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## Irish County Incomes in 1960

by

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## 1. Introduction

This paper owes its inception to a problem which the Taoiseach (Prime Minister), Mr. Seán F. Lemass, T.D., at the Opening Ceremony on 6 June, 1961, asked the Institute to examine, in the following terms:—

> "The Minister for Finance has already raised the questions whether the present system is adequate or appropriate to deal with the increasing activities of local bodies or whether a more rational or more effective system could be devised. There is a situation developing in local authority operations, and their financing, which requires consideration. Investigations, under the auspices of the Institute, of certain aspects, including the economic aspects, of the incidence of local taxation covering such matters as the effect of the local rate charge on enterprise and development, and the possibilities of providing Local Authorities with new sources of income, will provide some basic material which will be invaluable in the review of local finance which the Minister for Local Government intends to undertake".

One paper on this topic has already been published.† Another paper is in preparation in which our present findings will be taken into account.

Apart from its main purpose the appended estimates of county incomes may be put to many uses, amongst them the following:

1. Market planning by business concerns;
2. Regional studies of location of industry;
3. A wide variety of social studies;
4. Cross section analyses on econometric lines with a view to establishing relationships between level of income and various causative factors;
5. Regional economic planning and appraisal of results achieved in time.

Actually studies have begun within the Institute falling under more than one of these general headings, using data from the appended tables.

## 2. Acknowledgements

This work could not have been completed without the help of many organisations. It is pleasing to state that all the information required was fully and willingly supplied by the following:—

Central Statistics Office
All Government Departments (through Department of Finance) for data summarized in Table 7.
Revenue Commissioners
Department of Social Welfare
Department of Local Government
Department of Education
Department of Lands
An Foras Talúntais (The Agricultural Institute)
Irish Banks Standing Committee
Electricity Supply Board
Córas Iompair Éireann (Irish Transport Service)
Bord na Móna (Turf Board)
Bord Fáilte (Tourist Board)

We are indebted in a special way to the Central Statistics Office which supplied many returns of unpublished material, and for many consultations during the course of the work, in addition to the published statistics on which our work was based. The nature and extent of our indebtedness to all the organisations named will be apparent from the text and the Notes to the tables. Of course, responsibility for the contents of this paper is ours alone.

## 3. Plan of the Paper

This is a compilation of basic statistics consisting, in fact, in the twelve appended tables. No analysis of the figures is attempted, except implicitly in Table 12 (consisting of derived figures) which, however, is allowed to speak for itself. The estimated income data, the object of the study, are displayed in Tables 1 and 2. As will be clear from the Notes,

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†*Local Government Finance in Ireland: A Preliminary Survey*, by David Walker. Economic Research Institute, Paper No. 5.

Tables 3–11 have all been used in the preparation of Tables 1 and 2. This is the main justification for their presentation here, though it is hoped that they will be found useful in themselves. The tables, therefore, have no pretentions to being a statistical compendium of Irish counties. It might be of interest to produce such a compendium, displaying comprehensively all the principal demographic, economic and social data for counties, but such is not our object here.

Our main purpose was to estimate the statistics of personal income displayed in col. 6 of Table 2. These figures are designed to represent the incomes in 1960, from all sources, of persons normally resident in each county. The principal difficulty which we encountered was that the statistical sources on which we mainly relied were not compiled on an individual residential basis. For instance, two of our principal sources were the Census of Industrial Production 1958 (Table 5) and the Census of Distribution 1956 (Table 6). The basic statistical unit in these cases was the establishment, and the assumption had to be made, in the first instance, that the county of residence of persons (workpeople or proprietors) coincided with the county in which the establishment was located. As regards employee remuneration probably no serious error is introduced by this assumption, though many important Irish towns are located on or near county boundaries. Perhaps the same assumptions might safely be made with regard to profits of farms and other unincorporated enterprises. It is quite otherwise with limited companies; there is no reason for assuming that shareholders reside in the county in which the enterprise is carried on; and the situation is further complicated by the fact that the enterprise may consist of several establishments located in different counties. The "head office" effect (whereby a large part of profit and probably some share of employee income) is attributed to the location of the head office (overwhelmingly Dublin) precluded our using data available to the Revenue Commissioners (*see* Table 10) as a major source for our basic estimate, though these data proved very useful for checking and appraisal purposes. As far as unemployment benefit and unemployment assistance are concerned the unit of distribution is the local office of the Department of Social Welfare and recipients do not all reside in the county of the Office. For by far the greater part we have ignored this locational difficulty. The expedients to which we had to have recourse generally in the transition from income arising to personal income are described in the Notes to Table 2.

The same difficulty largely accounts for our failure to produce corroborative estimates of personal incomes and, as we had hoped, county estimates of personal saving by approaching the problem of estimation from the expenditure side. This aspect is dealt with in section 5 below.

## 4. Methods Used

It may be well to point the distinction between the two concepts of income used in this paper, namely "income arising" and "personal income". Income arising is the income created within the borders of each county in 1960. It is very like "earned income". As well as income in cash it includes income in kind, the most important constitutent of which is consumption of own produce in farm households (valued, incidentally, at farm and not retail prices). Personal income, on the other hand, is income receivable by households from all sources, whether earned or not. The manner of derivation of personal income from income arising should be clear from Table 2 and the notes thereto. It will be seen that, to obtain personal income, elements like emigrants' remittances, social welfare payments, dividends receivable, etc., have to be added to income arising but corporate allocations to reserves, dividends payable, etc., have to be deducted.

Estimates of income arising (Table 1) in each county were based on Table A2 in the Central Statistics Office compilation *National Income and Expenditure*, 1961 in which the following figures for 1960 are displayed:—

| | Remuneration of employees | Other income |
|---|---|---|
| | £ million | |
| 1. Agriculture, forestry and fishing .. .. .. | 21·3 | 112·3 |
| 2. Industry .. .. .. | 113·3 | 38·3 |
| 3. Distribution and transport .. | 51·0 | 28·1 |
| 4. Public administration and defence .. .. .. | 45·3 | 2·1 |
| 5. Other domestic (including rent) | 57·7 | 44·1 |
| Total .. | 288·6 | 224·9 |
| Income arising at factor cost .. | 513·5 | |

The approach therefore was strictly from the income side. Each of the ten sectoral figures was dealt with separately, sometimes in considerable detail, as will be apparent from the Notes, with a view to producing the county estimates. For instance, in the case of agriculture (Tables 3 and 4) the estimates of output and costs were made in commodity detail; for industry, "small" industry had to be estimated separately from industry included in the Census of Industrial Production; etc. In every case recourse was had to *distributors* deemed to represent proportionately the county allocation. Always the county figures, in general (as above) or in detail reconcilable

with the ten national totals shown above, were "forced" into the national totals. These distributors varied greatly in statistical quality ranging from county series which encompassed a large fraction of the national aggregate (e.g. output of cattle, industrial employee remuneration) to series (e.g. numbers engaged in small industry in 1951) rather remote in time or character from the entity to be distributed.

Fairly extensive use was made of the 1951 Census of Population as distributors in the non-agricultural sectors. It is not considered that the remoteness of the Census date seriously prejudices the accuracy of the estimates since a rough allocation of the county population in 1960 into (*a*) agricultural and (*b*) other, indicates that changes in (*b*) in the aggregate in the period 1951–61 are not considerable; in fact, the showing is a slight increase in almost all counties, the decline in the total population in all counties except Dublin being attributable to the agricultural population. Population distributors have the merit that they are residential in character since the census unit is the household (except as regards institutions) and county of allocation is therefore county of residence.

The transition from county income arising to personal income on a residential basis is indicated in Table 2. In full detail the steps are as follows:

| | £ million |
|---|---|
| 1. Income arising at factor cost (as above) .. | 513·5 |
| *Transfer payments :* | |
| 2. National debt interest .. .. .. | 18·6 |
| 3. Other transfer payments .. .. .. | 46·6 |
| 4. *Less* Government trading and investment income .. .. .. .. .. | −15·2 |
| 5. *Less* undistributed profits of companies before tax .. .. .. .. | −32·1 |
| *Internal redistribution :* | |
| 6. Profits distributed } 7. *Less* profit arising } .. .. .. | — |
| *External transactions :* | |
| 8. Emigrants' remittances .. .. .. | 13·0 |
| 9. Gross income from investments abroad .. | 33·6 |
| 10. Pensions, etc., from abroad .. .. .. | 5·7 |
| 11. *Less* profits paid abroad .. .. .. | −18·3 |
| Personal Income .. .. .. .. | 565·4 |

The total of personal income of £565·4 million agrees, of course, with the figure given for 1960 in Table A5 of *National Income and Expenditure*, 1961. Each of these eleven constituent series was separately distributed between counties, the distributors being described in the Notes to Table 2. The values for transitional items 3 and 8 only have been distinguished in Table 2, as worthy of credence. All the rest have been merged in col. 5—"other adjustments" —the aggregate value being only *minus* £7·7 million, in the hope that errors in the very large positive and negative values for some of the constituent items will largely cancel out and that the figures shown in the column will be reasonably dependable. It will be observed that the effect of this column has been for the most part to transfer a large amount (£33·1 million) of income arising from Dublin to the remaining counties.

It will be observed that no attempt has been made to distinguish, in the personal income Table 2, between employee and other remuneration or between sectors as in Table 1. The reason is fairly obvious. In Table 1 the figures purport to show income arising, which is not to be confused with income enjoyed. In particular, the income received by persons whose principal occupation is in agriculture, forestry and fishing is significantly larger than that shown in col. 4 of Table 1 even from the gainful employment of persons living on farms. It is well-known, in particular, that many family members living on small farms, whose principal occupation is farming, regularly obtain employment on road work during the slack agricultural seasons and the Census of Population 1951 revealed the remarkable fact that no fewer than 36% of the non-agriculturally occupied population of Connacht lived on agricultural holdings of £2 valuation or over. We cannot estimate the non-agricultural income of the households of farmers and farm workers. A similar observation applies to unearned income. We do not know how much of emigrants' remittances, social security payments, etc., go to households in the different economic sectors. For these reasons only a single figure for personal incomes in each county can be aspired to.

This may be a suitable point at which to observe that, following the national accounting convention, farmers' household consumption of own produce has been valued at the prices received by farmers for produce sold—*see* col. 12 of Table 3. This subsistence element in county income is large in the small-farming counties of the west and north-west and it may be well to bear in mind that for comparisons of welfare between a county like Mayo at the one extreme and Dublin at the other allowance should be made for the fact that a large part of the food consumption and fuel in Mayo is valued at farm, instead of at retail prices.*

*In 1960 the distribution cost (i.e., the difference between value at retail and farm prices) of farm produce consumed on farms without process of sale was officially estimated as £18·7 million equivalent to 69% of this produce valued at farm prices (£27·1 million—*see* foot of col. 12, Table 3). Applying this percentage to the Mayo figure of £2,637,000 an addition to the welfare income of Mayo of £1,820,000 is obtained, equivalent to £15 per head of population of Mayo, the corresponding addition for Dublin being less than £1. Accordingly the welfare comparison of personal income per head, instead of being £153 as shown in Table 12, col. 6, would be £168. Adjustments on these lines may readily be made between all counties.

## 5. *Appraisal of Statistical Reliability of Tables 1 and 2*

No extravagant claim can be made for the accuracy of the county income estimates, even when the official national aggregates, themselves estimates, are regarded as absolutely correct. This general appraisal will have been almost self-evident from what has gone before and from the methodological Notes to the tables which follow. It goes without saying, in the first place, that expressing the figures in these tables to the nearest £1,000 does not imply any belief on our part that we regard the figures as accurate to the unit place; the figures are set down as they emerge from the calculations as described and we leave them as they are, for our own arithmetical convenience. As already stated, each constituent in the various aggregates has been estimated by recourse to county distributors (on the *pro rata* principle), some very good, as encompassing in themselves a large part of the national aggregate, ranging through a whole spectrum of reliability to dubious population distributors admittedly remote from the value entity to be estimated. That the distributor is dubious is no great matter when the constituent is small (say under £10 million) but it is quite otherwise when, as is apparent from Table 2, the amounts distributed by remote control are of the order of £50 million. In the Table 2 case, however, which marks the transition from income arising to personal income, a mitigating circumstance is that some of the signs are + and some −, the national aggregate largely cancelling out. This, of course, is by no means the case at county level, as will be clear from the comparison of columns 2 and 6 of Table 2 where the transition, largely a redistribution effect between counties, is seen to involve a considerable decrease in the Dublin income arising and an increase in most of the other twenty-five counties, the increase being relatively greatest (*see* Table 12, col. 7) in the poorer counties of the north-west. Still, in general effect this column is reassuring for its consistency.

As a general opinion, we think that, as regards income arising (Table 1), estimates of sector 4—public administration and defence—are the most reliable, as based on exact data for the year 1958–59 (*see* Table 7) carried forward to our year of reference 1960. Then follows sector 1—agriculture, forestry, fishing—for which the estimates of product and cost were made in considerable commodity and service detail and, for some large constituents, the distributors were in good agreement, in the aggregate and independently, with the corresponding national aggregates. Industry, largely covered county-wise by the 1958 Census of Industrial Production and supplementary exact information, may be accorded a fairly high rating; perhaps sector 3—distribution and transport—would not be far below sector 2. Certainly sector 5—other domestic—has the lowest reliability rating.

As regards non-agriculture as a whole, estimates of employee remuneration, covered by exact information to the extent of over one-half, are of far higher statistical quality than estimates of other income. So much for income arising (Table 1). For reasons indicated in a previous paragraph, estimates of personal income (Table 2) are of more dubious quality than the estimates of income arising.

