A Comparison of the National Incomes and Social Accounts of Northern Ireland, the Republic of Ireland and the United Kingdom.

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In March, 1933, Dr. T. J. Kiernan published in the *Economic Journal* a paper on " The National Income of the Irish Free State in 1926," following it in June by a paper to this Society on National Expenditure. Since that time the Society has many times renewed its interest in the accounts of national income—most notably in the formidable Symposium on National Income and Social Accounts, opened by Dr. M. D. McCarthy in January, 1952. In April, 1951, Mr Norman Cuthbert read a paper on " Total Civilian Income in Northern Ireland," which was the first occasion on which the problems of computing components of national income for Northern Ireland had been systematically tackled. In the discussion on Mr. Cuthbert's paper, Dr. Geary and Professor Joseph Johnston both warned their hearers not to attempt to make comparisons between the Six and the Twenty-Six Counties. It is with some trepidation, therefore, that we now proceed to make such comparisons.

It is well known that there are grave difficulties in computing national income statistics for areas which are not independent States. For this reason, many of the figures for Northern Ireland which we shall present, and even (because of the adjustments which we shall make) some of those for the other areas, are rough estimates. Yet—looking back on our work—we are impressed by the amount of statistical information which we have managed to press into service. Already, we think, our statistics are at least as well founded as those produced for Britain by the pioneering efforts of Stamp, Bowley and Clark. Furthermore, we believe that they can only be improved by publishing them, in all their naked crudity, and encouraging people to look for howlers and inconsistencies in them. Thus they may gradually be improved, and form an annual series which we believe will be of real value in assessing the state of the Northern Ireland economy.

This is our excuse for presenting more elaborate figures for Northern Ireland. Our excuse for making comparisons is that comparisons are needed, and will (whether we like it or not) be made ; so that effort is more sensibly devoted to making the comparisons safer, rather than to preventing them. For each country we have derived, on a common system, a set of social accounts ; that is to say, an interrelated set of accounts of transactions, the accounts being defined in a way which has economic significance. There are accounts (for instance) for production and the consequent payment of factor incomes : for the appropriation of those incomes to various purposes ; and for transactions with the rest of the world. Such a framework of itself provides a number of cross-checks of the figures, and, by concentrating attention on a whole set of economically significant transactions (and not simply on chosen aggregates, such as the national income) it may help to prevent false comparisons.

It is not, of course, easy to see the significance of a direct comparison between the values of transactions which relate to countries of very unequal size. The obvious way out is to express the aggregates to be compared in Pounds Sterling per head of population : for, after all, it is the satisfaction of individuals which is the final purpose of economic endeavour. But are all individuals to be treated as equal ? Both Northern Ireland and the Republic have a higher proportion of children than the United Kingdom, and, in so far as children consume less than adults, it might seem sensible to give them lower weight in computing the *per capita* values. But the difference which this could make is not great—even if children are counted as half an adult (which is much too low) it would only make a difference of 3% in the ratio of the United Kingdom to the Northern Ireland " population," and of 3½% in the ratio of the United Kingdom to the Republic of Ireland " population." Furthermore, the United Kingdom has a higher proportion of old people, whose " needs " might also be assessed lower than those of working adults. It therefore seems best to be simple-minded, and use in the comparisons the estimated mid-year populations for 1952, which is the year to which all this paper relates. These populations were :

Northern Ireland	1,375,000
Republic of Ireland	2,949,000
United Kingdom	50,429,000

There is, however, a more serious difficulty to be faced. What reason have we to suppose that the Pound Sterling, which passes freely over the Border, does not shrink or expand in purchasing power as it crosses ? This is a general difficulty of international comparisons ; and the general answer is that the purchasing power of a unit of currency is almost certain to differ between areas, and to show varying differences according to the use to which the money is put. The recent study by Milton Gilbert and Irving Kravis (" An International Comparison of National Products and the Purchasing Power of Currencies," O.E.E.C. 1954) contains many illustrations of the size of such differences. No direct comparisons of prices between the U.K. and either part of Ireland are available ; but it seemed to us that it might be possible to make a check on the seriousness of the problem by comparing prices in Northern Ireland and the Republic. Northern Ireland prices of transportable goods cannot differ very greatly from those in the remainder of the U.K.; by testing the "cross-Border" difference we would be dealing with the largest source of variation.

We limited our efforts further by comparing prices in the metropolitan cities of Belfast and Dublin. These cities, with their suburbs, each account for a large part of the economic life of their sections of the country; and it is at least possible that the price differences between city and country might be similar in each area. We therefore recruited four helpers and set ourselves to collect, in mid-August 1954, in ten districts of Belfast chosen as broadly similar to the districts of Dublin in which retail prices are surveyed, the items which enter into the quarterly Index of Retail Prices published by the Central Statistics Office. That index, however, exists for inter-temporal and not for geographical comparisons; consequently the items in it are in effect defined to be as near as possible to those whose prices were collected in the previous quarter. When one moves to another city the same items may not be in general or popular sale, or indeed be available at all. This problem is not serious with simple and well-defined goods, such as loaves of bread; but it makes it exceedingly difficult to make any worth-while comparisons of the prices of goods which vary with custom and fashion, such as clothing and furniture. We have done our best to price articles in common demand in the areas concerned, but the comparison must to some extent reflect the attitudes of the investigators. We would record our impression that the Dublin clothing prices are on the high side—perhaps because, being related to "staple" articles regularly available each quarter, they do not sufficiently reflect the large possibilities of buying clothing at "sale" prices.

The price to be included for housing sets a special difficulty. The Central Statistics Office index employs the rents of municipal housing; this would give a higher average rent in Belfast, due to the fact that a greater proportion of Belfast municipal housing is post-war, and let at the higher post-war rents. There is also an estimate, projected from the 1946 Census, of the average rent including rates in Dublin: this works out at 14/11, which is above the likely average for Belfast (according to various knowledgeable people whom we have consulted). Some indication of that average, inclusive of owner-occupied property (and therefore presumably biased upwards in relation to the average for rented property) can be obtained from the total valuation of residential property in the city, which mainly reflects the level of rents in the mid-1930's. This valuation, adjusted for rates, is consistent with an average Belfast rent (inclusive of rates) of 13/6. But, in any case, is a "house" equivalent in the two cities? In an area of so much uncertainty, it seems best to exhibit the alternative effects of different assumptions, and this is what we have done below.

The results of the price enquiry were as follows:

TABLE I.

Price Index for Belfast, as percentage of Dublin : August 1954.

Food	102·5	
Drink and tobacco	135·0	
Clothing	79.1	(or higher: see above)
Fuel and light	77·2	
Household durable goods	93·2	
Miscellaneous goods, services and entertainment	76·1	
TOTAL excluding housing	98·7	
TOTAL including housing, assuming Belfast rents		
110% of Dublin	99·7	
100%	98·8	
90%	98·0	
80%	97·2	

[No significance should be attached to the figures after the decimal points, which are included merely to facilitate further calculation.]

These are estimates of the cost of buying a Dublin " basket " of goods in Belfast ; it might be expected that the comparison of the cost of buying a Belfast basket would be more favourable to Belfast. We have no sufficient knowledge of the pattern of consumer demand in Belfast, but the result of re-weighting by groups of current weights obtained from the U.K. Index of Retail Prices would be to reduce the figure for " total excluding housing " to about 93. The main differences in the U.K. index are the lower weights of food and fuel, and the much higher ones for durable and miscellaneous goods—differences typical of a richer economy. " Belfast " weights, relating to a city poorer than the U.K. average, would be expected to follow a pattern intermediate between those for Dublin and for the U.K. On the other hand, the result of re-weighting, not group by group, but item by item, with U.K. weights might be expected to produce an index lower than 93, while on the other side has to be placed the possibility that the clothing comparison is unduly favourable to Belfast. An alternative is to use the weights obtained from the general pattern of consumers expenditure in the two countries (see Table IV below). This method gives 96 (with Republic weights) and 91 (with Northern Ireland weights).

