately, and indeed reluctantly, driven to the conclusion that the calculations above are more significant as an exercise in methods, rather than as measurements of the real changes which took place

APPENDIX A

GROUP I—*Farm Products*

1 Apples
2 Barley
3 Calves
4 Corn
5 Cotton
6 Eggs
7 Hogs
8 Oranges
9 Potatoes
10 Steers
11 Tobacco
12 Wheat
13 Wool

GROUP II —*Foods*

14 Bacon
15 Bananas.
16 Beef
17 Butter
18 Canned Peaches
19 Canned Asparagus
20 Canned Peas
21 Canned Tomatoes.
22 Cheese
23 Cocoa Beans
24 Cocoa, powdered
25 Coffee, raw
26
27 Corn Starch
28 Dried Apricots
29 Dried Prunes
30 Dried Raisons
31 Flour
32 Ham
33 Lard
34 Milk, condensed
35 Milk, evaporated
36 Pork
37 Poultry
38 Salt
39 Sugar, granulated
40 Sugar, raw
41 Tea

GROUP III —*Hides and Leather Products*

42 Gloves, women's
43 Hides
44 Leather, Calf Upper
45 Leather, sole
46 Shoes, men's

GROUP IV —*Textile Products*

47 Burlap
48 Cotton Cloth, not bleached
49 ,, ,, bleached
50 ,, ,, dyed
51 ,, Collars
52 ,, Hosiery
53 ,, Overalls
54 ,, Shirts
55 ,, Underwear
56 ,, Yarn
57 Linen Handkerchiefs
58 Raw Silk
59 Rayon Staple
60 Rayon Piece Goods
61 Rayon Yarn
62 Silk Hosiery
63 Wool Overcoats
64 Wool Piece Goods
65 Wool Suits
66 Wool Underwear
67 Wool Yarn

GROUP V —*Fuel*

68 Coal, Anthracite
69 Coal, Bituminous
70 Fuel Oil
71 Gasoline
72 Petroleum, Crude

GROUP VI —*Metals*

73 Aluminium
74 Barbed Wire
75 Copper
76 Copper Wire
77 Cultivators
78 Harrows
79 Lead
80 Manganese Ore
81 Motor Vehicles
82 Pipe, Black Steel
83 Pipe, Cast Iron
84 Pipe, Galvanised
85 Pig Iron
86 Ploughs
87 Shovels
88 Steel Billets
89 Steel Plates
90 Steel Rails
91 Steel Sheets
92 Steel Sheets, galvanised
93 Steel, Structural
94 Tin
95 Typewriters
96 Wire Nails
97 Woven Wire Fencing
98 Zinc

GROUP VII —*Building Materials.*

99 Brick, Common
100 Cement
101 Doors, Wood
102 Lime
103 Linseed Oil
104 Lumber
105 Paint
106 Plate Glass
107 Resin
108 Shingles
109 Turpentine
110 Varnish
111 Window Glass.

GROUP VIII —*Chemicals.*

112 Alcohol, Ethyl
113 Alcohol, Methyl
114 Aluminium Sulphate
115 Ammonium Sulphate
116 Camphor
117 Caustic Soda
118 Citric Acid
119 Coconut Oil
120 Copra
121 Creosote Oil
122 Dyes Indigo
123 ,, Direct Black
124 ,, Sulphur ,,
125 ,, Vat Blue
126 Fertiliser
127 Glycerine
128 Nitrate of Soda
129 Phosphate Rock
130 Potash, Crude
131 Potash, Muriate
132 Potash, Sulphate
133 Salt
134 Soda Ash
135 Sulphur
136 Superphosphate
137 Tallow
138 Tankage

GROUP IX —*House Furnishings*

139 Carpets
140 China ware
141 Electric Refrigerators
142 Furniture, Wood
143 Linoleum
144 Pillow Cases
145 Sewing Machines
146 Sheets
147 Wool Blankets

GROUP X —*Miscellaneous*

148 Cameras
149 Cigarettes
150 Cigars
151 Diamonds, cut but not mounted.
152 Films
153 Furs, undressed
154 Matches
155 Newsprint
156 Perfumery
157 Radios
158 Rubber
159 Rubber Tyres
160 Soap, Laundry.
161 Soap, Toilet
162 Starch, Casava
163 ,, Corn
164 ,, Potato
165 Whiskey, Scotch
166 Wine, Champagne
167 Wine, Still
168 Woodpulp, Chemical
169 ,, Mechanical
170 Wrapping Paper