The more doubtful the estimates the more necessary is it to try to check, by comparison, in whole or in part, these estimates with suitable correlatives. Such comparisons have been revealing in showing up the particular counties for which the estimates of personal income are probably too high or too low. As will appear, the series of comparisons was on an elaborate scale, leaving us with the impression that the estimates of personal income which emerged from our calculations for certain counties were too low and in a few others rather high. Having come to so definite a conclusion we were confronted with a problem of statistical ethics —do we alter the original estimates in the direction of general conformity with the correlatives? We decided against this course for the following reasons:—

(i) In our view, the correlatives were, as regards all counties, less reliable than those which we adopted; if the case were otherwise we would obviously have adopted the correlatives as estimates or bases of estimate;

(ii) The adjustments would, in magnitude, contain too large an element of guess-work; we are here in a different situation from that of random sampling estimates in which probabilistic confidence limits could be set to estimates;

(iii) If some of the estimates be not accepted by users of the material, the users may make their own adjustments in the light of our correlatives (which we present fairly fully) or on other evidence; they will do so on their own responsibility and we shall not object.

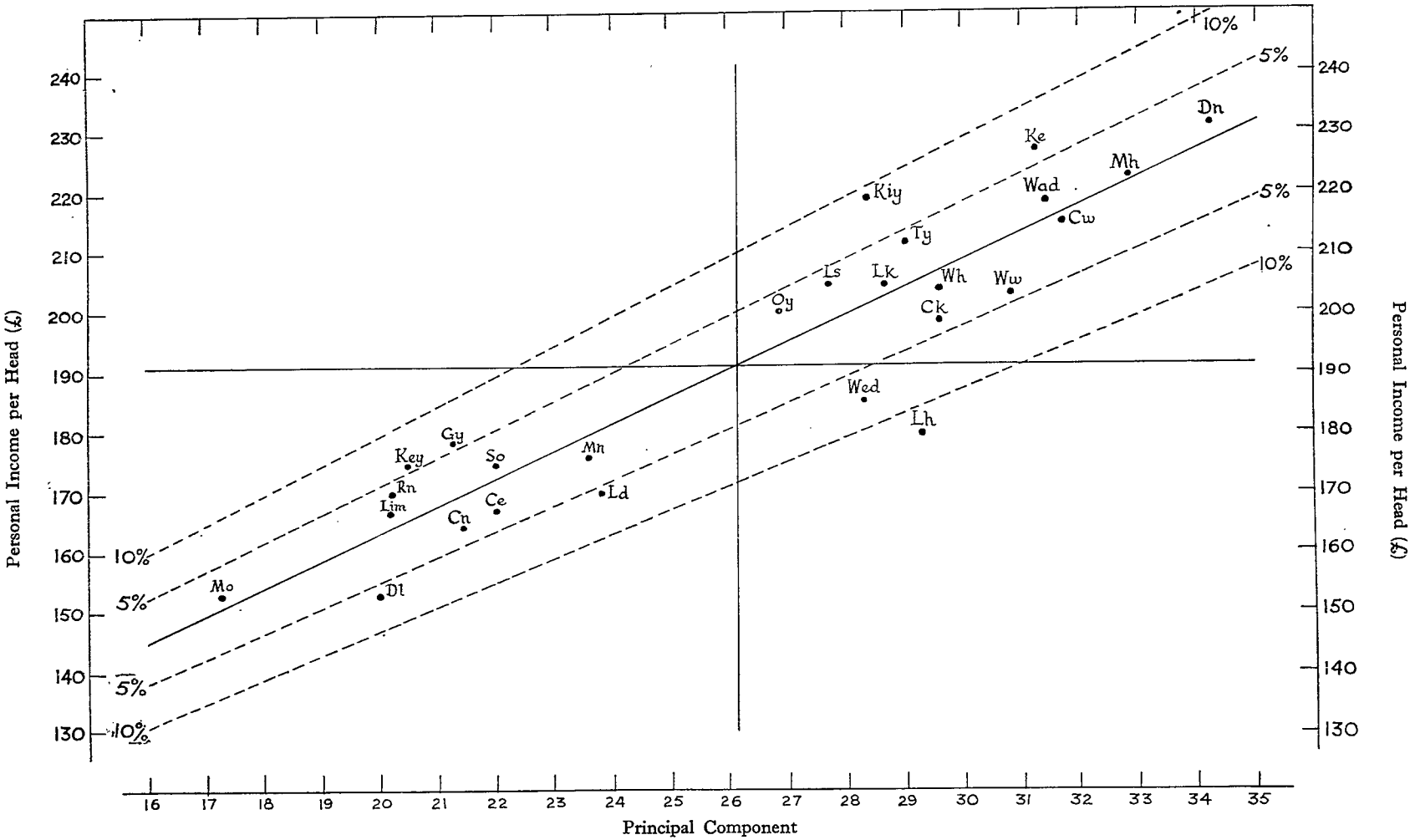
We divide the correlatives into two main groups:

(i) Component analysis;

(ii) Five other aggregations.

Component analysis is dealt with in the Appendix, where it is shown that the principal component of

Chart : Scatter Diagram and Regression for Personal Income per Head on Principal Component in Irish Counties




Sources : Appendix Table A3, col. 2 ; Table 12, col. 6.

Regression : $Y=73.2446+4.4928Z_1$, $Z_1=26.23$, $Y=191.08$. Broken lines are 5% and 10% above and below the regression line.

the seven series in Table 11 explains, of itself, most of the variability in personal income per head between counties; it is also shown that the correlation between income per head and this principal component is as high as ·9. We draw the inference that a measure of confidence may be reposed in the estimates of personal income *in general*, despite the animadversions expressed in the foregoing paragraphs.

It will obviously be desirable, however, to investigate how the individual county figures stand up to this test. In the Chart, county personal incomes per head are graphed against principal component values, for the seven series in Table 11; also displayed is the least squares regression line of incomes on component, as well as the simple average abscissa and ordinate dividing the Chart into four quadrants. None of the county points departs significantly (in the statistical sense) from the regression line; furthermore, the line lies "fairly" between the points in both the top right and bottom left quadrants. Both standards, income and component, clearly divide the counties into two classes, the fifteen counties of Leinster (except Longford) and Munster (except Clare and Kerry) in the more prosperous class with the remaining eleven counties less prosperous. As the magnitude of the correlation coefficient has already shown, there is a considerable measure of consistency between the two series. The location of Louth and Wexford exceptionally in the lower right quadrant must, however, raise the suspicion that the personal income for these counties is under-estimated, and Kilkenny over-estimated. At the same time we cannot accept deviation from the regression line as a criterion of inaccuracy since, even if we knew the incomes exactly, the county points would certainly not lie on the line.

The four aggregations referred to at (ii) are as follows:

(*a*) Estimates of personal income from the personal expenditure side for comparison with our estimates from the income side;

(*b*) Rates paid in comparison with income arising;

(*c*) Almost firm figures for non-agricultural employee remuneration in many economic sectors compared with our estimates (*see* Table 1, col. 15).

(*d*) Estimates based on amounts of gross income assessed to income tax (Table 10) for comparison with our estimates of non-agricultural non-employee income arising (Table 1, col. 16);

(*e*) Farm income (Table 4, Cols. 11-12) compared with regression estimates.

Attention is directed to the Notes appended to the Table in which the comparisons are made. It will be seen that the principal component comparison is also included (col. 2), using a more rigorous standard than in the other four cases.

It was a disappointment, in regard to (*a*), that an attempt to estimate county personal incomes from the expenditure side proved abortive and, though we have used the estimates for the purpose of the Table, we refrain from citing the actual figures as likely to confuse. The method used was based on a recast version of Table A8 of *National Income and Expenditure*, 1961 from which personal income in 1960 may be aggregated as follows:—

| *Personal expenditure* | £000 |
|---|---|
| 1. Goods covered by Census of Distribution (Retail establishments) ... ... ... ... | 373,988 |
| 2. Consumption on farms of own produce ... ... ... ... | 27,100 |
| 3. Electricity ... ... ... | 7,262 |
| 4. Gas ... ... ... ... | 3,050 |
| 5. Rent ... ... ... ... | 28,100 |
| 6. Private domestic service ... | 7,200 |
| 7. Other personal expenditure ... | 98,300 |
| 8. Tax on personal income ... | 28,400 |
| 9. Saving ... ... ... ... | 34,400 |
| 10. Total, personal income and expenditure by non-residents ... | 607,800 |
| 11. *Less* expenditure by non-residents | —42,400 |
| 12. Personal income ... ... ... | 565,400 |

Each of items 1–9 was distributed county-wise using appropriate distributors; naturally the *Census of Distribution*, 1956–59, Table 1B, using factors (officially estimated for provinces) for non-response, was the distributor for item 1. Conjectural allocations between counties were made for expenditure at retail in a number of important towns at or near county boundaries, purporting to allow for county of residence of purchasers. However, the estimate for Dublin which emerged was £232·4 million, far in excess of the Table 2, col. 6 figure of £164·6 million. This excess was due to two factors: the propensity of residents in (*a*) other counties and (*b*) non-residents in the State to make retail purchases in Dublin. With so large an amount as £68 million to be redistributed we found it impossible to derive reasonably satisfactory distributors. According to one attempt it was assumed that half of the total £42·4 million of non-resident expenditure was spent in Dublin, the remaining £21·2 million being distributed amongst the other twenty-five counties proportionately to estimates based on data supplied

TABLE: COMPARISON OF CERTAIN MACRO-ESTIMATES WITH ANCILLARY SERIES

| County | Personal income *versus* | | Income arising *versus* | Non-agricultural employee remuneration arising *versus* | Other non-agricultural income arising *versus* | Farm income *versus* |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Carlow | — | — | — | — | — | — |
| Dublin | — | (*a*) | — | — | (*a*) | HH |
| Kildare | H | L | — | — | — | HH |
| Kilkenny | H | — | — | — | — | — |
| Laoighis | — | — | — | H | HH | L |
| Longford | — | — | LL | H | LL | LL |
| Louth | LL | L | — | LL | L | — |
| Meath | — | — | — | HH | LL | HH |
| Offaly | — | — | — | L | L | L |
| Westmeath | — | — | L | L | — | — |
| Wexford | L | LL | — | H | L | L |
| Wicklow | — | — | L | HH | LL | L |
| Clare | — | H | — | L | — | — |
| Cork | — | — | — | — | — | — |
| Kerry | H | HH | — | — | H | — |
| Limerick | — | — | — | H | H | H |
| Tipperary | — | H | — | — | L | H |
| Waterford | — | — | L | — | — | — |
| Galway | H | H | — | — | H | — |
| Leitrim | — | H | — | — | HH | L |
| Mayo | — | — | — | L | — | — |
| Roscommon | — | — | — | — | — | — |
| Sligo | — | — | — | — | HH | — |
| Cavan | — | — | — | — | HH | L |
| Donegal | L | — | — | — | L | L |
| Monaghan | — | L | — | — | H | LL |

*Notes to Table*

H (L)=high (low) for macro-estimates compared with test series A—E defined below. (*a*)=Dublin test figure made same as macro under test. Single letters H (L) mean that discrepancy is in the range 10–20%; double letters that discrepancy is over 20%, except for test series A when ranges are respectively 5–10% and over 10%, i.e., as indicated on the Chart.

Macro-estimates under test are as follows:—

Cols. 2–3: Table 2, col. 6.
Col. 4: Table 1, col. 20.
Col. 5: Table 1, col. 15.
Col. 6: Table 1, col. 16.
Col. 7: Table 4, cols. 11–12.

Test series are as follows:—

A: Principal component; *see* text and Appendix.
B: Personal income estimated from expenditure side; *see* text.
C: Rates paid; *see* text.
D: Employee remuneration in special groups, i.e., sum of Table 5 (col. 5), Table 6 (col. 6), Table 7B ((col. 13), Table 8B (col. 7).
E: Income tax Schedule A—D income assessed, based on Table 10, col. 6.
F: Regression estimate for farm income; *see* text.

by Bórd Fáilte and the Central Statistics Office. The residual £47 million was redistributed from Dublin amongst the counties using the distributor $p/d$, where $p$ is the county population and $d$ the distance from mid-county to Dublin City. It was the resulting estimate which was used for comparative purposes in col. 3 of the Table.

With regard to col. 4, the comparison may be regarded as somewhat anomalous, since the main purpose of the present series of estimates of income was just to ascertain if rates paid were high compared with income. The fact is, however, that rates paid as percentage of incomes arising exhibit a rather remarkable degree of constancy throughout the counties, as will appear from the local taxation paper to be published shortly. This particular comparison therefore finds its justification in pure empiricism.

Despite the many entries in col. 5, the result was rather satisfactory for us. Of course, the so-called "special groups", defined at the foot of the Table, were included in the corresponding macro, non-agricultural employee remuneration (Table 1, col. 15), so that the comparison really bore on employee compensation *not* in the special groups as a percentage of the amount in special groups. It may suffice to state that the four provincial percentages were practically identical: Leinster 73, Munster 73, Connacht 72, Ulster 75, national average 73. As will be apparent from the Notes, the county estimates for (*a*) employee remuneration not in the special groups and (*b*) the other (firm) constituent were

independently estimated, the former using expedients which, to say the least, required verification. Here again we find Louth making an exceptional showing, the percentage 43 being by far the lowest in the series.