Between 1952 and August 1954, retail prices in the Republic rose slightly more than those in the U.K., the difference being less than 1% : and since changes in subsidies were a major influence on prices, it is reasonable to assume that the relative price movement for Dublin and Belfast was also small. We consequently think it likely that Belfast retail prices were, in 1952, 96–101% of the Dublin level with " Dublin " weights, and perhaps 90–96% with " Belfast " weights : or, taking a geometric average for the two weighting systems, 93–98½%. This is not much different from equality : and considering the errors of the comparison, and the further errors introduced by using it to apply to the whole of Northern Ireland and the Republic, and to apply to aggregates other than consumer expenditure, we do not feel justified in departing from the simplicity of a straight comparison of money values. *Readers should note that in consequence this comparison may overstate the production, incomes and expenditure in the Republic by a small amount, around* 4%.

These preliminaries disposed of, we can proceed to the main business of the paper. Our estimates relate to the year 1952, since figures for 1953 are not fully available at the time of writing. The choice of this year is relatively unfavourable to Northern Ireland, since it includes part of the " textile depression," and Northern Ireland has a higher proportion of textile industries than the other two countries.

The basic definitions we have employed are, except where noted, those of the United Kingdom National Income Blue Books (e.g., National Income and Expenditure, 1946–1953 : H.M.S.C., August 1954). We have made our own adjustments to the figures published by the Central Statistics Office in Dublin to bring them into closer conformity with the U.K. definitions. The methods of estimation used, if set out in detail, would greatly overload this paper ; we have therefore prepared a separate description of them, which will shortly be available to those interested (price 2s. post free). Heeding the advice of Messrs. Carter and Roy (*British Economic Statistics* (Cambridge, 1954) : p. 120) we have taken the first steps towards a disclosure of reliability by classifying our estimates in five groups :

A. Tolerably firm accounting figures-e.g., tax receipts.

B. Well-supported secondary statistics.

C. Statistics with doubtful, inadequate or partial support.

D. Intelligent guesses.

E. Residuals.

But it must be noted that an articulated system of accounts, provided that it has fewer than the maximum number of residuals, is stronger than its individual items : it cross-checks.

Certain conceptual problems arise out of the position of Northern Ireland as a semi-autonomous region of the United Kingdom. The broad principle on which we have decided these is to treat Northern Ireland as though it were an independent country. In consequence Great Britain, and the Imperial Government, fall into the " rest of the world " : reserved taxes are treated as paid to the " rest of the world," and return (less the Imperial Contribution) as a transfer to the Northern Ireland Government. Profits are considered to arise at the financial headquarters of a company, and the profits of a company with its head office in Great Britain therefore only enter the Northern Ireland accounts if payments are made to Northern Ireland residents or institutions.

It is convenient to begin our survey by seeing how various industries contribute to the gross national product. The figures given for the Republic in Pr. 2607 (Dublin, Stationery Office, 1954) are net of depreciation, and some adjustments have been made to make them broadly comparable with the gross figures for the other areas. Minor differences of coverage probably still remain. The definition of " national product " in the Republic differs slightly from that employed in the U.K. : both are shown below.

TABLE II.

Gross National Product by Industry of Origin, 1952.

	Reliability of N.I. estimates	Gross product (£mn.)			Product per head (£)		
		N.I.	Republic	U.K.	N.I.	Republic	U.K.
Agriculture, forestry and fishing ...	B	45	157	763	33	53	15
Industry (including mining, building, gas, electricity, water) ...	B	97	98	6,611	70	33	131
Transport and distribution ...	C	50	62	2,787	37	21	55
Services and professions (including the ownership of houses) ...	C	40	67	2,493*	29	23	49
Public administration and defence	B	12	36	895	9	12	17
Less Stock appreciation ...		—	−26	+50	—	−9	+1
Gross domestic product, factor cost		244	395	13,599	177	134	270
Net income from abroad	B	9	12	139	7	4	3
Gross national product (U.K. definition)		253	407	13,738	184	138	272
Current transfers to persons (net)	D	4	15	14	3	5	—
Gross national product (Republic definition)		257	422	13,752	187	143	273

Totals do not always agree with sums of columns owing to rounding.

*Includes residual error (−12).

These figures must be used with care. The extra " riches " of the United Kingdom include great armaments, and other such products which are thought to be " regrettable necessities," but which do not directly serve human welfare. The higher level of distribution and services reflects in part the inevitable complication of an urban community. But the differences in product per head are still very striking.

The national income differs from the gross national product by the subtraction of the product required to make good the depreciation of the year. The United Kingdom now treats the national income with the coyness appropriate to an unmentionable article of underwear; the concept finds no place in the National Income Blue Book. However, it is possible to base some estimates on the great work of Mr. Philip Redfern in computing figures of depreciation for the United Kingdom. His results are presented in a paper read to the Royal Statistical Society on 19 January 1955 : they relate to depreciation *at the prices of the year concerned,* so that his measure of the use of capital is expressed (as it should be) in the same prices as the other transactions recorded in the national accounts. We have accordingly estimated depreciation for the Republic and Northern Ireland on the same basis : in doing so, we have assumed that the " gross " figures for the Republic were the source from which the published " net " figures are derived.

TABLE III.

Gross National Product and National Income, 1952.

	£ Mn.			£ per head		
	N.I.	Republic	U.K.	N.I.	Republic	U.K.
Gross national product — U.K. definition ...	253	407	13,738	184	138	272
Gross national product — Republic definition	257	422	13,752	187	143	273
Less depreciation* at 1952 prices ...	−21 (D)	−22	−1,346	−15	−7	−27
National income — U.K. definition	232	385	12,392	169	131	246
National income — Republic definition ...	236	400†	12,406	172	136	246

*Straight-line method for U.K.: rest intended to be comparable.

†This figure differs from the national income shown (e.g.) on p. 49 of Pr. 2607 by the addition of the value of the change in the numbers of livestock (p. 57) and the subtraction of £9 mn. additional depreciation (see above).

A comparison slightly more favourable to the Republic can be obtained by valuing farm produce and fuel consumed on farms at retail prices : national income per head (on the Republic definition) then becomes about £141, 57% of that for the U.K.

Next, let us examine the pattern of consumers' expenditure. The Northern Ireland figures are here extremely conjectural, though we believe the total to be of the right order of magnitude.

TABLE IV.

Consumers' Expenditure.

	Reliability of N.I. estimates	Expenditure (£mn.)			Expenditure per head (£)		
		N.I.	Republic	U.K.	N.I.	Republic	U.K.
Food	C	78	122	3,236	57	41	64
Alcoholic beverages	A	14	—	850	10	—	17
Tobacco	A*	13	—	821	9	—	16
Alcoholic beverages *plus* tobacco		*27*	*52*	*1,671*	*20*	*18*	*33*
Clothing	C	28	46	1,064	20	16	21
Fuel and light	C	11	28‡	421	8	9‡	8
Other goods§	C	31	53‡	1,418	23	18‡	28
Travelling—private motoring ...	C	6	†	290	5	†	6
—other	B	7	15	413	5	5	8
Housing	C	9	15	783	7	5	16
Entertainments	D	4	5	186	3	2	4
Other services	D	20	32	932	15	11	18
Less expenditure by tourists ...	D	−8	†	−104	−6	†	−2
Plus expenditure by residents when "abroad"	D	+12	†	+130	+9	†	+3
Personal expenditure on consumption at market prices		225	368	10,440	164	125	207

Totals do not always agree with sums of columns owing to rounding.

*See, however, comment following page.

†These items appear, in principle, to be included under the headings above them.

‡It appears from P. 7356 that private motoring is divided between "fuel and light" and "other goods."

§Including (for U.K. and N.I.) income in kind of Forces and seamen.

The low figure for the Northern Ireland consumption of alcoholic beverages is supported by the evidence of the family budgets collected in 1937–8 (which would suggest an even lower figure). The figure for tobacco, however, appears remarkably low. Unless there is a fault in the method of attributing revenue employed by the Customs and Excise, this must be due *either* to smuggling across the Border (and the bringing of a " duty-free allowance " by travellers) *or* to a real difference in Northern Ireland habits, or both. It is conceivable that the relative isolation of the country in wartime meant that there was less response to the forces which at that time caused British tobacco consumption to rise.

In making comparisons of expenditure per head on commodity groups, the differences in prices have to be remembered. Thus, consumption of alcohol and tobacco in real terms would appear to be substantially higher in the Republic than in Northern Ireland : while consumption of fuel is less. It may be worth while setting alongside the figures for expenditure on food, the following data from the *Monthly Bulletin* of the Food and Agriculture Organisation, November 1953 :

(1952/53)	*Republic*	*U.K.*
Calories per head per day	3,470	3,030
Protein, grams per head per day ..	96	86
Animal protein, grams per head per day	49	45

These figures are in part a tribute to the calorie content of the potato : but they may act as a warning against equating " lower expenditure on food " with " lower nutritional standards." In both parts of Ireland, the valuation of food produced and consumed on the same farm is at " farm " and not at " retail " prices, and this tends to depress the expenditure figures.