TABLE

Comparison of Irish Tariff Levels for each Group

Country	GROUP I	GROUP II	GROUP III	GROUP IV	GROUP V	GROUP VI
	Farm Products Value in Cargo $25,984,000	Foods Value in Cargo $20,938,900	Hides and Leather Products Value in Cargo $1,829,700	Textile Products Value in Cargo $8,629,200	Fuels Value in Cargo $9,408,000	Metals and Products Value in Cargo $11,372,500
(1)	% Duty (2)	% Duty (3)	% Duty (4)	% Duty (5)	% Duty (6)	% Duty (7)
Eire†	**99 1 to 101·2**	**72 5 to 82·1**	**48 1 to 53 5**	**35 5 to 37 5**	**244 8 to 254 6**	**9 0 to 9 2**
Argentine	24 9	64 4	228 0	31 2	53 4	43 0
Belgium	6 4	92 8	7·6	19 3	149 5	18 7
Brazil	64 0	228 0	94 0	117·6	59 2	31 8
Canada	33 0	47 5	11 6	39 8	12·2	12 7
Egypt	119 8	60·8	21 0	19·1	26·8	10 4
France	24 2	79 2	7 2	22 7	55 6	30 2
Germany	37 9	172 3	30 5	55 2	308 0	79 6
Greece	50 0	98 2	93 7	58 8	110 0	15 5
Hungary	9 1	212 0	64·5	37 4	82 1	30 3
Italy	17·9	121·0	52·8	15·3	23·0	87·5
Japan	65·1	48·6	75 4	30 0	29·8	16·3
Mexico	50 0	87 8	85 0	86 8	31·6	17 3
Netherlands	6 7	41 1	6 4	7·6	33·0	4·0
Spain	80·5	354 0	254 0	316 1	269·3	229·0
Sweden	8·8	32 4	14 2	18 9	0·5	7·2
Switzerland	46·2	62 2	22 8	40 0	124 8	22 8
Turkey	91·8	346 0	308 5	163 0	122 8	49·5
United Kingdom	89 0	33·7	15·5	21 2	88 6	11·7
United States	95 8	37·0	17 0	32 3	Free	10·7

* The figures in this table, with the exception of those for Ireland, are taken from *How High are United States Tariffs?* p 14

II

*with those of 19 Other Countries for 1937**

GROUP VII	GROUP VIII	GROUP IX	GROUP X	GROUPS I–X	
Building Materials Value in Cargo $2,477,480	Chemicals Value in Cargo $2,719,200	House Furnishing Goods Value in Cargo $920,000	Miscellaneous Value in Cargo $15,880,500	All Goods Value in Cargo $100,159,480	Country
% Duty (8)	% Duty (9)	% Duty (10)	% Duty (11)	% Duty (12)	(13)
25 4 to 28 5	**12 9 to 14 5**	**40 1 to 44·8**	**55·7 to 61·8**	**79·0 to 83 8**	**Eire**
74·2	24 4	43 8	50·5	47·5	Argentine
11 1	1 3	10·7	15 3	41·7	Belgium
129·2	30 3	42·6	87·2	103 0	Brazil
16·2	13·7	51 0	44·5	32·9	Canada
38·5	15 0	19·1	26·2	56 0	Egypt
52·5	15·9	20 3	7·9	36 6	France
98 5	73 2	53 4	168 5	120 2	Germany
179·1	74 5	70 5	77 3	71·5	Greece
72·8	13 2	37 7	31 0	69 5	Hungary
38·2	11 4	58 7	119 2	64 8	Italy
35·5	16 7	54 4	45 5	42 2	Japan
48·2	295 8	123 0	55 2	64 2	Mexico
5·5	7·8	10 8	6 6	16·1	Netherlands
182·0	143 4	253 5	78·5	200 7	Spain
33·6	2 8	18 0	8 4	14 2	Sweden
62 1	10 1	33·0	63·0	55 2	Switzerland
71·8	85 0	112 0	108·7	155 0	Turkey
12 8	13 3	30 3	52·5	51 0	United Kingdom
10·6	12 1	43 3	34 2	43·1	United States

† The lower of the two figures for Eire is computed from preference rates of duty, and the higher from full rates

TABLE III

RELATIVE TARIFF LEVELS

Eire=100 (1937)

Spain	254 0	Switzerland	69 9
Turkey	196 2	United Kingdom	64·6
Germany	152 1	Argentine	60·1
Brazil	130 4	United States	54·5
Eire	**100 0**	Japan	53·4
Greece	90·5	Belgium	52 8
Hungary	88·0	France	46·3
Italy	82 0	Canada	41·6
Mexico	81·3	Netherlands	20·4
Egypt	70 9	Sweden	18 0

DISCUSSION.