With regard to col. 7, CSO kindly made available to us a series of estimates of farm (i.e. labour and family) income based on linear regression analysis of farms included in the National Farm Survey of 1955. Regression equations were determined for the Survey farms in each size-region cell with labour and family income per acre of crops and pasture as the dependent variable and, as independent variables, the density per acre of crops and pasture of ploughed land, milch cows, other cattle, pigs, sheep and poultry.* The average densities determined from the size group analysis of the 1960 Agricultural Statistics were inserted in these equations, using the equations for a particular region for all counties within that region. The resultant estimates of income per acre of crops and pasture, when multiplied by the appropriate total of crops and pasture for the cell and aggregated for all sizes within a county, yielded county estimates. These totals were then used as distributors to give the figures in the statement attached where they are compared with the estimates in the paper. The method of estimation produces results as at the cost/price structure existing in 1955–56 and tends to eliminate differences between counties within a region. Hence the best comparison is on a regional basis.†

From principal component analysis in conjunction with the showing of the Table generally we incline to the view that our estimates for Counties Louth and Wexford are too low and those for Kerry, Galway and Leitrim rather too high.

*The simple average of the $R^2$ for the 17 regression equations used was ·544. The linear regression, as representing the data, can therefore be regarded only as fair.

†Comparisons are as follows in three Survey regions :—

| | £ million | |
|---|---|---|
| *Region* 1 | A | B |
| Carlow | 2·29 | 2·31 |
| Dublin | 2·56 | 3·22 |
| Kildare | 3·45 | 4·32 |
| Laoighis | 3·71 | 3·28 |
| Longford | 2·10 | 1·60 |
| Louth | 2·10 | 1·91 |
| Meath | 5·02 | 6·21 |
| Offaly | 3·37 | 2·96 |
| Westmeath | 2·96 | 2·88 |
| Wexford | 6·14 | 5·39 |
| Wicklow | 2·79 | 2·36 |
| Galway | 8·19 | 8·68 |
| Roscommon | 4·07 | 4·09 |
| Total, Region 1 | 48·75 | 49·21 |

| | £ million | |
|---|---|---|
| *Region* 2 | A | B |
| Clare | 4·81 | 5·01 |
| Cork | 17·64 | 16·77 |
| Kerry | 7·58 | 8·11 |
| Limerick | 6·61 | 7·60 |
| Tipperary | 8·71 | 9·68 |
| Waterford | 3·59 | 3·68 |
| Kilkenny | 4·87 | 5·07 |
| Total Region 2 | 53·81 | 55·93 |
| *Region* 3 | | |
| Leitrim | 2·34 | 2·03 |
| Mayo | 6·74 | 6·45 |
| Sligo | 2·89 | 3·00 |
| Cavan | 4·02 | 3·36 |
| Donegal | 5·31 | 4·67 |
| Monaghan | 3·27 | 2·47 |
| Total, Region 3 | 24·56 | 21·98 |
| State | 127·12 | 127·12 |

A : Regression estimate. B : sum of cols. 11–12, Table 4.

## 6. *Conclusion*

It will be clear that formidable difficulties had to be surmounted to produce the estimates in Tables 1 and 2, if indeed these difficulties may be regarded as overcome. If experience shows that these statistics are useful then steps can be taken to improve their quality. It seems likely that the methodology used in this paper is sound enough; realistically one cannot conceive of any method which at one sweep would surmount all the difficulties; the method will always entail the setting together of many small pieces, as in the case of the national accounts themselves. At first sight it might appear that one or more of the following general approaches could be used :

1. Compilation of county incomes derived from a question about incomes on the Census of Population schedule;
2. Compilation of incomes from all sources assessed to income tax on a strictly residential basis by the Revenue Commissioners;
3. A sample Household Budget inquiry.

Unfortunately each of these sources is defective for the present purpose—which is not to say that the compilations would not be useful, indeed essentially useful, for other purposes—or for parts of an inquiry into county incomes. As to 1, experience elsewhere has indicated a tendency to understate income and in Ireland it is notorious that farmers have very imprecise ideas of what their incomes are. As to 2, the Revenue régime scarcely touches agriculture or non-agricultural incomes not assessable. As to 3, the inquiry would have to be on a very large scale to enable the authority to produce reliable county figures and these inquiries are very expensive; also, experience with the Irish inquiry of 1951–52 revealed a substantial and systematic tendency to understate income.

It has been noted that many of the distributors used for the present purpose were derived from the 1951 Census of Population. When the corresponding statistics from the 1961 Census become available we propose to revise the estimates in Tables 1 and 2. It is not expected that these will be significantly changed as a result; if they are, revised versions will be published.

Once series of statistics for county incomes have been set up for a particular year, say 1960, it will be a comparatively easy task to keep them up-to-date by the use of index numbers applied to the more important constituents in the aggregation; in fact one may place much more reliance on the year-to-year *changes* than on the absolute level of figures in any particular year.

# *List of Tables*



*Abbreviations*

BM: Bórd na Móna.
CIE: Córas Iompair Éireann.
CSO: Central Statistics Office.
ESB: Electricity Supply Board.
CIP: Census of Industrial Production.
CP: Census of Population.
ITJSB: Irish Trade Journal and Statistical Bulletin.
NIE: National Income and Expenditure.
SA: Statistical Abstract.

*See* Notes to Tables, pages 22-25, for definitions and methodology.

## TABLE 1: INCOME ARISING 1960 IN FIVE MAIN SECTORS DISTINGUISHING REMUNERATION OF EMPLOYEES AND OTHER INCOME

£ thousand

| County | 1. Agriculture, forestry, fishing | | | 2. Industry | | | 3. Distribution and transport | | | 4. Public administration and defence | 5. Other domestic (including rent) | | | 6. Total non-agricultural income arising (2—5) | | | 7. Total income arising (1+6) | | | County |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Remuneration of employees | Other income | Total income | Remuneration of employees | Other income | Total income | Remuneration of employees | Other income | Total income | Total income | Remuneration of employees | Other income | Total income | Remuneration of employees | Other income | Total income | Remuneration of employees | Other income | Total income | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| Carlow .. .. | 496 | 1,877 | 2,373 | 1,313 | 273 | 1,586 | 370 | 228 | 598 | 351 | 557 | 278 | 835 | 2,591 | 779 | 3,370 | 3,087 | 2,656 | 5,743 | Carlow |
| Dublin .. .. | 1,418 | 2,110 | 3,528 | 51,505 | 18,596 | 70,101 | 26,413 | 13,948 | 40,361 | 22,643 | 24,056 | 24,645 | 48,701 | 122,517 | 59,289 | 181,806 | 123,935 | 61,399 | 185,334 | Dublin |
| Kildare .. .. | 998 | 3,450 | 4,448 | 3,065 | 813 | 3,878 | 576 | 371 | 947 | 1,585 | 1,058 | 538 | 1,596 | 6,284 | 1,722 | 8,006 | 7,282 | 5,172 | 12,454 | Kildare |
| Kilkenny .. | 950 | 4,298 | 5,248 | 2,122 | 647 | 2,769 | 559 | 344 | 903 | 579 | 1,002 | 476 | 1,478 | 4,262 | 1,467 | 5,729 | 5,212 | 5,765 | 10,977 | Kilkenny |
| Laoighis .. | 639 | 2,819 | 3,458 | 1,336 | 536 | 1.872 | 418 | 233 | 651 | 514 | 643 | 331 | 974 | 2,911 | 1,100 | 4,011 | 3,550 | 3,919 | 7,469 | Laoighis |
| Longford .. | 235 | 1,428 | 1,663 | 472 | 172 | 644 | 246 | 169 | 415 | 280 | 420 | 199 | 619 | 1,418 | 540 | 1,958 | 1,653 | 1,968 | 3,621 | Longford |
| Louth .. .. | 563 | 1,477 | 2,040 | 4,644 | 1,366 | 6,010 | 1,343 | 617 | 1,960 | 693 | 1,157 | 699 | 1,856 | 7,837 | 2,682 | 10,519 | 8,400 | 4,159 | 12,559 | Louth |
| Meath .. .. | 1,308 | 5.110 | 6,418 | 1,583 | 622 | 2,205 | 480 | 303 | 783 | 541 | 999 | 436 | 1,435 | 3,603 | 1,361 | 4,964 | 4,911 | 6,471 | 11,382 | Meath |
| Offaly .. .. | 507 | 2,555 | 3,062 | 2,580 | 519 | 3,099 | 499 | 308 | 807 | 438 | 686 | 348 | 1,034 | 4,203 | 1,175 | 5,378 | 4,710 | 3,730 | 8,440 | Offaly |
| Westmeath .. | 516 | 2,485 | 3,001 | 1,221 | 373 | 1,594 | 677 | 318 | 995 | 1,302 | 814 | 445 | 1,259 | 4,014 | 1,136 | 5,150 | 4,530 | 3,621 | 8,151 | Westmeath |
| Wexford .. | 1,273 | 4,430 | 5,703 | 1,840 | 667 | 2,507 | 980 | 598 | 1,578 | 706 | 1,337 | 629 | 1,966 | 4,863 | 1,894 | 6,757 | 6,136 | 6,324 | 12,460 | Wexford |
| Wicklow .. | 793 | 1,925 | 2,718 | 2,160 | 806 | 2,966 | 702 | 421 | 1,123 | 369 | 1,291 | 793 | 2,084 | 4,522 | 2,020 | 6,542 | 5,315 | 3,945 | 9,260 | Wicklow |
| LEINSTER .. | 9,696 | 33,964 | 43,660 | 73,841 | 25,390 | 99,231 | 33,263 | 17,858 | 51,121 | 30,001 | 34,020 | 29,817 | 63,837 | 169,025 | 75,165 | 244,190 | 178,721 | 109,129 | 287,850 | LEINSTER |
| Clare .. .. | 476 | 4,711 | 5,187 | 978 | 300 | 1.278 | 403 | 408 | 811 | 917 | 925 | 505 | 1,430 | 3,223 | 1,213 | 4,436 | 3,699 | 5,924 | 9,623 | Clare |
| Cork .. .. | 2,708 | 14,984 | 17,692 | 14,528 | 4,507 | 19,035 | 6,049 | 3,062 | 9,111 | 3,848 | 6,679 | 4,531 | 11,210 | 31,104 | 12,100 | 43,204 | 33,812 | 27,084 | 60,896 | Cork |
| Kerry .. .. | 761 | 7,646 | 8,407 | 1,833 | 676 | 2,509 | 953 | 530 | 1,483 | 1,139 | 1.549 | 840 | 2,389 | 5,474 | 2,046 | 7,520 | 6,235 | 9,692 | 15,927 | Kerry |
| Limerick .. | 1,224 | 6,645 | 7,869 | 4,198 | 1,571 | 5,769 | 2,546 | 1,255 | 3,801 | 2,003 | 2,343 | 1,309 | 3,652 | 11,090 | 4,135 | 15,225 | 12,314 | 10,780 | 23,094 | Limerick |
| Tipperary .. | 1,615 | 8,430 | 10,045 | 3,828 | 1,177 | 5,005 | 1,203 | 772 | 1,975 | 1,322 | 1,913 | 942 | 2,855 | 8,266 | 2,891 | 11,157 | 9,881 | 11,321 | 21,202 | Tipperary |
| Waterford .. | 768 | 3,352 | 4,120 | 2,966 | 869 | 3,835 | 1,603 | 836 | 2,439 | 780 | 1,435 | 847 | 2,282 | 6,784 | 2,552 | 9,336 | 7,552 | 5,904 | 13,456 | Waterford |
| MUNSTER .. | 7,552 | 45,768 | 53,320 | 28,331 | 9,100 | 37,431 | 12,757 | 6,863 | 19,620 | 10,009 | 14,844 | 8,974 | 23,818 | 65,941 | 24,937 | 90,878 | 73,493 | 70,705 | 144,198 | MUNSTER |
| Galway .. .. | 917 | 8,250 | 9,167 | 2,508 | 736 | 3,244 | 1,268 | 780 | 2,048 | 2,317 | 2,254 | 1,437 | 3,691 | 8,347 | 2,953 | 11,300 | 9,264 | 11,203 | 20,467 | Galway |
| Leitrim .. | 193 | 1,920 | 2,113 | 487 | 196 | 683 | 189 | 152 | 341 | 336 | 399 | 234 | 633 | 1,411 | 582 | 1,993 | 1,604 | 2,502 | 4,106 | Leitrim |
| Mayo .. .. | 636 | 6,120 | 6,756 | 1,798 | 552 | 2,350 | 804 | 578 | 1,382 | 1,195 | 1,412 | 1,033 | 2,445 | 5,209 | 2,163 | 7,372 | 5,845 | 8,283 | 14,128 | Mayo |
| Roscommon .. | 335 | 3,885 | 4,220 | 796 | 218 | 1,014 | 322 | 246 | 568 | 661 | 744 | 466 | 1,210 | 2,523 | 930 | 3,453 | 2,858 | 4,815 | 7,673 | Roscommon |
| Sligo .. .. | 283 | 2,835 | 3,118 | 1,187 | 396 | 1,583 | 579 | 329 | 908 | 538 | 833 | 564 | 1,397 | 3,137 | 1,289 | 4,426 | 3,420 | 4,124 | 7,544 | Sligo |
| CONNACHT .. | 2,364 | 23,010 | 25,374 | 6,776 | 2,098 | 8,874 | 3,162 | 2,085 | 5,247 | 5,047 | 5,642 | 3,734 | 9,376 | 20,627 | 7,917 | 28,544 | 22,991 | 30,927 | 53,918 | CONNACHT |
| Cavan .. .. | 454 | 3,024 | 3,478 | 964 | 388 | 1,352 | 436 | 343 | 779 | 601 | 767 | 422 | 1,189 | 2,768 | 1,153 | 3,921 | 3,222 | 4,177 | 7,399 | Cavan |
| Donegal .. | 881 | 4 318 | 5,199 | 2,478 | 927 | 3,405 | 932 | 656 | 1,588 | 1,090 | 1,680 | 740 | 2,420 | 6,180 | 2,323 | 8,503 | 7,061 | 6,641 | 13,702 | Donegal |
| Monaghan .. | 353 | 2,216 | 2,569 | 910 | 397 | 1,307 | 450 | 295 | 745 | 652 | 747 | 413 | 1,160 | 2,759 | 1,105 | 3.864 | 3,112 | 3,321 | 6,433 | Monaghan |
| ULSTER (part) .. | 1,688 | 9,558 | 11,246 | 4,352 | 1,712 | 6,064 | 1,818 | 1,294 | 3,112 | 2,343 | 3,194 | 1,575 | 4,769 | 11,707 | 4,581 | 16,288 | 13,395 | 14,139 | 27,534 | ULSTER (part) |
| TOTAL .. .. | 21,300 | 112,300 | 133.600 | 113,300 | 38,300 | 151,600 | 51,000 | 28,100 | 79,100 | 47,400 | 57,700 | 44,100 | 101,800 | 267,300 | 112,600 | 379,900 | 288,600 | 224,900 | 513,500 | TOTAL |