Finally, we turn to our main comparison. This shows the Production Account of each country : the Income and Expenditure Accounts of the three main classes of economic entity—persons, companies and public corporations, and public authorities : the consolidated Capital Accounts for each country : and the accounts of the Rest of the World with each country. The " rest of the world " includes, for Northern Ireland, Great Britain and the Republic : for the Republic, the United Kingdom : and for the United Kingdom, the Republic. Each horizontal line shows balancing receipts and payments : for instance, the payment by the production account to employees appears as a receipt in the Income and Expenditure account of persons. The system is a contracted version of that shown in the National Income Blue Books. In each space, the three figures relate (in that order) to Northern Ireland, the Republic and the U.K. : the letter is an indication of the reliability of the Northern Ireland estimate (see above).

TABLE V.

Social Accounts for Northern Ireland, the Republic of Ireland and the United Kingdom, 1952.
Absolute Values (£ million).

		Production Account		Income and Expenditure Accounts						Capital Account		Account of Rest of World	
				Persons		Companies and Public Corporations		Public Authorities					
		Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments	Receipts	Payments
1. *Factor Payments:* (a) Income from Employment and Forces Income.	N.I.	—	149C	149C	—	—	—	—	—	—	—	—	—
	Republic	—	198	198	—	—	—	—	—	—	—	—	—
	U.K.	—	8,946	8,946	—	—	—	—	—	—	—	—	—
(b) Income from self-employment	N.I.	—	63C	63C	—	—	—	—	—	—	—	—	—
	Republic	—	170	170	—	—	—	—	—	—	—	—	—
	U.K.	—	1,515	1,515	—	—	—	—	—	—	—	—	—
(c) Gross trading profits of companies and Public Corporations	N.I.	—	27C	—	—	27C	—	—	—	—	—	—	—
	Republic	—	41	—	—	41	—	—	—	—	—	—	—
	U.K.	—	2,542	—	—	2,542	—	—	—	—	—	—	—
(d) Gross trading profits of other public enterprises.	N.I.	—	*	—	—	—	—	*	—	—	—	—	—
	Republic	—	3	—	—	—	—	3	—	—	—	—	—
	U.K.	—	49	—	—	—	—	49	—	—	—	—	—
(e) Rent	N.I.	—	7C	4D	—	1D	—	2D	—	—	—	—	—
	Republic	—	11	6	—	1	—	4	—	—	—	—	—
	U.K.	—	509	259	—	74	—	176	—	—	—	—	—
2. *Indirect Taxes less Subsidies:*	N.I.	—	25A	—	—	—	—	6A	—	—	—	19A	—
	Republic	—	55	—	—	—	—	55	—	—	—	—	—
	U.K.	—	1,867	—	—	—	—	1,867	—	—	—	—	—
3. *Transfer Incomes:* (a) Current grants from or to Public Authorities.	N.I.	—	—	27A	—	—	—	46A	26A	—	—	—	47A
	Republic	—	—	25	—	—	—	—	25	—	—	*	—
	U.K.	—	—	908	—	—	—	121	967	—	—	59	121
(b) Interest and dividend payments *plus* income earned abroad.	N.I.	—	—	15C	—	1E	8C	2C	1C	—	—	3C	12C
	Republic	—	—	30	—	12	25	3	7	—	—	8	21
	U.K.	—	—	1,136	—	571	1,008	139	699	—	—	357	496

(c) Tax payments on Income and National Insurance Contributions.	N.I.	—	—	—	29C	—	8C	10A	—	—	—	27C	—
	Republic	—	—	—	20	—	11	30	—	—	—	—	—
	U.K.	—	—	—	1,696	—	934	2,630	—	—	—	—	—
(d) Personal remittances abroad (net)	N.I.	—	—	3D	—	—	—	—	—	—	—	—	3D
	Republic	—	—	15	—	—	—	—	—	—	—	—	15
	U.K.	—	—	—	6	—	—	—	—	—	—	6	—
4. *Current Expenditure on Goods and Services:*													
(a) By persons	N.I.	213C	—	—	225C	—	—	—	—	—	—	12C	—
	Republic	355	—	—	365	—	—	—	—	—	—	9	—
	U.K.	10,310	—	—	10,440	—	—	—	—	—	—	130	—
(b) By Public Authorities	N.I.	31B	—	—	—	—	—	—	31B	—	—	—	—
	Republic	62	—	—	—	—	—	—	63	—	—	1	—
	U.K.	2,734	—	—	—	—	—	—	2,886	—	—	152	—
5. *Payments to Capital Accounts:*													
(a) Saving and net overseas investment.	N.I.	—	—	—	12D	—	13E	—	7E	38C	—	—	6E
	Republic	—	—	—	34	—	16	—	1	60	—	—	9
	U.K.	—	—	—	634	—	1,251	—	462	2,116	—	—	−231
(b) Stock appreciation	N.I.	*	—	—	*	—	*	—	*	*	*	—	—
	Republic	26	—	—	24	—	1	—	*	26	26	—	—
	U.K.	−50	—	—	−12	—	−6	—	−32	−50	−50	—	—
6. *Gross Domestic Capital Formation:*	N.I.	38	—	—	—	—	—	—	—	—	38C	—	—
	Republic	60	—	—	—	—	—	—	—	—	60	—	—
	U.K.	2,116C	—	—	—	—	—	—	—	—	2,116	—	—
7. *Transactions with Rest of World in Goods and Services by Businesses.*	N.I.	216B	227C	—	—	—	—	—	—	—	—	227C	216B
	Republic	146	172	—	—	—	—	—	—	—	—	172	146
	U.K.	3,522	3,216	—	—	—	—	—	—	—	—	3,216	3,522
Error	N.I.	—	—	5	—	—	—	—	—	—	—	—	5
	Republic	—	—	—	—	—	—	—	—	—	—	—	—
	U.K.	12	—	—	—	—	—	—	—	—	—	—	12
TOTAL ...	N.I.	498	498	266	266	29	29	66	66	38	38	288	288
	Republic	649	649	443	443	53	53	96	96	86	86	191	191
	U.K.	18,644	18,644	12,764	12,764	3,187	3,187	4,982	4,982	2,066	2,066	3,920	3,920

*=less than £500,000.

NOTE: Totals may not agree with sums of individual items owing to rounding.

TABLE VI.

Social Accounts for Northern Ireland, the Republic of Ireland and the United Kingdom, 1952.
Values per head of population (£).

		Production Account		Income and Expenditure Accounts						Capital Account		Account of Rest of World	
				Persons		Companies and Public Corporations		Public Authorities					
		Receipts	Pay-ments	Receipts	Pay-ments	Receipts	Pay-ments	Receipts	Pay-ments	Receipts	Pay-ments	Receipts	Pay-ments
1. *Factor Payments:* (*a*) Income from employment and Forces Income.	N.I. Republic U.K.	— — —	109C 67 177	109C 67 177	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —
(*b*) Income from self-employment	N.I. Republic U.K.	— — —	46C 58 30	46C 58 30	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —	— — —
(*c*) Gross trading profits of companies and Public Corporations.	N.I. Republic U.K.	— — —	19C 14 50	— — —	— — —	19C 14 50	— — —	— — —	— — —	— — —	— — —	— — —	— — —
(*d*) Gross trading profits of other public enterprises.	N.I. Republic U.K.	— — —	* 1 1	— — —	— — —	— — —	— — —	* 1 1	— — —	— — —	— — —	— — —	— — —
(*e*) Rent	N.I. Republic U.K.	— — —	5C 4 10	3D 2 5	— — —	1D * 1	— — —	2D 1 3	— — —	— — —	— — —	— — —	— — —
2. *Indirect Taxes less Subsidies:*	N.I. Republic U.K.	— — —	18A 19 37	— — —	— — —	— — —	— — —	4A 19 37	— — —	— — —	— — —	14A — —	— — —
3. *Transfer Incomes:* (*a*) Current grants from or to public authorities.	N.I. Republic U.K.	— — —	— — —	20A 8 18	— — —	— — —	— — —	33A — 2	19A 9 19	— — —	— — —	— * 1	34A — 2
(*b*) Interest and dividend payments *plus* income earned abroad.	N.I. Republic U.K.	— — —	— — —	11C 10 23	— — —	1C 4 11	5C 9 20	1C 1 3	1C 2 14	— — —	— — —	2C 3 7	9C 7 10