PROFESSOR DUNCAN welcomed the opportunity of proposing the Society's thanks to Mr Ryan, partly on account of the gratifying proof the paper afforded of the ability of a former pupil and present colleague, and partly on account of the theme of the paper itself This type of investigation, though technical in spots, was of immediate interest and well within the Society's field It was, indeed, an investigation that should have been undertaken long ago, and with a larger apparatus of direct inquiry than Mr. Ryan's lone hands could furnish. A democratic Government would have regarded such a probing of the effects of its policies as a necessary public service, but such a disinterested approach could not be expected from Governments whose ideas of economic policy were confined to narrow nationalistic ideologies The Society, then, might have sponsored an inquiry, but lacked the funds So it was left to Mr Ryan to undertake himself, and in the larger work of which this paper is a part I have no doubt he will complete a study as authoritative as this part

Mr Ryan's specific problem has been that of the significance of tariffs in a given context in which, unlike the natural scientist's experiment, the "*cetera*" cannot be neutralised i e, the cost-price-income effects of quotas and similar obstructions other than tariffs can be neither neglected nor brought to account Mr Ryan's limited field may, therefore, appear somewhat academic, since present neo-mercantilist practice has, by the use of other more destructive engines, reduced the sphere of tariffs to comparative insignificance This appearance is deceptive, because on the one hand the practical effect of the I T O Charter is to leave tariffs as the only flexible and negotiable part of the anti-trade structure, and on the other tariffs are the sole instrument of obstruction employed by the U.S Government, whose influence is directed towards re-establishing their former position

The apparently simple question is "How far has our freedom of access to this world's goods been curtailed since 1914?" but Mr Ryan has clearly shown that no simple answer is possible Hence, of course, the over-abundance of special pleading by interested parties and believers in patent medicines Mr Ryan suggests (p 122) that his computed level of protection is surprisingly high on the contrary, it seems to me surprisingly low by comparison with the rates of duty

Professor Duncan proposed the vote of thanks

DR BEDDY seconded the vote of thanks and congratulated Mr Ryan on his work in the construction of an index which would have added value if it proved possible to also measure the extent to which tariffs had been availed of by home manufacturers In Ireland, as in most countries, tariffs were not imposed on any scientific basis Where the object of a tariff was to protect a new industry it would obviously be impossible to relate the tariff in any accurate manner to the conditions likely to be experienced in that industry, and hence the tariff levels are largely a matter of guesswork An index based upon figures arrived at in this way had obvious limitations, particularly when few manufacturers, if any, availed of their tariff to the full extent The home manufacturer who increased his prices up to the limit of the imported price, plus the full tariff, would lose the competitive advantage of offering goods at a lower price and would in effect be facing international competition under conditions in which he would be

unable to offer the same variety of goods as his foreign competitors who would be catering for a world market Furthermore, there were protected industries where a stage had been reached at which protection was not required except as a safeguard against dumping—industries in which the home price was no greater and in certain cases was less than the imported price. The evidence of this was that some of the newer industries had reached the stage at which they were exporting goods It followed, therefore, that an index which was based upon figures which were largely theoretical could only have practical value if it could be related to figures showing the extent to which it might not be possible for Mr. Ryan to undertake so formidable a task as the construction of a second index number He could, however, have regard to the fact that during the war many tariffs were suspended and have not since been reimposed For example, there is no protection at all for a very wide range of textiles. Consequently, he would find if he brought his index up to date by the inclusion of the year 1947 that his figures would show the extent to which tariffs have been removed

Dr. Beddy suggested that Mr. Ryan should include as an appendix to his paper the select list of commodities which form the basis of his index. In regard to the American figures, he felt they were open to criticism and mentioned that if, as was unlikely, the American computation regarded cotton yarn as being subject to a tariff in this country, their assumption was incorrect since the tariff applied only to thread and not to the much more substantial imports of weaving yarns on which there was no tariff