TABLE 2: DERIVATION OF PERSONAL INCOME AND POPULATION, 1960

| County | Income arising | Emigrants' remittances | Social security and other transfer payments | Other adjustments | Personal income | Population |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | £000 | | | | | No. |
| Carlow | 5,743 | 103 | 575 | 764 | 7,185 | 33,461 |
| Dublin | 185,334 | 1,510 | 10,922 | −33,135 | 164,631 | 714,231 |
| Kildare | 12,454 | 81 | 986 | 1,182 | 14,703 | 64,673 |
| Kilkenny | 10,977 | 171 | 999 | 1,438 | 13,585 | 62,167 |
| Laoighis | 7,469 | 51 | 711 | 1,049 | 9,280 | 45,476 |
| Longford | 3,621 | 385 | 628 | 663 | 5,297 | 31,113 |
| Louth | 12,559 | 232 | 1,181 | −1,816 | 12,156 | 67,680 |
| Meath | 11,382 | 199 | 1,011 | 1,920 | 14,512 | 65,450 |
| Offaly | 8,440 | 155 | 763 | 962 | 10,320 | 51,631 |
| Westmeath | 8,151 | 247 | 949 | 1,495 | 10,842 | 53,055 |
| Wexford | 12,460 | 143 | 1,392 | 1,587 | 15,582 | 84,076 |
| Wicklow | 9,260 | 140 | 953 | 1,568 | 11,921 | 58,752 |
| LEINSTER | 287,850 | 3,417 | 21,070 | −22,323 | 290,014 | 1,331,765 |
| Clare | 9,623 | 452 | 1,280 | 1,080 | 12,435 | 74,418 |
| Cork | 60,896 | 1,583 | 5,044 | −1,622 | 65,901 | 331,485 |
| Kerry | 15,927 | 1,070 | 2,104 | 1,409 | 20,510 | 117,562 |
| Limerick | 23,094 | 717 | 2,464 | 1,120 | 27,395 | 134,024 |
| Tipperary | 21,202 | 513 | 2,155 | 2,554 | 26,424 | 124,932 |
| Waterford | 13,456 | 291 | 994 | 955 | 15,696 | 71,896 |
| MUNSTER | 144,198 | 4,626 | 14,041 | 5,496 | 168,361 | 854,317 |
| Galway | 20,467 | 1,072 | 2,654 | 2,757 | 26,950 | 150,982 |
| Leitrim | 4,106 | 479 | 630 | 494 | 5,709 | 34,193 |
| Mayo | 14,128 | 1,349 | 2,371 | 1,353 | 19,201 | 125,180 |
| Roscommon | 7,673 | 380 | 1,017 | 1,153 | 10,223 | 60,126 |
| Sligo | 7,544 | 283 | 908 | 726 | 9,461 | 54,227 |
| CONNACHT | 53,918 | 3,563 | 7,580 | 6,483 | 71,544 | 424,708 |
| Cavan | 7,399 | 483 | 993 | 584 | 9,459 | 57,638 |
| Donegal | 13,702 | 657 | 2,056 | 1,211 | 17,626 | 115,488 |
| Monaghan | 6,433 | 254 | 860 | 849 | 8,396 | 48,084 |
| ULSTER (part) | 27,534 | 1,394 | 3,909 | 2,644 | 35,481 | 221,210 |
| TOTAL | 513,500 | 13,000 | 46,600 | −7,700 | 565,400 | 2,832,000 |

TABLE 3: GROSS OUTPUT OF AGRICULTURE 1960, DISTINGUISHING PRINCIPAL PRODUCT GROUPS

£ thousand

| County | Cattle and calves | Milk and milk products | Eggs and poultry | Pigs | Sheep, lambs and wool | Other livestock and products | Total livestock and livestock products | Total crops, timber and turf | Value of changes in stock | Total gross output of agriculture | *Including consumption of own produce* | County |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Carlow .. | 897 | 307 | 203 | 401 | 457 | 59 | 2,324 | 1,505 | 26 | 3,855 | *334* | Carlow |
| Dublin .. | 812 | 851 | 190 | 815 | 206 | 385 | 3,259 | 1,861 | 28 | 5,148 | *486* | Dublin |
| Kildare .. | 1,839 | 936 | 229 | 298 | 429 | 602 | 4,333 | 2,159 | 48 | 6,540 | *610* | Kildare |
| Kilkenny .. | 2,066 | 1,467 | 426 | 957 | 367 | 153 | 5,436 | 2,635 | 62 | 8,133 | *636* | Kilkenny |
| Laoighis .. | 1,532 | 603 | 304 | 577 | 203 | 50 | 3,269 | 2,190 | 43 | 5,502 | *578* | Laoighis |
| Longford .. | 1,130 | 331 | 310 | 327 | 100 | 38 | 2,236 | 355 | 30 | 2,621 | *519* | Longford |
| Louth .. | 822 | 541 | 233 | 278 | 213 | 43 | 2,130 | 1,169 | 23 | 3,322 | *336* | Louth |
| Meath .. | 3,450 | 1,913 | 425 | 483 | 813 | 475 | 7,559 | 1,454 | 88 | 9,101 | *797* | Meath |
| Offaly .. | 1,639 | 588 | 306 | 482 | 242 | 45 | 3,302 | 1,672 | 43 | 5,017 | *757* | Offaly |
| Westmeath .. | 1,987 | 587 | 336 | 328 | 342 | 119 | 3,699 | 677 | 52 | 4,428 | *711* | Westmeath |
| Wexford .. | 1,855 | 1,138 | 517 | 1,122 | 779 | 168 | 5,579 | 3,819 | 61 | 9,459 | *818* | Wexford |
| Wicklow .. | 871 | 844 | 235 | 353 | 696 | 81 | 3,080 | 986 | 34 | 4,100 | *422* | Wicklow |
| LEINSTER .. | 18,900 | 10,106 | 3,714 | 6,421 | 4,847 | 2,218 | 46,206 | 20,482 | 538 | 67,226 | *7,004* | LEINSTER |
| Clare .. | 2,958 | 1,765 | 444 | 344 | 236 | 65 | 5,812 | 916 | 79 | 6,807 | *1,295* | Clare |
| Cork .. | 5,774 | 7,681 | 1,801 | 4,871 | 881 | 330 | 21,338 | 5,489 | 211 | 27,038 | *2,459* | Cork |
| Kerry .. | 2,520 | 4,258 | 732 | 1,515 | 644 | 23 | 9,692 | 1,484 | 98 | 11,274 | *1,926* | Kerry |
| Limerick .. | 2,824 | 4,757 | 509 | 1,249 | 75 | 252 | 9,666 | 724 | 97 | 10,487 | *1,197* | Limerick |
| Tipperary .. | 4,623 | 3,630 | 626 | 1,420 | 625 | 409 | 11,333 | 2,818 | 130 | 14,281 | *1,334* | Tipperary |
| Waterford .. | 1,502 | 1,530 | 266 | 736 | 297 | 127 | 4,458 | 1,304 | 47 | 5,809 | *461* | Waterford |
| MUNSTER .. | 20,201 | 23,621 | 4,378 | 10,135 | 2,758 | 1,206 | 62,299 | 12,735 | 662 | 75,696 | *8,682* | MUNSTER |
| Galway .. | 3,364 | 1,661 | 1,412 | 681 | 2,141 | 62 | 9,321 | 2,625 | 111 | 12,057 | *2,626* | Galway |
| Leitrim .. | 1,143 | 586 | 342 | 236 | 144 | 6 | 2,457 | 322 | 32 | 2,811 | *650* | Leitrim |
| Mayo .. | 2,980 | 1,346 | 1,087 | 580 | 928 | 36 | 6,957 | 1,741 | 90 | 8,788 | *2,637* | Mayo |
| Roscommon .. | 2,440 | 691 | 632 | 198 | 648 | 15 | 4,624 | 963 | 64 | 5,651 | *1,301* | Roscommon |
| Sligo .. | 1,545 | 925 | 397 | 249 | 266 | 23 | 3,405 | 606 | 42 | 4,053 | *897* | Sligo |
| CONNACHT .. | 11,472 | 5,209 | 3,870 | 1,944 | 4,127 | 142 | 26,764 | 6,257 | 339 | 33,360 | *8,111* | CONNACHT |
| Cavan .. | 1,560 | 1,326 | 681 | 1,108 | 136 | 18 | 4,829 | 496 | 54 | 5,379 | *822* | Cavan |
| Donegal .. | 1,770 | 923 | 708 | 293 | 985 | 12 | 4,691 | 2,370 | 64 | 7,125 | *1,925* | Donegal |
| Monaghan .. | 1,118 | 824 | 635 | 870 | 73 | 21 | 3,541 | 737 | 38 | 4,316 | *556* | Monaghan |
| ULSTER (part) | 4,448 | 3,073 | 2,024 | 2,271 | 1,194 | 51 | 13,061 | 3,603 | 156 | 16,820 | *3,303* | ULSTER (part) |
| TOTAL .. | 55,021 | 42,009 | 13,986 | 20,771 | 12,926 | 3,617 | 148,330 | 43,077 | 1,695 | 193,102 | *27,100* | TOTAL |

TABLE 4: DERIVATION OF AGRICULTURAL INCOME AND MALES ENGAGED IN AGRICULTURE, 1960

| County | Gross value of output | Non-labour costs | | | | | | Income arising in agriculture | Rent element in land annuities | Remuneration of employees | Family farm income | Males engaged in agriculture, 1 June 1960 | | | County |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Animal feed | Fertilisers and lime | Machinery | Rates | Misc. costs | Total | | | | | Members of family | Other males | Total | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | £000 | | | | | | | | | | | Number | | | |
| Carlow | 3,855 | 374 | 208 | 425 | 170 | 326 | 1,503 | 2,352 | 45 | 485 | 1,822 | 3,441 | 2,303 | 5,744 | Carlow |
| Dublin | 5,148 | 594 | 166 | 522 | 247 | 333 | 1,862 | 3,286 | 65 | 1,255 | 1,966 | 2,329 | 5,576 | 7,905 | Dublin |
| Kildare | 6,540 | 418 | 312 | 583 | 336 | 484 | 2,133 | 4,407 | 88 | 973 | 3,346 | 4,333 | 4,200 | 8,533 | Kildare |
| Kilkenny | 8,133 | 784 | 426 | 806 | 318 | 646 | 2,980 | 5,153 | 83 | 891 | 4,179 | 8,044 | 4,072 | 12,116 | Kilkenny |
| Laoighis | 5,502 | 533 | 313 | 627 | 225 | 470 | 2,168 | 3,334 | 59 | 539 | 2,736 | 6,516 | 2,554 | 9,070 | Laoighis |
| Longford | 2,621 | 381 | 108 | 144 | 171 | 173 | 977 | 1,644 | 45 | 222 | 1,377 | 5,941 | 1,161 | 7,102 | Longford |
| Louth | 3,322 | 305 | 174 | 415 | 187 | 279 | 1,360 | 1,962 | 49 | 532 | 1,381 | 3,351 | 2,505 | 5,856 | Louth |
| Meath | 9,101 | 810 | 350 | 559 | 463 | 590 | 2,772 | 6,329 | 122 | 1,303 | 4,904 | 8,100 | 5,722 | 13,822 | Meath |
| Offaly | 5,017 | 532 | 283 | 523 | 244 | 414 | 1,996 | 3,021 | 64 | 484 | 2,473 | 6,729 | 2,339 | 9,068 | Offaly |
| Westmeath | 4,428 | 489 | 146 | 217 | 323 | 289 | 1,464 | 2,964 | 84 | 502 | 2,378 | 6,746 | 2,412 | 9,158 | Westmeath |
| Wexford | 9,459 | 908 | 598 | 1,284 | 317 | 877 | 3,984 | 5,475 | 83 | 1,148 | 4,244 | 9,077 | 5,227 | 14,304 | Wexford |
| Wicklow | 4,100 | 428 | 217 | 471 | 227 | 335 | 1,678 | 2,422 | 59 | 545 | 1,818 | 4,135 | 2,511 | 6,646 | Wicklow |
| LEINSTER | 67,226 | 6 556 | 3,301 | 6,576 | 3,228 | 5,216 | 24,877 | 42,349 | 846 | 8,879 | 32,624 | 68,742 | 40,582 | 109,324 | LEINSTER |
| Clare | 6,807 | 554 | 227 | 204 | 319 | 406 | 1,710 | 5,097 | 83 | 429 | 4,585 | 14,426 | 2,131 | 16,557 | Clare |
| Cork | 27,038 | 3,570 | 1,359 | 2,012 | 1,044 | 2,014 | 9,999 | 17,039 | 273 | 2,362 | 14,404 | 29,662 | 10,809 | 40,471 | Cork |
| Kerry | 11,274 | 1,222 | 367 | 485 | 308 | 703 | 3,085 | 8,189 | 81 | 652 | 7,456 | 19,048 | 3,248 | 22,296 | Kerry |
| Limerick | 10,487 | 1,068 | 286 | 385 | 449 | 578 | 2,766 | 7,721 | 118 | 1,168 | 6,435 | 12,283 | 5,515 | 17,798 | Limerick |
| Tipperary | 14,281 | 1,303 | 610 | 913 | 635 | 970 | 4,431 | 9,850 | 166 | 1,475 | 8,209 | 15,583 | 6,802 | 22,385 | Tipperary |
| Waterford | 5,809 | 579 | 287 | 398 | 327 | 449 | 2,040 | 3,769 | 86 | 577 | 3,106 | 5,141 | 2,609 | 7,750 | Waterford |
| MUNSTER | 75,696 | 8,296 | 3,136 | 4,397 | 3,082 | 5,120 | 24,031 | 51,665 | 807 | 6,663 | 44,195 | 96,143 | 31,114 | 127,257 | MUNSTER |
| Galway | 12,057 | 949 | 494 | 447 | 511 | 845 | 3,246 | 8,811 | 134 | 704 | 7,973 | 29,191 | 3,619 | 32,810 | Galway |
| Leitrim | 2,811 | 284 | 47 | 141 | 114 | 161 | 747 | 2,064 | 30 | 162 | 1,872 | 8,970 | 878 | 9,848 | Leitrim |
| Mayo | 8,788 | 773 | 319 | 302 | 284 | 583 | 2,261 | 6,527 | 74 | 524 | 5,929 | 26,926 | 2,787 | 29,713 | Mayo |
| Roscommon | 5,651 | 437 | 206 | 198 | 285 | 355 | 1,481 | 4,170 | 75 | 319 | 3,776 | 14,502 | 1,565 | 16,067 | Roscommon |
| Sligo | 4,053 | 339 | 107 | 163 | 165 | 239 | 1,013 | 3,040 | 43 | 242 | 2,755 | 9,820 | 1,220 | 11,040 | Sligo |
| CONNACHT | 33,360 | 2,782 | 1,173 | 1,251 | 1,359 | 2,183 | 8,748 | 24,612 | 356 | 1,951 | 22,305 | 89,409 | 10,069 | 99,478 | CONNACHT |
| Cavan | 5,379 | 825 | 197 | 343 | 233 | 359 | 1,957 | 3,422 | 61 | 430 | 2,931 | 12,197 | 2,216 | 14,413 | Cavan |
| Donegal | 7,125 | 486 | 279 | 703 | 303 | 602 | 2,373 | 4,752 | 79 | 642 | 4,031 | 18,928 | 3,319 | 22,247 | Donegal |
| Monaghan | 4,316 | 641 | 189 | 430 | 195 | 344 | 1,799 | 2,517 | 51 | 335 | 2,131 | 8,948 | 1,748 | 10,696 | Monaghan |
| ULSTER (part) | 16,820 | 1,952 | 665 | 1,476 | 731 | 1,305 | 6,129 | 10,691 | 191 | 1,407 | 9,093 | 40,073 | 7,283 | 47,356 | ULSTER (part) |
| TOTAL | 193,102 | 19,586 | 8,275 | 13,700 | 8,400 | 13,824 | 63,785 | 129,317 | 2,200 | 18,900 | 108,217 | 294,367 | 89,048 | 383,415 | TOTAL |