(*c*) Tax payments on income and National Insurance Contributions.	N.I.	—	—	—	21C	—	6C	8A	—	—	—	20C	—
	Republic	—	—	—	7	—	4	10	—	—	—	—	—
	U.K.	—	—	—	34	—	19	52	—	—	—	—	—
(*d*) Personal remittances abroad (net)	N.I.	—	—	2D	—	—	—	—	—	—	—	—	2D
	Republic	—	—	5	—	—	—	—	—	—	—	—	5D
	U.K.	—	—	—	*	—	—	—	—	—	—	*	—
4. *Current Expenditure on Goods and Services:*													
(*a*) By persons	N.I.	155C	—	—	164C	—	—	—	—	—	—	9C	—
	Republic	121	—	—	124	—	—	—	—	—	—	3	—
	U.K.	204	—	—	207	—	—	—	—	—	—	3	—
(*b*) By public authorities	N.I.	23B	—	—	—	—	—	—	23B	—	—	—	—
	Republic	21	—	—	—	—	—	—	21	—	—	*	—
	U.K.	54	—	—	—	—	—	—	57	—	—	3	—
5. *Payments to Capital Accounts:*													
(*a*) Saving and net overseas investment.	N.I.	—	—	—	9D	—	9D	—	5E	28C	—	—	4E
	Republic	—	—	—	12	—	5	—	*	20	—	—	3
	U.K.	—	—	—	13	—	25	—	9	42	—	—	−5
(*b*) Stock appreciation	N.I.	*	—	—	*	—	*	—	—	*	*	—	—
	Republic	9	—	—	8	—	*	—	—	9	9	—	—
	U.K.	−1	—	—	*	—	*	—	−1	−1	−1	—	—
6. *Gross Domestic Capital Formation*	N.I.	28C	—	—	—	—	—	—	—	—	28C	—	—
	Republic	20	—	—	—	—	—	—	—	—	20	—	—
	U.K.	42	—	—	—	—	—	—	—	—	42	—	—
7. *Transactions with Rest of World in Goods and Services by Businesses.*	N.I.	157B	165C	—	—	—	—	—	—	—	—	165C	157B
	Republic	50	58	—	—	—	—	—	—	—	—	58	50
	U.K.	70	64	—	—	—	—	—	—	—	—	64	70
Error	N.I.	—	—	4	—	—	—	—	—	—	—	—	3
	Republic	—	—	—	—	—	—	—	—	—	—	—	—
	U.K.	*	—	—	—	—	—	—	—	—	—	—	*
TOTAL ...	N.I.	362	362	194	194	21	21	48	48	28	28	209	209
	Republic	220	220	150	150	18	18	32	32	29	29	65	65
	U.K.	370	370	253	253	63	63	99	99	41	41	78	78

*=less than £0·5.
NOTE: Totals may not agree with sums of individual items owing to rounding.

A word should first be said on the relation of these tables to the preceding ones. The two columns of the production account represent expenditure (at market prices) at home and (by businesses) overseas, on the resources available to the country, and the corresponding value of those resources built up from domestic factor payments, indirect taxes *less* subsidies, and imports. We thus have :

TABLE VII.

	£ Mn.		
	N.I.	Republic	U.K.
Totals of production account	498	649	18,644
less (indirect taxes, *less* subsidies) ...	−25	−55	−1,867
less imports from the rest of the world ...	−227	−172	−3,216
plus income from abroad	9	12	139
less stock appreciation	—	−26	+50
Error	—	—	−12
Gross national product (U.K. definition) ...	261	408	13,738
Compared with (Table II)	253	407*	13,738

*Difference due to rounding.

Since the two Northern Ireland figures are built up from quite different sources, the discrepancy is encouragingly small. The totals in Table IV appear as " current expenditure on goods and services by persons " in the large tables, the small difference in the Republic figure being due to some alterations to bring it into line with the U.K. definitions, which could not conveniently be shown under the separate items of Table IV.

The Northern Ireland accounts are peculiar in that they show net tax payments to the " rest of the world," i.e. to the Imperial Government, and a current grant by the " rest of the world." It should be noted that the payment from the Imperial to the Northern Ireland exchequer is based on a calculation which attributes to Northern Ireland the *undistributed* profits, owned by its residents, of companies in Great Britain : whereas we have regarded these undistributed profits as belonging to the national income of Great Britain. Similarly undistributed profits of British investors in Northern Ireland are differently treated. Thus our total of tax payments to the Imperial Government (£46 mn.) excludes tax on the net balance of the profits : whereas the grant from the Imperial to the Northern Ireland government of £46 mn. is entered at its actual amount, derived from an alternative basis of calculation. The relation of our apparent Imperial Contribution (nil, i.e. £46 mn. less £46 mn.) to that usually quoted is roughly as follows :

Add :	tax on G.B. undistributed profits owned by N.I. residents	£3—4 mn.
	subsidies	10
	receipts from U.K. exchequer under social services agreement	4
	receipts of N.I. national insurance fund from G.B. national insurance fund ..	3
		20—21

This yields a total which actually exceeds the reported Imperial Contribution, which was somewhat over £19 mn. for the calendar year 1952.

The savings figures are, for all the countries, extremely uncertain and sensitive to changes in other items, and no special account should be taken of the differences between them ; but the *total* of savings equals gross domestic capital formation, which can be separately estimated. It appears to us very unlikely that the figures of domestic saving in Northern Ireland could plausibly be as high as capital formation : and we consequently conclude that Northern Ireland was, in 1952, as it should be, a capital-importing country—no doubt through expenditure by British firms on Northern Ireland subsidiaries.

The large figure for " stock appreciation " for the Republic arises mostly in farming. The methods used for estimating agricultural output in Northern Ireland do not throw up stock appreciation as a constituent of the value of output. No conclusions should therefore be drawn from the absence of a figure for Northern Ireland.

Among the more interesting figures are : (*a*) the very high value of trade per head in Northern Ireland—more than three times that for the Republic, and twice that for the U.K. This is of course natural for a section of a larger economy, but it is not unimportant : it implies for instance, that the effectiveness of public works in increasing Northern Ireland activity is likely to be low, because much of the income generated will not be spent on local products.

(*b*) The low burden of " indirect taxes *less* subsidies " in Northern Ireland, compounded of a low yield of indirect taxes on alcohol and tobacco, offset by subsidies at the full U.K. level.

(*c*) The high value in Northern Ireland of grants by public authorities to persons—i.e. social security payments.

(*d*) The very low burden per head of taxes on income in the Republic; and the low yield per head of the British income tax system applied to the poorer economy of Northern Ireland.

We should like to express our gratitude to many persons and authorities who have helped us, and especially to Dr. Geary and the staff of the Central Statistics Office in Dublin, who have allowed us to maltreat their statistics with scarcely a complaining word, and who have given much advice and assistance. They are in no sense responsible, however, for the finished product.

APPENDIX.

Derivation of Northern Ireland Statistics.

TABLE II.

Gross National Product by Industry of Origin.

1.—Agriculture, forestry and fishing (£45 mn.).

(*a*) Agriculture (£44.00 mn.) : from Monthly Agricultural Report, supplemented by advance information. Value of output sold, adjusted for subsidies and valuation change, less inputs of factors from outside the " national farm."

(*b*) Forestry (£0.24 mn.) : wages, salaries and national insurance of forestry workers, from Appropriation Accounts for 1951–2 and Estimates for 1952–3, plus a small addition for depreciation.

(c) Fishing (£0.62 mn.): the "Report on Sea and Inland Fisheries" suggests that there are 600 sea and 650 inland fishermen: an output per head (including depreciation) of £500 is assumed.

2.—Industry (£97 mn.).

(a) Mining and quarrying (£1.02 mn.): from the net selling value of the products, as given in the Ulster Year Book, multiplied by the ratio of net output to net selling value in 1950.

(b) Manufacturing (£73.18 mn.): from Northern Ireland Census of Production net outputs, adjusted industry by industry by the ratio of "National Income Blue Book" to "Census of Production" net outputs in the U.K. This adjustment produces a fall of about 2%, corresponding to a number of minor differences in definition.

(c) Building and Contracting (£17.49 mn.): U.K. output (Blue Book)

$$\times \frac{\text{N.I. employment}}{\text{U.K. employment}} \times \frac{\text{N.I. net output per head.}}{\text{U.K. net output per head.}}$$

(The N.I. census figure is about $\frac{2}{3}$ of the full contribution of this industry.)

(d) Gas, electricity and water (£5.01 mn.): as in (b).

3.—Transport and distribution (£50 mn.).

(a) Rail and road transport (£9.00 mn.): three alternative calculations. The first, taking 1% of U.K. for rail, less rail losses: 2.3% of U.K. for road goods transport: 2% of U.K. for road passenger transport—gives £8.2 mn. The second, based on U.T.A. and Belfast Corporation expenditure and 60% of the G.N.R., less inputs of materials, gives £9 mn. The third, applying the employment ratio for transport and communication to the U.K. output gives £20.2 mn. for the whole group, or about £11 mn. for this item. This last calculation, however, is likely to give too high a figure. £9 mn. is taken as reasonable.

(b) Communications (e.g. Post Office) (£4.35 mn.): 2½% of U.K. total.

(c) Airways (£0.22 mn.): 4% of aircraft movements of U.K. aerodromes were at Nutts Corner. Output taken as 4% of £5½ mn. (U.K. figure from RPUK*). This relates only to aerodrome operation.

(d) Shipping (£4.50 mn.): rough estimate based on proportion of U.K. entrances and clearances of ships (for port operation) plus a small addition for operation of ships by Northern Ireland owners.

(e) Distribution (£32.20 mn.): on proportion of U.K. employment in N.I., reduced to allow for lower N.I. earnings in the proportion indicated by Deane, Journal of the Royal Statistical Society, Series A, Part II, 1953.

4.—Services and professions (£40 mn.).

(a) Insurance, banking and finance (£4.77 mn.): as 3 (e).

(b) Professional and other services, except health, education and domestic service (£14.85 mn.): as 3 (e).

(c) Education services (£5.10 mn.): salaries and superannuation of teachers from Government accounts, plus allowance for the part of teachers' salaries in voluntary grammar schools not covered by government grant, and an allowance for other private schools: £0.30 mn. for universities.

(d) Health services (£7.00 mn.): from Health Service accounts, plus £0.28 mn. for "private" work.

(e) Ownership of dwellings (£3.69 mn.): proportion of U.K. from Schedule A valuation.

(f) Domestic services (including services to non-profit-making bodies) (£4.89 mn.): 3% of U.K.

5.—Public administration and defence (£12 mn.).

(a) Central and local government (£9.31 mn.): estimated total of wages and salaries, from Government and local government accounts.

*RPUK refers to the Cambridge calculations of the "real product" of the United Kingdom (Journal of the Royal Statistical Society, Series A, Part I, 1952).

(*b*) Defence (£2.90 mn.) : there were 6,901 members of the Forces in N.I. at the time of the 1951 Census. These are assumed to be contributors to the Northern Ireland product, and are allotted their share of the total U.K. pay in cash and kind of the Forces.

Net income from abroad and current transfers to persons are explained below (Table V, lines 3 (*b*), and 3 (*a*) with 3 (*d*)).

TABLE III.

Depreciation at 1952 prices (£21 mn.) : depreciation per £ of gross product assumed to be the same in N.I. as in U.K., for each industry shown in Table II for which separate depreciation figures are available in Redfern, Journal of the Royal Statistical Society, 1955. Depreciation for service industries and public administration assumed to be £6–7 mn.

TABLE IV.

Consumers' Expenditure.

It is expected that regional figures will be published from the Ministry of Labour's recent Family Budget survey : these will enable better estimates of consumers' expenditure to be made, and the estimates in Table IV are of an interim nature. The starting point in each case was the " population proportion " of U.K. consumers' expenditure, referred to below as PP.

1.—Food (£78 mn.).

(*a*) Household expenditure (£74.26 mn.) : Ministry of Labour's 1937-38 survey of weekly expenditure of working-class households (July 1949 : referred to below as ML 37) shows household expenditure 108% of U.K., but owing to the greater size of households in N.I. per capita expenditure is 86%. The gap between average family sizes in U.K. and N.I. has, if anything, increased since 1937-38: but there has been considerable levelling-up of N.I. feeding standards, caused partly by rationing and partly by greater prosperity. 95% of PP is therefore taken.

(*b*) Meals in restaurants, etc. (£3.82 mn.) : ML 37 shows per capita expenditure 34% of U.K. : increased to 38% to take account of greater prosperity.

2.—Alcoholic beverages (£14 mn.).

(*a*) Beer (£7.59 mn.)
(*b*) Wines, spirits, etc. (£6.51 mn.)
} from tax revenue attributed to N.I. (Customs and Excise). No allowance for smuggling or illicit stills.

3.—Tobacco (£13 mn.).

Cigarettes and pipe tobacco (£12·75 mn.) : as for (2).

4.—Clothing (£28 mn.).

(*a*) Men's and boys' wear (£7·72 mn.) :
(*b*) Women's and girls' wear (£14·04 mn.) :
ML 37 shows per capita ratios to U.K. 98% for men, 93% for women, 62% for children : which, on basis of known proportion of children to adults, gives 88% for men and boys, 84% for women and girls. These are increased to 95% of PP and 90% of PP, respectively, to allow for greater prosperity.

(*c*) Footwear (£5·82 mn.) : ML 37 shows per capita ratio 104% : increased to 110% of PP.

5.—Fuel and light (£11 mn.).

(*a*) Coal (£6·44 mn.) : N.I. proportion of U.K. domestic consumption, price factor 120%.
(*b*) Electricity (£1·55 mn.) :
(*c*) Gas (£1·94 mn.) :
} on estimated N.I. proportion of U.K. domestic consumption.

(*d*) Other (£1·50 mn.): PP 1·14, adjusted upwards for greater use of turf etc.

(Application of ML 37 to PP gives 10·26: increase to £11 or £11½ mn. seems reasonable on grounds of greater prosperity, and availability of standard coal ration).

6.—Other goods (£31 mn.).

(*a*) Household durables (£14·16 mn.): 80% of PP (ML 37 gives 69%).
(*b*) Other household goods (£3·00 mn.): matches on PP, rest mainly soap and cleaning materials on 80% of PP.
(*c*) Recreational goods (£6·24 mn.): newspapers and magazines 85% of PP (ML 37 gives 61%, which is surely now much too low): books 50% of PP (as in ML 37): others 80% of PP.
(*d*) Chemists goods (£3·65 mn.): 90% of PP (guess based on ML 37).
(*e*) Other goods (£3·14 mn.): 80% of PP (guess).
(*f*) Income in kind not elsewhere specified (£1·00 mn.): 50% of PP (mainly Forces and seamen: guess).

7.—Travelling—private motoring (£6 mn.).

On N.I. proportion of U.K. private cars (£6·40 mn.): equal private consumers' utilisation per car assumed. Consumption of motor spirit gives similar answer.

8.—Travelling—other (£7 mn.).

(*a*) Railways (£1·05 mn.): U.K. expenditure multiplied by N.I. proportion of U.K. total rail passenger receipts.
(*b*) Other (£5·80 mn.): 65% of PP. ML 37 suggests 55%, but this excludes sea and air travel (which are much higher), and UTA bus journeys are over 3 times pre-war.

9.—Housing (£9 mn.).

Schedule A valuation proportion of U.K. expenditure gives £8·38 mn.: ML 37 applied to PP gives £9·54 mn., but this does not adequately reflect low rural rents. £9·00 used.

10.—Entertainments (£4 mn.).

Guessed at £4·00 mn. (80% of PP).

11.—Other services (£20 mn.).

(*a*) Domestic service (£2·97 mn.): 3% of U.K. taken.
(*b*) Communication services (£1·80 mn.): 2½% of U.K.
(*c*) Other services (£15·22 mn.): 2% of U.K.

(*a*) and (*b*) conform to the assumptions made in Table II.

12.—Tourist expenditure (£−8 mn., £+12 mn.).