TABLE 5: PARTICULARS FROM CENSUS OF INDUSTRIAL PRODUCTION 1958

| County | Gross output | Materials, etc. used | Net output | Employee remuneration | Remainder of net output | Average number engaged | Net output per person engaged |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | £000 | | | | | No. | £ |
| Carlow | 5,280 | 4,040 | 1,240 | 830 | 410 | 1,840 | 674 |
| Dublin | 173,877 | 111,975 | 61,902 | 33,228 | 28,674 | 82,144 | 754 |
| Kildare | 7,458 | 5,112 | 2,346 | 1,146 | 1,200 | 3,041 | 772 |
| Kilkenny | 8,570 | 6,568 | 2,002 | 1,182 | 820 | 2,931 | 683 |
| Laoighis | 3,288 | 2,485 | 803 | 465 | 338 | 1,331 | 603 |
| Longford | 475 | 285 | 190 | 119 | 71 | 403 | 472 |
| Louth | 23,369 | 17,205 | 6,164 | 2,950 | 3,214 | 7,672 | 803 |
| Meath | 2,633 | 1,547 | 1,086 | 614 | 472 | 1,956 | 555 |
| Offaly | 6,198 | 4,981 | 1,217 | 825 | 392 | 2,482 | 490 |
| Westmeath | 2,239 | 1,439 | 800 | 463 | 337 | 1,421 | 563 |
| Wexford | 5,439 | 3,663 | 1,776 | 963 | 813 | 2,622 | 677 |
| Wicklow | 3,215 | 1,845 | 1,370 | 920 | 450 | 2,617 | 524 |
| LEINSTER | 242,041 | 161,145 | 80,896 | 43,705 | 37,191 | 110,460 | 732 |
| Clare | 2,715 | 2,090 | 625 | 354 | 271 | 1,101 | 568 |
| Cork | 62,779 | 45,166 | 17,613 | 9,382 | 8,231 | 23,061 | 764 |
| Kerry | 8,741 | 7,498 | 1,243 | 719 | 524 | 1,945 | 639 |
| Limerick | 19,156 | 15,321 | 3,835 | 2,067 | 1,768 | 5,383 | 712 |
| Tipperary | 18,068 | 14,505 | 3,563 | 2,023 | 1,540 | 5,005 | 712 |
| Waterford | 10,229 | 7,418 | 2,811 | 1,601 | 1,210 | 4,341 | 648 |
| MUNSTER | 121,688 | 91,998 | 29,690 | 16,146 | 13,544 | 40,836 | 727 |
| Galway | 4,786 | 3,328 | 1,458 | 987 | 471 | 2,805 | 520 |
| Leitrim | 766 | 570 | 196 | 107 | 89 | 372 | 527 |
| Mayo | 6,067 | 4,669 | 1,398 | 823 | 575 | 2,562 | 546 |
| Roscommon | 1,142 | 856 | 286 | 211 | 75 | 632 | 453 |
| Sligo | 3,629 | 2,790 | 839 | 483 | 356 | 1,434 | 585 |
| CONNACHT | 16,390 | 12,213 | 4,177 | 2,611 | 1,566 | 7,805 | 535 |
| Cavan | 4,240 | 3,371 | 869 | 414 | 455 | 1,209 | 719 |
| Donegal | 5,727 | 4,046 | 1,681 | 996 | 685 | 3,350 | 502 |
| Monaghan | 3,126 | 2,357 | 769 | 433 | 336 | 1,318 | 584 |
| ULSTER (part) | 13,093 | 9,774 | 3,319 | 1,843 | 1,476 | 5,877 | 565 |
| TOTAL | 393,212 | 275,130 | 118,082 | 64,305 | 53,777 | 164,978 | 716 |

TABLE 6: PARTICULARS OF RETAIL TRADE FROM CENSUS OF DISTRIBUTION 1956

| County | Sales | Purchases | Change in stock | Gross margin | Employee remuneration | Persons Engaged | | | Gross margin per person engaged | Employee remuneration per employee |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Paid employees | Other | Total engaged | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | £000 | | | | | No. | | | £ | |
| Carlow .. | 2,962 | 2,468 | −20 | 473 | 196 | 845 | 541 | 1,386 | 341 | 232 |
| Dublin .. | 89,424 | 71,581 | +347 | 18,190 | 8,627 | 25,907 | 6,157 | 32,064 | 567 | 333 |
| Kildare .. .. | 4,803 | 4,056 | −6 | 742 | 260 | 1,173 | 904 | 2,077 | 357 | 222 |
| Kilkenny .. | 4,321 | 3,623 | +13 | 711 | 266 | 1,175 | 1,109 | 2,284 | 311 | 226 |
| Laoighis .. | 3,128 | 2,636 | +6 | 498 | 195 | 816 | 791 | 1,607 | 310 | 239 |
| Longford .. | 1,960 | 1,673 | +10 | 297 | 106 | 492 | 535 | 1,027 | 289 | 215 |
| Louth .. .. | 7,059 | 5,828 | +28 | 1,258 | 537 | 1,971 | 1,075 | 3,046 | 413 | 272 |
| Meath .. .. | 3,356 | 2,815 | +15 | 556 | 191 | 929 | 773 | 1,702 | 327 | 206 |
| Offaly .. .. | 3,817 | 3,197 | +13 | 634 | 243 | 1,016 | 739 | 1,755 | 361 | 239 |
| Westmeath .. | 3,822 | 3,144 | +21 | 700 | 283 | 1,130 | 860 | 1,990 | 352 | 250 |
| Wexford .. | 8,231 | 7,053 | +45 | 1,223 | 480 | 2,134 | 1,475 | 3,609 | 339 | 225 |
| Wicklow .. | 4,865 | 4,042 | +27 | 850 | 324 | 1,341 | 904 | 2,245 | 379 | 242 |
| LEINSTER .. | 137,748 | 112,117 | +499 | 26,130 | 11,708 | 38,929 | 15,863 | 54,972 | 475 | 301 |
| Clare .. .. | 3,460 | 2,787 | +60 | 732 | 153 | 691 | 1,686 | 2,377 | 308 | 221 |
| Cork .. .. | 28,402 | 23,638 | +117 | 4,880 | 2,025 | 7,672 | 6,352 | 14,024 | 348 | 264 |
| Kerry .. .. | 6,341 | 5,298 | +51 | 1,095 | 372 | 1,600 | 2,450 | 4,050 | 270 | 233 |
| Limerick .. | 10,786 | 8,846 | +18 | 1,957 | 804 | 3,011 | 2,578 | 5,589 | 350 | 267 |
| Tipperary .. | 9,226 | 7,694 | +12 | 1,544 | 537 | 2,414 | 2,721 | 5,135 | 301 | 222 |
| Waterford .. | 7,526 | 6,118 | +41 | 1,449 | 586 | 2,119 | 1,289 | 3,408 | 425 | 277 |
| MUNSTER .. | 65,741 | 54,382 | +299 | 11,658 | 4,477 | 17,507 | 17,076 | 34,583 | 337 | 256 |
| Galway .. .. | 8,972 | 7,409 | +47 | 1,610 | 546 | 2,227 | 2,470 | 4,697 | 343 | 245 |
| Leitrim .. | 1,885 | 1,597 | +4 | 292 | 84 | 417 | 700 | 1,117 | 261 | 201 |
| Mayo .. .. | 6,758 | 5,662 | +24 | 1,120 | 337 | 1,522 | 2,324 | 3,846 | 291 | 221 |
| Roscommon .. | 2,821 | 2,375 | — | 447 | 132 | 651 | 1,033 | 1,684 | 265 | 203 |
| Sligo .. .. | 3,535 | 2,945 | +6 | 596 | 221 | 922 | 942 | 1,864 | 320 | 240 |
| CONNACHT .. | 23,972 | 19,988 | +81 | 4,064 | 1,320 | 5,739 | 7,469 | 13,208 | 308 | 230 |
| Cavan .. .. | 4,452 | 3,773 | −3 | 675 | 216 | 1,030 | 1,166 | 2,196 | 307 | 210 |
| Donegal .. | 7,478 | 6,290 | +20 | 1,208 | 374 | 1,725 | 2,003 | 3,728 | 324 | 217 |
| Monaghan .. | 3,960 | 3,440 | +31 | 551 | 202 | 898 | 800 | 1,698 | 324 | 225 |
| ULSTER (part) | 15,890 | 13,504 | +48 | 2,434 | 792 | 3,653 | 3,969 | 7,622 | 319 | 217 |
| TOTAL .. | 243,351 | 199,992 | +927 | 44,286 | 18,297 | 65,828 | 44,377 | 110,205 | 402 | 278 |