The Republic accounts show expenditure of incoming cross-border visitors as £14 mn., but these include (e.g.) Scots travelling via Belfast or Larne: £9 mn. is taken as the expenditure of N.I. residents. The expenditure of Republic residents who cross the border is £4·8 mn., of which £4 mn. is taken as expenditure in N.I. Expenditure in N.I. of "direct" visitors is taken, after enquiry, as £4 mn. (cf. £17 mn. for the 26 Counties): expenditure of N.I. residents as tourists outside Ireland as £3 mn. This gives tourist *receipts* £8 mn. (£4 mn. Republic residents, £4 mn. other): *expenditure* £12 mn. (£9 mn. in Republic, £3 mn. elsewhere). The large amounts of the cross-border traffic must be borne in mind: thus the value of the trade due to motorists filling their tanks before leaving the Republic must be about £1 mn., though part of this is business expenditure.

TABLES V AND VI.

The Social Accounts.

Row 1 (*a*).—Income from employment and Forces' income (£149 mn.).

Basis as in Cuthbert, "Total Civilian Income in Northern Ireland" (*Journal SSISI*, 1951): i.e. Inland Revenue PAYE statistics. (The figure above has *not* been corrected in the light of the Inland Revenue report published January 1955). The main adjustments are:

(i) Incomes below the exemption limit: total non-agricultural occupied population less non-agricultural persons assessed to tax under PAYE (except pensioners with another source of income), average income assumed to be £110 in 1951/2 and £120 in 1952/3. (The exemption limits in these years were £135 and £155 respectively). This gives a total income below the exemption limit of £14·2 mn. in 1951/2 and £16·0 mn. in 1952/3. It should be noted that persons assessed under PAYE form a larger class than the class of taxpayers.

(ii) "Imperial" civil servants, whose tax is deducted in London: income £0·3 mn.

(iii) Agricultural wages, as estimated by Ministry of Agriculture, less income of agricultural workers counted in PAYE statistics: £14·8 less £1·7 mn.

(iv) Employers' contributions to national insurance and industrial injuries funds: £4·8 mn.

(v) Employers' contributions to private pensions schemes: £1·0 mn. (rather less than half the "population proportion").

(vi) Forces' pay and allowances: £2·9 mn., as in Table II, item 5 (*b*).

These are applied to "income under PAYE" of £110 mn. for 1951/2 and £112 mn. for 1952/3.

Row 1 (*b*).—Income from self-employment (£63 mn.).

In principle based on individual and partnership income taxed under Schedule D: but since the latest available figures relate to income earned in 1950/51 (taxed in 1951/52), they must be extrapolated with the help of the changes in production shown in the Census of Production. The results are:

£ mn.	1951/2	1952/3
Non-agricultural income from self-employment ...	(24·8)	(22·5)
Agricultural do.	25·4	31·0
	50·2	53·5

(from Ministry of Agriculture): calendar year 1952, £52·6 mn. Since there would appear to be ample scope for evasion, £10 mn. has been added. This must not be taken to imply that income evading tax in the United Kingdom is upwards of £400 mn.: there are reasons to think that tax evasion may be more prevalent in Northern Ireland.

Row 1 (*c*).—Gross trading profits of companies and public corporations (£27 mn.).

Schedule D income assessed on companies, extrapolated as last item. Until 1952 Profits Tax was charged before determining the assessment for income tax: £3·4 mn. must therefore be added back to the estimates (£24·5 mn. for 1951/2, £22·8 mn. for 1952/3: adding £3·4 mn. we get £26·7 mn. for the calendar year), since the extrapolations were made from Sch. D figures net of Profits Tax.

Row 1 (*d*).—Gross trading profits of other public enterprises: ignored.

This figure refers to central and local government trading departments, and it is not easy to obtain appropriately defined figures of profit. Since, however, some local authority trading was certainly run at a loss, it is believed that the net figure would be small.

Row 1 (*e*).—Rent (£7 mn., £4 mn. to persons, £1 mn. to companies, £2 mn. to public authorities).

This is defined to be actual rent paid (including an imputed rent for owner-occupied houses but *not* for owner-occupied trading property), less actual expenditure on repairs. The net annual value in 1952/3 corresponding to this appears to have been about £7 mn. (*Ulster Year Book* 1953, p. 299: "Other hereditaments" plus a part of "agricultural hereditaments" for farmhouses and rented land, and an allowance for industrial rented property). This has to be increased, to allow for increases in rents and imputed rents since the pre-war valuation, and the cost of repairs must be deducted. The net Schedule A valuation of property was £5·6 mn.: this similarly would require to be increased to allow for higher rents, and abated by any excess of repair expenditure over repairs allowances. In the light of this evidence we assumed the correct figure to be between £6½ mn. and £7½ mn. The 94th Inland Revenue report shows that in 1949/50 rents received by persons were about £4 mn. (£2·8 mn. to persons taxed under Schedule A, and £1·2 mn. Schedule A income of persons below the exemption limit). The increase in the number of houses from 1949 to 1952 is offset by an increase in the cost of repairs. The receipts of companies and public corporations consist mainly of £0·6 mn. rents, plus subsidies, less repairs for the Northern Ireland Housing Trust: other company receipts are assumed small, so that £1 mn. is assumed correct to the nearest million pounds. The public authority receipts are made up as follows:

Local authority rent receipts	£0·4 mn.	(extrapolated from 1948/9)
Government subsidies (annual value) ...	0·4	
Rate-fund subsidies	0·1	
Subsidies on pre-fabricated houses ...	0·2	
Rents received by central Government ...	0·2	
Rent element of Land Purchase Annuities	0·8	(out of a total of £0·95 mn.)
	2·1	

The receipts having been estimated independently, they support the view that total rent payments were around £7 mn.

Row 2.—Indirect taxes less subsidies (£25 mn., £6 mn. to N.I. government and £19 mn. to "rest of world").

These are derived from Government accounts, though information is not always up-to-date.

"Transferred" revenue from indirect taxes	£3·2 mn.	
Local rates	£4·7 mn.	
Less subsidies (agriculture, industry, G.N.R., housing)	—£2·2 mn.	
Indirect taxes less subsidies: N.I. government	£5·7 mn.	
"Reserved" revenue from indirect taxes	£29·0 mn.	(less Post Office deficit)
Population proportion of food subsidies ...	—£7·5 mn.	
Agricultural subsidies from U.K. government	—£2·7 mn.	(from Ministry of Agriculture)
Indirect taxes less subsidies: U.K. government	£18·8 mn.	

Row 3 (*a*).—Current grants from or to Public Authorities (Receipts of persons £26 mn. from N.I. Government, £1 mn. from "rest of world": receipts of N.I. Government from "rest of world" £46 mn.).

Receipts of persons from N.I. Government are the items from Government accounts corresponding to those in Table 38 of the 1954 National Income Blue Book. Including miscellaneous payments by local authorities, the total is £26·07 mn.: this includes certain "payments in kind" such as those on school meals, milk and welfare foods. The payment to persons from the "rest of the world" is an estimated figure for war pensions received by N.I. residents. The payment to the N.I. Government from the U.K. Government is made up of the residuary share of reserved taxation, receipts by the N.I. exchequer under the Social Services agreements, and receipts of the N.I. national insurance fund from the U.K. national insurance fund.

Row 3 (*b*).—Interest and dividend payments plus income earned abroad.
(*a*) Receipts of persons (£15 mn.).

Ninety-fourth Inland Revenue report shows interest and dividend receipts by persons in N.I. in 1949/50 as £9·3 mn.: but the report points out a considerable deficiency in income reported, mostly due to understatement of wife's income and of income from interest and dividends, amounting to £322 mn. for the U.K. (This deficiency is *not* necessarily evasion: it is a deficiency in allocation). Assuming half is due to the latter cause, and allocating N.I. its *working population* proportion, one would get £4·1 mn. for the deficiency in interest and dividends, or a total of £13·4 mn. The apparently high estimate for the deficiency is to some extent supported by the following calculation:

	N.I. company dividends, 1949/50, £6·8 mn. (estimated) of which (on Estate Duty statistics) 30·7% is paid abroad, leaving	£4·7 mn.
Add :	1·06% (on Estate Duty statistics) of G.B. company dividends	£6·5 mn.
	Interest on British Government securities	£1·2 mn.
	Interest on Dominion and foreign government securities	£0·2 mn.
	Interest on Post Office and Trustee Savings Bank deposits	£1·8 mn.
		£14·4 mn.

The corresponding calculation for 1952 gives £15·9 mn. : but part of this does not accrue to persons. If we take the personal proportion as 13·4/14·4, as in 1949/50, the receipts of persons would be £14·8 mn., or £15·1 mn. including £0·3 mn. of the interest on Ulster Savings Certificates. The remainder (£1·1 mn.) would be mainly receivable by companies, but would not be the whole of company income from this source, since the proportion of G.B. interest and dividends taken (from Estate Duty experience) relates to personal estates. It is not, however, wholly included in item (*b*) below, part being a transfer within the group of N.I. companies.

(*b*) Receipts of companies and public corporations (£1 mn.).
This is a residual in the row : it refers to company receipts from investments in G.B. or foreign companies or Government securities. It appears to be *too low* : but the effect of increasing it is to increase company saving, which already appears high enough (since, in a bad year, it is shown as a higher proportion of company income than in the U.K.).

(*c*) Payments by companies and public corporations (£8 mn.).
This is obtained by assuming that the U.K. proportion of company profits is distributed.

(*d*) Public authority receipts (£2 mn.) and payments (£1 mn.).

Receipts :	N.I. Government receipts of interest on U.K. Government stock	£1·25 mn.	£1·8 mn.
	Other receipts, *less* those from local authorities (which are a transfer within the sector)	£0·59 mn.	
Payments :	Interest on short-term advances and Treasury Bills	£0·21 mn.	£1·2 mn.
	Interest on N.I. Government stocks not held by Government bodies ...	£0·31 mn.	
	Interest on Ulster Savings Certificates (not reinvested in U.K.)	£0·44 mn.	
	Interest on Local Authority borrowings, other than from the Government Loans fund	£0·20 mn.	

(*e*) " Income from abroad " : receipts by N.I. (£12 mn.) and payments (£3 mn.).

Receipts by N.I. :	Interest and dividends from G.B. companies ("estate duty " proportion) ...	£7·6 mn.	
	Interest on British Government securities	2·4	(including receipts by N.I. Government)
	Interest on Dominion and foreign government securities	0·2	
	Interest on Post Office and Trustee Savings Bank deposits	1·7	
	Interest on National Savings Certificates	0·5	
		£12·4 mn.	

(We are now of the view that this omits receipts of Northern Ireland companies from investments in British companies. We do not think this can be large (since reserves are commonly held in gilt-edged rather than industrial stock): an addition for it would increase company receipts of interest and company saving, and reduce the capital transfer from the "rest of the world").

Payments by N.I.:	30% of N.I. company interest and dividend payments ...	£2·3 mn.
	39% of interest on Government stock	0·2
	Interest on short term advances and Treasury Bills (see (*d*))	0·2
		£2·7 mn.

Row 3 (*c*).—Tax payments by persons (£29 mn.)* and companies (£8 mn.)* to Northern Ireland Government (£10 mn.) and the "rest of the world" (£27 mn.).

The payment to the Northern Ireland Government consists of £10·3 mn. National Insurance contributions paid by or on account of persons. The tax paid by companies consists of

Profits tax	£3·4 mn.
Tax on undistributed profits estimated as	4·5
Tax on rent and on interest and dividends received from G.B.	0·9
	£8·8 mn.*

The total receipts of income tax, surtax and profits tax, including tax on the net receipt of income from Great Britain, come to £26·9 mn.: so that tax payments by persons (other than National Insurance contributions) total £18·1 mn., or total tax payments by persons £28·4 mn.*

Row 3 (*d*).—Personal remittances from abroad (£3 mn.).
Assumed to be 20% of Republic figure.

Row 4 (*a*).—Current expenditure on goods and services by persons (£225 mn. of which £12 mn. spent abroad).
From Table IV.

Row 4 (*b*).—Current expenditure on goods and services by public authorities (£31 mn.).

For central government current expenditure we take net expenditure on supply services *less* subsidies, housing payments, grants to persons (as in row 3 (a)), exchequer payments to National insurance funds, identifiable items of capital expenditure, and grants to local authorities: and *plus* administrative costs of the national insurance and road funds. The result (for the calendar year 1952) is £21·92 mn. The local authority expenditure is uncertain, in the absence of official statistics since 1949/50. But local authority income is about £12·1 mn. (rates £4·7 mn., government grants £6·4 mn., rents and subsidies £1·1 mn.) and subtracting grants to persons of £1·7 mn. and interest payments of £1·0 mn. we are left with £9·3 mn.: giving total current public authority expenditure £31·2 mn.

Row 5 (*a*).—Saving and net overseas investment.
(*a*) Personal saving (£12 mn.).

The figures of saving are throughout very rough. N.I. personal saving is assumed to be 4½% of personal receipts. The U.K. proportion is 5%: for N.I. to save the same proportion out of a much lower income per head, and in a bad year, would indicate a much higher propensity to save—which one would regard as improbable, except for the remarkably high savings figure shown for the Republic. On the other hand, despite the lower incomes, N.I. savings per head can hardly be less than half those of the U.K. This gives a range of £10 mn. to £16 mn. (the latter figure corresponding to savings per head as high as in the Republic).

*NOTE: the figures shown in Table V should be altered to £28 mn. paid by persons and £9 mn. by companies: the effect being to reduce the "error" in column 3 to £4 mn., and to reduce company saving to £12 mn.

(*b*) Company saving (£13 mn. : or reduce to £12 mn., see 3 (*c*) above).
Residual in the company accounts. It might be too low if company income from investment is underestimated : range (say) £12 mn.—£14 mn.

(*c*) Government saving (£7 mn.).
Residual in the Government accounts. This should be a fairly firm figure.

(*d*) Payments to capital account (£38 mn.) : see row 6.

(*e*) Disinvestment in "rest of world" (£6 mn.).
This can consist both of investment by the "rest of the world" in N.I. (e.g. by British companies) and of disinvestment by N.I. of its assets in the rest of the world. The latter is likely in a depressed year. The figure shown is a residual in the row : taking both personal and company saving at their upper limits, it would be only £1 mn., but (if capital formation is correctly estimated) it could hardly be negative.

Row 5 (*b*).—Stock appreciation.
Assumed negligible in the absence of other information. The negative U.K. item is mainly accounted for by Central Government trading stocks.

Row 6.—Gross domestic capital formation (£38 mn.).
Built up as follows :

Public road passenger vehicles.	N.I. proportion of U.K. registrations	£0·17 mn.
Road goods vehicles	do. ...	1·68
Passenger cars ...	do. ...	1·03
Railway rolling stock	5 diesel car conversions (including all G.N.R.) : assumed ...	0·10
Ships	"Ballyhaft" and "Marwick Head" (2,632 tons)	0·3
Aircraft	None in N.I. ownership ...	—
Plant and machinery	Agriculture, transport and distribution : same proportion to gross product as U.K. Public services other than housing : 2% of U.K. Census trades : from Census of Production ...	13·20
New housing ...	Average cost per house assumed same as for U.K.	16·50
Other new building	As for plant and machinery ...	7·50
Legal fees, stamp duties, etc.	Estimated (stamp duties being £0·3 mn.)	0·70
Total fixed capital formation		41·18
Less Value of physical decrease in stocks and work in progress*		−3·00
		38·18

Row 7—Transactions with the rest of the world in goods and services by businesses (Imports £227 mn., Exports £216 mn.).
The figure for exports f.o.b. (£215·6 mn.) is taken from the Trade Accounts for Northern Ireland, invisible exports being assumed negligible. The import figure is obtained as follows :

Imports (c.i.f.) (from Trade Accounts)	£241·3	
Less services of N.I. owned shipping ...	− 4·0	(estimated)
tourist expenditure	−12·0	(see row 4 (*a*))
Plus invisible imports other than shipping services	+ 5·0	(estimated)
Less overestimation of imports	− 3·0	(estimated)
	227·3	

*Estimated by assuming the same relation of stock formation to output to exist as in the U.K., for the industries shown in Table 49 in the 1954 Blue Book.