## Table 7: Central and Local Government 1958/59

### Average Number of Employees and Employee Remuneration

| County | Dept. of Justice (incl. Gardai) | Dept. of Defence | Dept. of Posts and Telegraphs | All other Central Govt. employees (except N.T.) | Total Central Govt. | Total Local Govt. | Central and Local Govt. |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | A. Average Number of Employees | | | | | | |
| Carlow | 67 | 12 | 164 | 59 | 302 | 607 | 909 |
| Dublin | 3,263 | 4,368 | 5,809 | 9,732 | 23,172 | 9,681 | 32,853 |
| Kildare | 88 | 2,483 | 251 | 152 | 2,974 | 872 | 3,846 |
| Kilkenny | 113 | 29 | 242 | 122 | 506 | 1,127 | 1,633 |
| Laoighis | 133 | 7 | 229 | 102 | 471 | 1,005 | 1,476 |
| Longford | 76 | 6 | 129 | 119 | 330 | 612 | 942 |
| Louth | 150 | 15 | 307 | 237 | 709 | 952 | 1,661 |
| Meath | 84 | 120 | 271 | 167 | 642 | 937 | 1,579 |
| Offaly | 85 | 13 | 186 | 220 | 504 | 813 | 1,317 |
| Westmeath | 91 | 1,100 | 335 | 226 | 1,752 | 1,248 | 3,000 |
| Wexford | 160 | 8 | 393 | 363 | 924 | 1,276 | 2,200 |
| Wicklow | 130 | 30 | 315 | 148 | 623 | 827 | 1,450 |
| Leinster | 4,440 | 8,191 | 8,631 | 11,647 | 32,909 | 19,957 | 52,866 |
| Clare | 174 | 14 | 340 | 612 | 1,140 | 1,509 | 2,649 |
| Cork | 642 | 2,004 | 1,639 | 870 | 5,155 | 5,087 | 10,242 |
| Kerry | 218 | 21 | 506 | 625 | 1,370 | 1,837 | 3,207 |
| Limerick | 283 | 346 | 667 | 611 | 1,907 | 2,085 | 3,992 |
| Tipperary | 266 | 325 | 648 | 395 | 1,634 | 1,868 | 3,502 |
| Waterford | 145 | 9 | 366 | 194 | 714 | 1,236 | 1,950 |
| Munster | 1,728 | 2,719 | 4,166 | 3,307 | 11,920 | 13,622 | 25,542 |
| Galway | 284 | 232 | 635 | 1,498 | 2,649 | 3,174 | 5,823 |
| Leitrim | 86 | 7 | 200 | 220 | 513 | 717 | 1,230 |
| Mayo | 238 | 10 | 639 | 962 | 1,849 | 1,285 | 3,134 |
| Roscommon | 113 | 12 | 291 | 318 | 734 | 1,280 | 2,014 |
| Sligo | 104 | 4 | 306 | 311 | 725 | 857 | 1,582 |
| Connacht | 825 | 265 | 2,071 | 3,309 | 6,470 | 7,313 | 13,783 |
| Cavan | 176 | 8 | 305 | 347 | 836 | 924 | 1,760 |
| Donegal | 274 | 53 | 573 | 665 | 1,565 | 2,021 | 3,586 |
| Monaghan | 195 | 2 | 251 | 120 | 568 | 1,173 | 1,741 |
| Ulster (part) | 645 | 63 | 1,129 | 1,132 | 2,969 | 4,118 | 7,087 |
| Total | 7,638 | 11,238 | 15,997 | 19,395 | 54,268 | 45,010 | 99,278 |
| | B. Employee Remuneration (£000) | | | | | | |
| Carlow | 37 | 2 | 64 | 24 | 127 | 246 | 373 |
| Dublin | 1,570 | 1,813 | 2,892 | 6,211 | 12,486 | 4,839 | 17,325 |
| Kildare | 48 | 813 | 91 | 51 | 1,003 | 319 | 1,322 |
| Kilkenny | 60 | 14 | 83 | 52 | 209 | 441 | 650 |
| Laoighis | 69 | 4 | 84 | 31 | 188 | 333 | 521 |
| Longford | 41 | 4 | 44 | 38 | 127 | 200 | 327 |
| Louth | 76 | 6 | 124 | 119 | 325 | 357 | 682 |
| Meath | 47 | 35 | 89 | 56 | 227 | 396 | 623 |
| Offaly | 46 | 5 | 62 | 75 | 188 | 276 | 464 |
| Westmeath | 50 | 397 | 115 | 88 | 650 | 485 | 1,135 |
| Wexford | 86 | 3 | 128 | 144 | 361 | 385 | 746 |
| Wicklow | 68 | 20 | 106 | 75 | 269 | 270 | 539 |
| Leinster | 2,198 | 3,116 | 3,882 | 6,964 | 16,160 | 8,547 | 24,707 |
| Clare | 93 | 5 | 116 | 250 | 464 | 510 | 974 |
| Cork | 338 | 725 | 670 | 405 | 2,138 | 1,723 | 3,861 |
| Kerry | 120 | 8 | 176 | 220 | 524 | 637 | 1,161 |
| Limerick | 134 | 125 | 282 | 344 | 885 | 816 | 1,701 |
| Tipperary | 142 | 105 | 214 | 169 | 630 | 821 | 1,451 |
| Waterford | 77 | 4 | 145 | 99 | 325 | 508 | 833 |
| Munster | 904 | 972 | 1,603 | 1,487 | 4,966 | 5,015 | 9,981 |
| Galway | 163 | 81 | 233 | 512 | 989 | 1,230 | 2,219 |
| Leitrim | 43 | 2 | 73 | 57 | 175 | 215 | 390 |
| Mayo | 125 | 7 | 208 | 270 | 610 | 571 | 1,181 |
| Roscommon | 63 | 6 | 95 | 88 | 252 | 409 | 661 |
| Sligo | 55 | 3 | 102 | 100 | 260 | 305 | 565 |
| Connacht | 449 | 99 | 711 | 1,027 | 2,286 | 2,730 | 5,016 |
| Cavan | 88 | 3 | 106 | 114 | 311 | 315 | 626 |
| Donegal | 134 | 16 | 195 | 242 | 587 | 584 | 1,171 |
| Monaghan | 95 | 1 | 83 | 47 | 226 | 357 | 583 |
| Ulster (part) | 317 | 20 | 384 | 403 | 1,124 | 1,256 | 2,380 |
| Total | 3,868 | 4,207 | 6,580 | 9,881 | 24,536 | 17,548 | 42,084 |

TABLE 8 : AVERAGE NUMBER OF EMPLOYEES AND EMPLOYEE REMUNERATION IN CERTAIN GROUPS 1958

| County | E.S.B. | Bord na Móna | C.I.E. | Banks | National teachers | Total |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| | A. AVERAGE NUMBER OF EMPLOYEES | | | | | |
| Carlow .. .. .. | 20 | — | 87 | 64 | 121 | 292 |
| Dublin .. .. .. | 2,885 | 198 | 12,315 | 2,442 | 2,080 | 19,920 |
| Kildare .. .. .. | 143 | 1,486 | 412 | 74 | 216 | 2,331 |
| Kilkenny .. .. | 63 | — | 165 | 73 | 255 | 556 |
| Laoighis .. .. .. | 250 | 1 | 241 | 65 | 179 | 736 |
| Longford .. .. | 36 | — | 135 | 53 | 138 | 362 |
| Louth .. .. .. | 199 | — | 2,566 | 106 | 277 | 3,148 |
| Meath .. .. .. | 102 | 188 | 263 | 79 | 274 | 906 |
| Offaly .. .. .. | 245 | 1,499 | 176 | 74 | 205 | 2,199 |
| Westmeath .. .. | 180 | 144 | 586 | 77 | 219 | 1,206 |
| Wexford .. .. .. | 38 | — | 359 | 117 | 324 | 838 |
| Wicklow .. .. .. | 21 | — | 301 | 79 | 234 | 635 |
| LEINSTER .. .. | 4,182 | 3,516 | 17,606 | 3,303 | 4,522 | 33,129 |
| Clare .. .. .. | 220 | — | 236 | 94 | 354 | 904 |
| Cork .. .. .. | 846 | — | 2,633 | 663 | 1,178 | 5,320 |
| Kerry .. .. .. | 247 | 84 | 796 | 139 | 615 | 1,881 |
| Limerick .. .. | 492 | — | 1,614 | 204 | 484 | 2,794 |
| Tipperary .. .. | 59 | 303 | 643 | 209 | 494 | 1,708 |
| Waterford .. .. | 291 | — | 884 | 118 | 243 | 1,536 |
| MUNSTER .. .. | 2,155 | 387 | 6,806 | 1,427 | 3,368 | 14,143 |
| Galway .. .. .. | 161 | 130 | 643 | 168 | 704 | 1,806 |
| Leitrim .. .. .. | 50 | — | 176 | 57 | 212 | 495 |
| Mayo .. .. .. | 130 | 131 | 530 | 134 | 683 | 1,608 |
| Roscommon .. .. | 38 | 293 | 121 | 74 | 308 | 834 |
| Sligo .. .. .. | 235 | — | 355 | 67 | 274 | 931 |
| CONNACHT .. .. | 614 | 554 | 1,825 | 500 | 2,181 | 5,674 |
| Cavan .. .. .. | 68 | — | 217 | 86 | 336 | 707 |
| Donegal .. .. | 367 | 47 | 216 | 128 | 703 | 1,461 |
| Monaghan .. .. | 66 | — | 189 | 78 | 284 | 617 |
| ULSTER (part) .. | 501 | 47 | 622 | 292 | 1,323 | 2,785 |
| TOTAL NO. .. .. | 7,452 | 4,504 | 26,859 | 5,522 | 11,394 | 55,731 |
| | B. EMPLOYEE REMUNERATION (£000) | | | | | |
| Carlow .. .. .. | 9 | — | 34 | 45 | 87 | 175 |
| Dublin .. .. .. | 1,857 | 145 | 5,848 | 1,641 | 1,487 | 10,978 |
| Kildare .. .. .. | 73 | 630 | 137 | 58 | 172 | 1,070 |
| Kilkenny .. .. | 26 | — | 60 | 57 | 189 | 332 |
| Laoighis .. .. .. | 141 | 1 | 72 | 49 | 124 | 387 |
| Longford .. .. | 19 | — | 40 | 39 | 95 | 193 |
| Louth .. .. .. | 110 | — | 950 | 80 | 178 | 1,318 |
| Meath .. .. .. | 39 | 73 | 74 | 59 | 185 | 430 |
| Offaly .. .. .. | 125 | 646 | 75 | 60 | 147 | 1,053 |
| Westmeath .. .. | 93 | 51 | 255 | 54 | 155 | 608 |
| Wexford .. .. .. | 19 | — | 169 | 85 | 232 | 505 |
| Wicklow .. .. .. | 11 | — | 114 | 59 | 154 | 338 |
| LEINSTER .. .. | 2,522 | 1,546 | 7,828 | 2,286 | 3,205 | 17,387 |
| Clare .. .. .. | 99 | — | 81 | 70 | 239 | 489 |
| Cork .. .. .. | 426 | — | 1,116 | 506 | 886 | 2,934 |
| Kerry .. .. .. | 121 | 32 | 274 | 105 | 394 | 926 |
| Limerick .. .. | 262 | — | 651 | 154 | 384 | 1,451 |
| Tipperary .. .. | 29 | 124 | 225 | 161 | 372 | 911 |
| Waterford .. .. | 146 | — | 360 | 90 | 195 | 791 |
| MUNSTER .. .. | 1,083 | 156 | 2,707 | 1,086 | 2,470 | 7,502 |
| Galway .. .. .. | 89 | 47 | 277 | 125 | 503 | 1,041 |
| Leitrim .. .. .. | 29 | — | 45 | 44 | 120 | 238 |
| Mayo .. .. .. | 57 | 52 | 200 | 104 | 436 | 849 |
| Roscommon .. .. | 20 | 127 | 51 | 55 | 207 | 460 |
| Sligo .. .. .. | 123 | — | 128 | 50 | 176 | 477 |
| CONNACHT .. .. | 318 | 226 | 701 | 378 | 1,442 | 3,065 |
| Cavan .. .. .. | 27 | — | 49 | 69 | 195 | 340 |
| Donegal .. .. | 176 | 19 | 72 | 95 | 673 | 1,035 |
| Monaghan .. .. | 26 | — | 63 | 60 | 162 | 311 |
| ULSTER (part) .. | 229 | 19 | 184 | 224 | 1,030 | 1,686 |
| TOTAL VALUE .. | 4,152 | 1,947 | 11,420 | 3,974 | 8,147 | 29,640 |

TABLE 9: SOCIAL WELFARE PAYMENTS 1958/59

£ thousand

| County | Old age and blind pensions | Children's allowances | Disability benefit | Unemployment assistance and benefit | Widows' pensions and orphans' allowances | Home assistance | All other payments | Total social welfare payments |
|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9* |
| Carlow | 111 | 92 | 74 | 37 | 40 | 9 | 4 | 367 |
| Dublin | 1,364 | 1,626 | 1,017 | 1,202 | 926 | 152 | 309 | 6,596 |
| Kildare | 162 | 195 | 89 | 45 | 69 | 17 | 5 | 582 |
| Kilkenny | 213 | 166 | 92 | 50 | 60 | 21 | 8 | 610 |
| Laoighis | 166 | 119 | 76 | 24 | 46 | 9 | 4 | 444 |
| Longford | 161 | 83 | 53 | 65 | 43 | 7 | 3 | 416 |
| Louth | 209 | 170 | 108 | 148 | 99 | 16 | 19 | 769 |
| Meath | 207 | 170 | 90 | 50 | 67 | 14 | 5 | 603 |
| Offaly | 178 | 138 | 72 | 55 | 56 | 11 | 9 | 518 |
| Westmeath | 190 | 146 | 87 | 60 | 72 | 12 | 6 | 572 |
| Wexford | 323 | 224 | 169 | 110 | 106 | 23 | 15 | 969 |
| Wicklow | 176 | 152 | 108 | 79 | 71 | 13 | 11 | 610 |
| LEINSTER | 3,460 | 3,281 | 2,035 | 1,925 | 1,655 | 304 | 398 | 13,056 |
| Clare | 386 | 187 | 84 | 88 | 80 | 12 | 5 | 843 |
| Cork | 1,232 | 757 | 524 | 389 | 403 | 72 | 78 | 3,455 |
| Kerry | 594 | 297 | 157 | 275 | 125 | 29 | 11 | 1,489 |
| Limerick | 442 | 370 | 209 | 293 | 163 | 13 | 24 | 1,514 |
| Tipperary | 459 | 332 | 169 | 143 | 143 | 49 | 12 | 1,306 |
| Waterford | 257 | 170 | 104 | 107 | 91 | 36 | 18 | 783 |
| MUNSTER | 3,370 | 2,113 | 1,247 | 1,295 | 1,005 | 211 | 148 | 9,390 |
| Galway | 693 | 413 | 142 | 235 | 154 | 32 | 20 | 1,690 |
| Leitrim | 222 | 83 | 44 | 64 | 56 | 5 | 2 | 477 |
| Mayo | 796 | 338 | 120 | 344 | 164 | 26 | 10 | 1,798 |
| Roscommon | 363 | 142 | 62 | 82 | 73 | 11 | 2 | 735 |
| Sligo | 297 | 129 | 53 | 74 | 69 | 12 | 5 | 638 |
| CONNACHT | 2,371 | 1,105 | 421 | 799 | 516 | 86 | 39 | 5,338 |
| Cavan | 316 | 147 | 72 | 64 | 79 | 8 | 4 | 689 |
| Donegal | 622 | 303 | 133 | 369 | 148 | 13 | 14 | 1,602 |
| Monaghan | 220 | 122 | 66 | 52 | 66 | 4 | 3 | 534 |
| ULSTER (part) | 1,158 | 572 | 271 | 485 | 293 | 25 | 21 | 2,825 |
| TOTAL | 10,359 | 7,071 | 3,974 | 4,504 | 3,469 | 626 | 606 | 30,609 |

*Figures in col. 9 may differ in some cases from the total of cols. 2-8 because of rounding to nearest £1,000.

TABLE 10: INCOME CHARGED TO INCOME TAX AND YIELD OF TAX

£ thousand

| County | Assessment year 1961–62 | | | Income arising 1960–61 | | | Total taxes on personal income |
|---|---|---|---|---|---|---|---|
| | Tax on salaries, wages, etc. | Profits | | Salaries, wages, etc. | All other | Total income assessed | |
| | | Tax | Income assessed | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Carlow | 34 | 67 | 625 | 470 | 809 | 1,279 | 293 |
| Dublin | 6,846 | 10,544 | 75,148 | 80,319 | 79,039 | 159,358 | 12,771 |
| Kildare | 70 | 150 | 1,392 | 1,788 | 1,747 | 3,535 | 616 |
| Kilkenny | 68 | 110 | 1,213 | 891 | 1,579 | 2,470 | 503 |
| Laoighis | 34 | 63 | 647 | 538 | 888 | 1,426 | 350 |
| Longford | 33 | 80 | 633 | 460 | 778 | 1,238 | 255 |
| Louth | 196 | 344 | 2,743 | 2,264 | 3,048 | 5,312 | 597 |
| Meath | 38 | 154 | 1,355 | 620 | 1,862 | 2,482 | 652 |
| Offaly | 50 | 121 | 1,100 | 692 | 1,349 | 2,041 | 462 |
| Westmeath | 40 | 97 | 958 | 1,106 | 1,277 | 2,383 | 501 |
| Wexford | 84 | 194 | 1,838 | 1,215 | 2,246 | 3,461 | 638 |
| Wicklow | 77 | 245 | 2,371 | 1,045 | 2,694 | 3,739 | 669 |
| LEINSTER | 7,570 | 12,169 | 90,023 | 91,408 | 97,316 | 188,724 | 18,307 |
| Clare | 42 | 78 | 856 | 919 | 1,176 | 2,095 | 382 |
| Cork | 1,186 | 1,474 | 11,298 | 13,888 | 12,847 | 26,735 | 2,766 |
| Kerry | 83 | 132 | 1,477 | 1,385 | 1,826 | 3,211 | 555 |
| Limerick | 201 | 329 | 3,004 | 2,929 | 3,641 | 6,570 | 1,027 |
| Tipperary | 201 | 308 | 2,902 | 2,648 | 3,595 | 6,243 | 1,049 |
| Waterford | 101 | 221 | 1,951 | 1,340 | 2,352 | 3,692 | 678 |
| MUNSTER | 1,814 | 2,542 | 21,488 | 23,109 | 25,437 | 48,546 | 6,457 |
| Galway | 119 | 193 | 2,029 | 2,246 | 2,592 | 4,838 | 930 |
| Leitrim | 17 | 28 | 321 | 357 | 449 | 806 | 163 |
| Mayo | 56 | 178 | 1,792 | 1,217 | 2,155 | 3,372 | 604 |
| Roscommon | 26 | 58 | 633 | 530 | 909 | 1,439 | 344 |
| Sligo | 51 | 76 | 821 | 782 | 1,044 | 1,826 | 321 |
| CONNACHT | 269 | 533 | 5,596 | 5,132 | 7,149 | 12,281 | 2,362 |
| Cavan | 39 | 57 | 694 | 722 | 949 | 1,671 | 272 |
| Donegal | 67 | 237 | 2,495 | 1,298 | 2,841 | 4,139 | 686 |
| Monaghan | 43 | 65 | 704 | 668 | 958 | 1,626 | 316 |
| ULSTER (part) | 149 | 359 | 3,893 | 2,688 | 4,748 | 7,436 | 1,274 |
| TOTAL | 9,802 | 15,603 | 121,000 | 122,337 | 134,650 | 256,987 | 28,400 |

TABLE 11: CERTAIN ECONOMIC STATUS INDICATORS

| County | Per 1000 population 1960 | | | | Per 1000 gainfully occupied 1951 | | 7. Pop. 1961 as percentage pop. 1926 |
|---|---|---|---|---|---|---|---|
| | 1. Marriages 1959–61 (annual av.) | 2. Private cars registered | 3. Radio licences | 4. Rateable valuation (÷ 1000) | 5. Private domestic servants | 6. Higher status personnel | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | £ | | | |
| Carlow .. .. .. | 5·0 | 68 | 256 | 5·6 | 56 | 109 | 97 |
| Dublin .. .. .. | 5·6 | 69 | 195 | 5·8 | 58 | 104 | 142 |
| Kildare .. .. .. | 4·8 | 69 | 148 | 5·6 | 58 | 109 | 111 |
| Kilkenny .. .. | 4·1 | 69 | 131 | 6·2 | 52 | 101 | 87 |
| Laoighis .. .. .. | 4·5 | 71 | 169 | 5·7 | 39 | 83 | 87 |
| Longford .. .. | 3·6 | 57 | 187 | 5·2 | 39 | 64 | 77 |
| Louth .. .. .. | 5·3 | 59 | 252 | 4·7 | 42 | 84 | 107 |
| Meath .. .. .. | 4·6 | 73 | 153 | 8·9 | 60 | 103 | 103 |
| Offaly .. .. .. | 4·7 | 61 | 156 | 5·3 | 37 | 76 | 98 |
| Westmeath .. .. | 4·5 | 62 | 219 | 6·5 | 48 | 100 | 93 |
| Wexford .. .. .. | 4·6 | 60 | 187 | 5·1 | 64 | 87 | 87 |
| Wicklow .. .. .. | 5·0 | 62 | 125 | 5·8 | 76 | 100 | 102 |
| LEINSTER .. .. | 5·6 | 67 | 187 | 5·8 | 56 | 99 | 116 |
| Clare .. .. .. | 4·1 | 45 | 148 | 4·9 | 31 | 54 | 78 |
| Cork .. .. .. | 5·8 | 66 | 171 | 4·9 | 52 | 86 | 90 |
| Kerry .. .. .. | 3·6 | 47 | 131 | 3·2 | 39 | 48 | 78 |
| Limerick .. .. | 4·5 | 60 | 210 | 5·0 | 62 | 87 | 95 |
| Tipperary .. .. | 4·4 | 74 | 171 | 5·9 | 49 | 92 | 88 |
| Waterford .. .. | 5·3 | 64 | 231 | 5·6 | 57 | 115 | 91 |
| MUNSTER .. .. | 4·6 | 61 | 175 | 4·9 | 50 | 81 | 88 |
| Galway .. .. .. | 3·6 | 43 | 144 | 4·0 | 30 | 60 | 88 |
| Leitrim .. .. .. | 3·8 | 53 | 211 | 4·3 | 20 | 38 | 60 |
| Mayo .. .. .. | 3·0 | 35 | 162 | 3·2 | 23 | 41 | 71 |
| Roscommon .. .. | 3·5 | 44 | 160 | 5·4 | 20 | 49 | 71 |
| Sligo .. .. .. | 4·0 | 45 | 175 | 4·5 | 33 | 58 | 75 |
| CONNACHT .. .. | 3·4 | 42 | 161 | 4·1 | 26 | 50 | 76 |
| Cavan .. .. .. | 4·1 | 50 | 97 | 5·1 | 33 | 48 | 69 |
| Donegal .. .. | 3·6 | 42 | 149 | 3·2 | 38 | 47 | 75 |
| Monaghan .. .. | 4·4 | 51 | 114 | 6·0 | 37 | 63 | 72 |
| ULSTER (part) .. | 3·9 | 46 | 128 | 4·3 | 37 | 51 | 72 |
| TOTAL .. .. | 4·9 | 60 | 175 | 5·2 | 47 | 82 | 95 |

TABLE 12: SOME DERIVED STATISTICS

| County | Percentage distribution of income arising | | | Per head of population | | | Income in agriculture per male engaged | Emp. rem. per head special group | Income in agriculture | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Agriculture, forestry fishing | Industry | Other | Income arising | Personal income | Col. 6 as % of Col. 5 | | | Per acre agricultural land | Per £ valuation |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | % | % | % | £ | £ | % | £ | £ | £ | £ |
| Carlow .. | 41 | 28 | 31 | 172 | 215 | 125 | 409 | 407 | 13·9 | 18·0 |
| Dublin .. | 2 | 38 | 60 | 259 | 231 | 89 | 416 | 439 | 19·4 | 17·1 |
| Kildare .. | 36 | 31 | 33 | 193 | 227 | 118 | 516 | 367 | 13·0 | 18·1 |
| Kilkenny .. | 48 | 25 | 27 | 177 | 219 | 124 | 425 | 388 | 11·9 | 17·9 |
| Laoighis .. | 46 | 25 | 29 | 164 | 204 | 124 | 368 | 361 | 10·3 | 16·9 |
| Longford .. | 46 | 18 | 36 | 116 | 170 | 147 | 231 | 340 | 7·9 | 13·3 |
| Louth .. .. | 16 | 48 | 36 | 186 | 180 | 97 | 335 | 382 | 11·6 | 13·2 |
| Meath .. | 56 | 19 | 25 | 174 | 222 | 128 | 458 | 348 | 11·6 | 13·2 |
| Offaly .. | 37 | 37 | 26 | 163 | 200 | 123 | 333 | 370 | 9·0 | 15·7 |
| Westmeath .. | 37 | 20 | 43 | 154 | 204 | 132 | 324 | 369 | 8·2 | 11·6 |
| Wexford .. | 46 | 20 | 34 | 148 | 185 | 125 | 383 | 347 | 11·2 | 18·6 |
| Wicklow .. | 29 | 32 | 39 | 158 | 203 | 128 | 364 | 353 | 10·2 | 13·5 |
| LEINSTER .. | 15 | 34 | 51 | 216 | 218 | 101 | 387 | 417 | 11·2 | 15·5 |
| Clare .. .. | 54 | 13 | 33 | 129 | 167 | 129 | 308 | 369 | 9·9 | 19·0 |
| Cork .. .. | 29 | 31 | 40 | 184 | 199 | 108 | 421 | 396 | 13·2 | 22·0 |
| Kerry .. | 53 | 16 | 31 | 135 | 174 | 129 | 367 | 369 | 16·1 | 37·7 |
| Limerick .. | 34 | 25 | 41 | 172 | 204 | 119 | 434 | 399 | 13·1 | 19·6 |
| Tipperary .. | 47 | 24 | 29 | 170 | 212 | 125 | 440 | 392 | 11·8 | 18·6 |
| Waterford .. | 31 | 29 | 40 | 187 | 218 | 117 | 486 | 385 | 12·1 | 18·0 |
| MUNSTER .. | 37 | 26 | 37 | 169 | 197 | 117 | 406 | 391 | 12·7 | 21·6 |
| Galway .. | 45 | 16 | 39 | 136 | 178 | 131 | 269 | 380 | 11·6 | 23·7 |
| Leitrim .. | 52 | 17 | 31 | 120 | 167 | 139 | 210 | 326 | 7·9 | 17·9 |
| Mayo .. .. | 48 | 17 | 35 | 113 | 153 | 135 | 220 | 363 | 11·7 | 25·4 |
| Roscommon .. | 55 | 13 | 32 | 128 | 170 | 133 | 260 | 355 | 8·9 | 16·1 |
| Sligo .. .. | 41 | 21 | 38 | 139 | 174 | 125 | 275 | 360 | 10·3 | 18·7 |
| CONNACHT .. | 47 | 16 | 37 | 127 | 168 | 132 | 247 | 365 | 10·5 | 21·1 |
| Cavan .. .. | 47 | 18 | 35 | 128 | 164 | 128 | 237 | 340 | 8·9 | 15·3 |
| Donegal .. | 38 | 25 | 37 | 119 | 153 | 129 | 214 | 355 | 12·0 | 21·2 |
| Monaghan .. | 40 | 20 | 40 | 134 | 175 | 131 | 235 | 335 | 9·1 | 12·3 |
| ULSTER (part) | 41 | 22 | 37 | 124 | 160 | 129 | 226 | 347 | 10·1 | 16·4 |
| TOTAL .. | 26 | 30 | 44 | 181 | 200 | 110 | 337 | 402 | 11·5 | 18·6 |

# *Notes to Tables*

Most of the following notes pertain to the nature of the county distributors to be applied to national aggregates. All the aggregates used (the majority not published separately in NIE 1961) have been supplied for the present purpose by CSO.

*Table* 1

Col. 2 : Table 4, col. 11, together with figures for forestry and fishing based on data supplied by Department of Lands.

Col. 3 : Table 4, col. 12, together with estimates for (i) rent element in land annuities (distributor—rates payable on agricultural land) and (ii) profits in fishing (distributed as employee remuneration).

Col. 5 : For purposes of estimation total for each county as shown was considered as in three groups:—

(i) CIP distributed by location.

(ii) CIP not distributed by location (BM, CIE, ESB, Local Authorities and Central Government works).

(iii) Non-CIP (mainly small concerns) in the categories

(*a*) Construction.

(*b*) Other industry.