The grounds for believing that imports are over-estimated are that the N.I. "trade gap" is improbably large. It was £20 mn. in 1948, £25mn. in 1949, £35 mn. in 1950, £41 mn. in 1951 and £26 mn. in 1952: the difference being reckoned in each case between imports c.i.f. and exports f.o.b. In addition N.I. must pay for a substantial (but quite unknown) import of services, such as insurance: on the other hand, she carries a small part of her import trade in ships owned in Northern Ireland. If we suppose these items to offset each other, we have (to meet the deficit) about £9—£12 mn. net receipt of interest and dividends, and (say) £3 mn. personal remittances, *less* any net *payment* of Imperial Contribution (on our definitions). The remainder must come from capital imports and the implied capital import seems improbably high. The deduction of £3 mn. shown is a "dummy" figure, pending further investigation: the true deduction may be much higher.

The statistics for the Republic of Ireland are derived from official sources, e.g. Pr. 2607—Dublin, Stationery Office, 1954. The statistics for the United Kingdom are obtained from the official Blue Book on National Income and Expenditure—London, Stationery Office, 1954. Figures for Great Britain can of course be obtained by subtraction; but no fully comparable data are available for England, Wales or Scotland separately.

This paper is revised to take account of information available up to 1 February 1955. Further revisions to 1952 figures are certain to be required (e.g., to take account of later Inland Revenue data). While the broad picture is unlikely to be altered, it is suggested that before making any use of the data in which accuracy is important, users should ask the authors for the latest revisions.

DISCUSSION.

Dr. Geary: I have great pleasure in proposing that the thanks of the Society be accorded to Professor Carter for his interesting and important paper. I was as much amused as was Professor Carter at the disappearance from the United Kingdom National Income Accounts of the national income itself as a separate entity, though it could, of course, be derived from the published figures. Hamlet has left the play. Internationally, national income first tended to be superseded as a single figure by Gross National Product, i.e., the national income before depreciation, that nigger in the woodpile for social accountants. Now social, or national, accounts are in full favour. We in the south have been conservative about adopting this system officially. We feel that in the United Kingdom form they are too generalised—there are too few accounts—to be really useful. Apart from the larger aggregates which we publish at present, we feel that the next stage should be quite detailed when they would look like a well-integrated input-output system. It seems to me that such detail is necessary for the principal purpose for which these statistics are required, namely economic policy-making. Are these very generalised accounts, in which the attribution of certain items is necessarily doubtful, well adapted to describe a dynamic economic system? In particular I have some doubts as to whether Professor Carter's capital account system is an effective one. I feel that to be useful these accounts should go into the detail at which they genuinely operate. I would be very glad to have the comments of Professor Carter and other economists present to help the Central Statistics Office to decide whether it should adopt a fully integrated social account system and, if so, in what detail. Incidentally it would be useful to have an analysis of gross capital formation for the Six Counties into social (dwelling houses, hospitals etc.) and economic (i.e. income-producing).

Professor Carter has been well advised to produce a separate system of accounts for the Six Counties. It is quite obvious that even within the British polity the Six Counties constitute a special problem. It may be enough to state that in December 1954, the unemployment rate was 7·0% compared with a rate of 1·2% for Britain. To help in the formulation of a wise economic policy for such an area social accounts separate from those of Britain are necessary.

It would be well if Professor Carter could have produced the figures for several years because in certain respects the single year's figures may be misleading. Going by our experience I can only say that the proportions borne by the four contributors to savings, namely persons, companies, public authorities and the rest of the world, change drastically from year to year. It may be the same in the Six Counties.

I feel that the lecturer should have given more explanatory matter in his paper. I note that he intends to publish his methods in a separate brochure, price 2/- and I wish him success in this enterprise. I would, however, have liked to have had about a shilling's worth of explanation and detail on account. In particular some link-up in regard to methods and figures with Mr. Cuthbert's paper would have been desirable.

I note that the lecturer has applied the alphabetical system of statistical merit to his figures. When he attributed this system to Carter and Roy, I thought at first that his collaborator might have been myself, described a little informally, because this system was adopted in the first official publication (in 1946) of the Twenty-six Counties national income statistics. Of course, Professor Carter's colleague was my friend A. D. Roy. Lest you should think that I harbour resentment, however, I hasten to add that on our resumption of publication after an interval of years, we dropped the alphabetical system because, with fuller statistical knowledge, some of our swans, if not quite geese or ducks, turned out to have peculiar markings! We are also setting our sights higher. All kinds of checks are now applied to the figures. For instance, we have no fewer than four estimations of aggregate personal expenditure from independent statistical sources, three in excellent agreement and the fourth known to be too high. Gross capital formation is in process of reconciliation from the production and use approaches.

I am afraid that I remain impenitent in deprecating international comparisons of national income statistics. These statistics are designed for internal consumption and assume significance only when fairly extended series in time are available. The Six Counties and the Twenty-six Counties differ in many essential respects, in particular in that the Six Counties has no area comparable with that of the congested districts in the south. On the other hand the Six Counties has a remarkable affinity with the province of Leinster. While the area of Leinster is greater than that of the Six Counties, the populations are almost identical at 1·3 million. A special calculation has shown that in 1952 the Gross National Product per head is very similar in the two areas, £184 in the Six Counties and £177 in Leinster. I may say that the estimate for Leinster was in the main found by applying proportionate expenditure at retail, derived from the Census of Distribution, to the GNP for the State as a whole. Each area has a large city which, with suburbs, contains about 40–45% of the total population. The population experience of the two areas also corresponds, that of Leinster during the past twenty-five years being rather more favourable than that of the Six Counties. The emigration rate per annum during the period 1936–51 was 2·6 per thousand as compared with 3·6 for the Six Counties. Perhaps the most remarkable concordances were in the trend in *rural* population, which, in the period 1841–1951, declined by 62% in the Six Counties and 65% in Leinster. During the period 1911–1951 the declines were respectively 15% and 13%. The marriage rate in 1950 in the Six Counties was 6·6 per thousand and in Leinster 6·1 per thousand. While the Six Counties marriage rate is somewhat higher than that in Leinster, both are markedly below the rate in, e.g., Britain. Reference has already been made to the unemployment rate in the Six Counties of 7·0% in December 1954. In Leinster the rate was 6·2. These numerous similarities suggest that very much the same social and economic forces are operating north and south.

In one important respect, however, the experience of the two areas has been different. Linking, perhaps hazardously, Mr. Cuthbert's figures with those of Professor Carter, I estimate that in real terms (i.e., corrected for price changes) the national income in the Six Counties increased by 65% between 1938–39 and 1952, whereas the corresponding increase in Leinster was only 28%. The more favourable trend in the Six Counties seems to have been due largely to the remarkable increase of 81% in the volume of gross agricultural output: in the Twenty-six Counties generally the volume in 1952 was little above the pre-war level. Perhaps the Six County *net* volume increase is less than that of gross volume, i.e., that the proportionate volume input is greater than pre-war. This is a usual concomitatant of increased agricultural output.

A remarkable fact which emerges from Professor Carter's figures is that gross domestic capital formation as a percentage of gross national product was 15% in the three areas he distinguishes.

Seconding the vote of thanks, *Dr. Kiernan* congratulated the joint authors on their pioneer work in this field of Northern Ireland social statistics, and hoped that the paper would be the first of an annual series of studies of the national income and social accounts of Northern Ireland.

In the pattern of consumer expenditure (Table IV), if the deduction for expenditure by visiting tourists and the addition for expenditure by residents when abroad have been allowed for in the statistics of the Central Statistics Office, Dublin, Dr. Kieran thought that, since tourist expenditure in the Twenty-six County area is considerable, estimated at about £30 million a year, the per head expenditure in the Republic, shown in Table IV, is probably exaggerated.

On the other hand, the valuation of fuel used in farm houses at farm and not at retail prices would depress the expenditure figures more for the Twenty-six County area, with its bigger proportion of population living on farms.

Referring to the profits made in Northern Ireland by companies resident by registration in Britain, and not distributed to shareholders, Dr. Kieran thought that it should be possible to ascertain separate Income Tax totals of Northern Ireland income which would be assessed to a Northern Ireland income tax if Northern Ireland were a separate fiscal entity. From the administrative angle, he did not think that such a return should present any difficulties.

The apparently low consumption of tobacco in the Six-County area must in part be due to the absence of Customs duties between Great Britain and Northern Ireland. In order to ascertain the consumption of tobacco, the excise duties collected in Northern Ireland have to be adjusted by deduction for exports and addition for imports, and the source of calculation, the shipper's declaration, used only for statistical and not for duty purposes, may easily be an accumulative source of " carelessness " errors of omission from the totals.