The distributor for (i) was Table 5, col. 5; for (ii), special returns received from organisations concerned—*see* Table 8 as regards BM and ESB; for (iii), numbers engaged in each category and county derived as difference between numbers as returned at CP and CIP in 1951, adjusted by factors, conjecturally designed to represent differences in earnings per head in the different counties, ranging from 0·85 for Leitrim to 1·15 for Dublin.

Col. 6 : Categories as for col. 5. Distributor for (i) was Table 5, col. 6 ; category (ii), all attributed to Dublin; distributor for category (iii) was same as indicated for col. 5.

Col. 8 : For purposes of estimation total for each county as shown was considered as in four groups:—

(i) Retail trade.

(ii) Wholesale trade.

(iii) CIE.

(iv) Other transport.

The distributor for (i) was Table 6, col. 6; for (ii) data for the four provinces and Dublin County Borough available for 1956 in CD 1956–59 were distributed county-wise according to numbers engaged in Trading and Wholesale Distribution from CP 1951, Vol. III, Part II, Table 6. County aggregates for wholesale and retail, so determined, were used as the distributor for the national total of £37·1 million. For category (iii) the distributor was employee remuneration (excluding industrial workers included in col. 5) for 1956 as furnished by the Company. For category (iv) the distributor was numbers engaged in transport (except CIE) as returned in CP 1951, Vol. III, Part II, Table 6, using the county loading factors indicated in note to col. 5, to take account of presumed county differences in earnings per head.

Col. 9 : Categories as for col. 8. Distributor for (i) and (ii) was gross margin less employee remuneration for 1956 from CD 1956–59; in the case of (i), however, Dublin and provincial loading factors given in CD 1956–59 to take account of non-response were applied; profit (including subsidy) for (iii) attributed to Dublin; distributor for (iv) as in note to col. 8.

Col. 11 : Distributor Table 7, col. 13, purged of employee remuneration in industry (included in col. 4). Income shown is practically all employee remuneration. Only profit element is income of Post Office and Post Office Savings Bank, all attributed to Dublin.

Cols. 12–13 : These two columns may be considered together since almost invariably the same distributors were used for the employee remuneration and "other" divisions. Categories separately estimated and distributors were as follows:—

| *Category* | *Distributor* |
|---|---|
| Education | |
| Public Authority | |
| (i) Primary | Table 8, col. 6. |
| (ii) Vocational | Returns of Local Taxation 1959–60. |
| Other Education | |
| (iii) University | CSO. |
| (iv) Other | CP 1951, Vol. III, Part II, Table 6. |
| (v) Other professions | Ditto, appropriate heading; loading factor as at col. 5 applied. |
| (vi) Finance | Banking employee remuneration, Table 8, col. 5; profit, assigned to Dublin and Cork. Central Bank and Hospitals Trust, all Dublin. Remainder CP 1951, Vol. III, Part II, Table 6, appropriate headings with loading factor as at col. 5 applied. |
| (vii) Private domestic service | CP 1951, Vol. III, Part II, Table 6, females living in and living out separately adjusted for respective earnings per head 1960 in each county supplied by CSO. |
| (viii) Rent on dwellings | Product of A×B×C; A: number of private dwellings 1946; B: ratio population 1961 to population 1946; C: average rent of rented dwellings 1946. Sources CP 1946, Vol. IV, Preliminary Report 1961. |
| (ix) Other services | CP 1951, Vol. III, Part II, Table 6, appropriate headings; loading factor as at col. 5 applied. |

*Table 2*

Col. 2 : Col. 20 of Table 1.

Col. 3 : Distributor was emigrants' remittances through banks, classified by location of bank branch, supplied by Irish Banks' Standing Committee (through CSO). Distributor totalled £6·9 million or 53% of total (£13·0 million) to be distributed.

Col. 4 : Based on Table A17 of NIE 1961—Current transfer payments—except national debt and land bond interest—in the following categories:—

| *Category* | *Distributor* |
|---|---|
| (i) Universities .. .. .. | CSO return. |
| (ii) Other education (incl. scholarships and prizes) .. .. | Department of Education Incremental Salaries 1958–59. |
| (iii) Institutions, etc. .. .. | Returns of Local Taxation 1959–60, County Councils and County Borough Corporations expenditure. |
| (iv) Other .. .. .. .. | Table 9, col. 9. |

Col. 5 : Categories (and national aggregates involved) are as follows:—

| *Category* | *Distributor* |
|---|---|
| (i) Undistributed profits of companies and profit paid abroad (−£50·4 million) .. .. | A small part (£4·3 million) for national debt interest, ECA loan interest, bank and insurance transactions was attributed mainly to Dublin and Cork. For the rest distributor was sum of gross margin (or net output) less employee remuneration for (*a*) retail establishments with turnover of £25,000 or over 1956; (*b*) wholesale establishments; (*c*) CIP 1958 (Table 5, col. 6). |
| (ii) National debt interest and interest from investments abroad (£52·2 million) .. | A sum of £7·0 in respect of certain constituents was attributed mainly to Dublin and Cork. For the rest distributor was higher status personnel (*see* Table 11, col. 7). |
| (iii) Pensions, etc., from abroad (£5·7 million) .. .. .. | Male population aged 45 or over Town Areas (CP 1951, Vol. II, Part I). |
| (iv) Government trading and investment income (−£15·2 million). | Central Government element attributed to Dublin. Rest based on rents received by Local Authorities (Returns of Local Taxation 1959–60). |
| (v) Redistribution of profits internally— | |
| (*a*) Profits arising .. | As at (i). |
| (*b*) Profits distributed .. | As at (ii). |

It will be observed that the five large categories with positive and negative signs net to the comparatively small sum of *minus* £7·7 million shown at foot of column. For comment see text.

Col. 6 : Sum of cols. 2–5.

Col. 7 : Obtained by linear extrapolation from CP statistics for 1951 and 1961.

*Table 3*

The value of each type of output from the "national farm" in 1960, as published in the June 1961 issue of ITJSB, was allocated county-wise by the use of distributors:

Col. 2 : Content cattle, calves and cattle hides. Estimates of numbers of output were made in five categories: (i) under 1 year, (ii) 1–2 years, (iii) 2–3 years, (iv) 3 years and over, (v) fat cows. The survivorship method was used, e.g., net output of cattle aged 1–2 years in a particular county was, in the first instance, taken as number under 1 year of age in June 1960 less number under 2 years in June 1961. It was not necessary to take account of "natural" deaths, small in any case, as presumably of much the same incidence in each county. The only exception to this assumption appears to be that of the mortality of calves, for which the National Farm Survey results showed an average of 7·1 per cent. for the State as a whole and ranging from an average of 5·9 per cent. in the North and West to 8·2 per cent. in the South. This difference of ±1·2 per cent. in the level of calf mortality did not appear sufficiently large to justify a revision of the estimates of output of cattle under one year in each county. The numbers in each category are negative in younger age groups in the importing counties like Meath, with e.g., number —186,000 in the under 1 year category. To the numbers so ascertained the following provincial average prices for 1960 (calculated from data supplied by CSO) were applied, the same prices being used for each county in the respective provinces:—

Price per head (£) 1960

| | Under 1 year | 1–2 years | 2–3 years | 3 years or over | Cows and bulls |
|---|---|---|---|---|---|
| Leinster .. .. .. .. | 17·96 | 36·96 | 49·56 | 60·45 | 46·54 |
| Munster .. .. .. .. | 16·98 | 34·27 | 49·39 | 58·18 | 40·63 |
| Connacht .. .. .. .. | 21·09 | 37·72 | 53·09 | 63·32 | 48·85 |
| Ulster .. .. .. .. .. | 18·18 | 30·14 | 45·97 | 54·94 | 46·03 |

The use of provincial average prices has meant that cattle being sold in some counties at one price are entered at a slightly different price, if purchased by a county in a different province. Some of this difference would occur because of the travelling and marketing expenses incurred, but there remains a small difference in prices of cattle sold from one region to another. Without more detailed information, it is impossible to give a statistical evaluation. This difference has to be accepted as unavoidable unless recourse is had to a uniform national price for each category, which seems likely to give rise to a larger element of error in the estimate of cattle outputs than that involved in the present estimate. Difficulties also arose in the estimate of the county output of fat cows in the absence of figures on the annual total

intake of in-calf heifers into the National Dairy Herd. The survivorship method of estimation used overstates the output of 1–2 year-old cattle (and some of the 2–3 year-old cattle) to the extent that these are taken into the National Dairy Herd, and understates the output of fat cows. At the average prices used in these calculations, the difference which these under and over estimations would make to the total appears to be very small indeed, and the figures have therefore been used without alteration for this factor. The values for each county, so estimated, totalled £52,810,000 satisfactorily close to the independently derived official estimate of £55,021,000. These county values constituted the distributor.

Col. 3 : Estimates were made for four categories (i) liquid milk, (ii) milk used in industry, (iii) farmers' butter, (iv) buttermilk and separated milk. For (i) consuming population was considered as in three groups (*a*) Dublin and Cork Milk Board areas, (*b*) farming population and (*c*) remainder. For (*a*) the Dublin Milk Board supplied figures of production from each county; the Cork Milk Board supply area was confined to County Cork. The Boards also furnished prices paid. Total consumption by groups (*b*) and (*c*) were ascertained from CSO, as well as prices. Distributors for aggregate values at (*b*) and (*c*) were the respective county populations.

For category (ii) distributor was quantity of milk supplied to creameries from each county. For categories (iii) and (iv) county estimates prepared by CSO for farmers' butter made in 1960 were used for distribution.

Col. 4 : In the respective categories distributors were (i) turkeys, number in each county, 1 June 1960, (ii) geese, number, (iii) ducks and duck eggs, number, (iv) hens, hen eggs, day-old chicks and poults, number of ordinary fowl over six months old.

Col. 5 : Distributor, number of pigs in each county.

Col. 6 : Distributor, number of ewes in each county using £6·5 per head in the eight Congested Counties and £7·6 in other counties.

Col. 7 : Almost entirely horses, principally bloodstock; distributor, number of thoroughbred horses, broken and unbroken (including stallions), in each county on 1 June 1960.

Col. 9 : Generally distributors for the various crops were county areas on 1 June 1960. For sugar beet quantities delivered from counties supplying the great bulk of the crop were available from the Irish Sugar Co. Ltd. Potato output was estimated in two categories (i) consumed by farmers themselves (distributor males engaged on farm work), (ii) sold off farms (distributor, CSO county estimates of sales of potatoes). For turf, distributor was county estimates made by CSO.

Col. 12 : Distributor was "number of persons having meals on farm yesterday (i.e., on day prior to day of agricultural enumerator's visit)". As observed, it is included in gross value of output of agriculture (col. 11). This is the non-cash part of the Irish agricultural economy, proportionately an important part of output (and, when netted for production costs, of income) in Connacht and Ulster. *See* footnote on page 3.

*Table* 4

Col. 2 : Table 3, col. 11.

Col. 3 : Based on number of livestock in each county, grazing stock being expressed in equivalent units whereby cattle 1–2 years equalled $\frac{3}{4}$ units, sheep equalled $\frac{1}{4}$ unit, etc. It was assumed that pigs consumed 53 per cent., poultry 8 per cent. and grazing stock 39 per cent., (source—*The National Supply of Feeding Stuffs in Ireland*), and that cows in the liquid milk areas (as defined for Table 3, col. 3) were fed three times the amount of purchased feed fed to creamery milk cows.

Col. 4 : In separate categories (i) fertilisers, (ii) lime, distributors (from CSO) were respectively areas of (i) (*a*) grassland treated together with (i) (*b*) crops and (ii) grassland treated. Oats were assumed to receive only 50 per cent. of fertilisers used on other crops.

Col. 5 : After several trials using different distributors experimentally, number of tractors and combines was adopted. (*Source:* Number of Tractors per County from Return of Mechanically Propelled Road Vehicles, August 1960, Department of Local Government, plus Number of Combines per County deduced from Total Combines per Province (ITJSB) allocated by total acreage of crops per county).

Col. 6 : Distributor, rates payable on agricultural land 1960 (*source: Agricultural Land* 1960/61, Return from Department of Local Government).

Col. 7 : Principal constituents (i) seeds, (ii) miscellaneous (including transport). For (i) distributor was area under crops, for (ii), gross value of output (Table 3, col. 11).

Col. 9 : Col. 2 less col. 8.

Col. 10 : Distributor, same as for col. 6.

Col. 11 : Distributor, product of number of male employees and average minimum rates of wages for male agricultural workers as fixed by Agricultural Wages (Minimum Rates) Orders. Regard was had to differential rates as payable in types of areas A, B and C which in a few cases do not coincide with counties. Males 14–17 years were regarded as $\frac{5}{8}$ adult equivalent and wages of temporary workers were taken as about $\frac{5}{8}$ of permanent workers.

Col. 12 : Col. 9 less sum of cols. 10 and 11.

Cols. 13–15 : *Source* SA 1961, Table 75.

*Table* 5

*Source:* Special return supplied by CSO covering all industries included in the Census of Industrial Production 1958 except Local Authorities construction, CIE manufacture and construction work, Government Departments, electricity, canals, docks, harbours, waterworks. This table was used in construction of Table 1, sector 2, separate county estimates being made for the excluded industries as indicated, as well as for small industrial concerns not included in the Census.

Col. 2 : Net selling value (i.e., net of discounts) of goods made and manufacturing and repair work done during the year. As figures shown are aggregates for individual establishments these aggregates include much duplication in respect of intermediate products.

Col. 3 : Value of (i) ingredients, (ii) purchased containers and other packing materials sold with the goods, (iii) purchased materials for repair of buildings and plant executed by firms' own workpeople, (iv) fuel, electricity, etc.

Col. 4 : Difference between cols. 2 and 3. These figures are free of duplication; they include provision for employee remuneration, profits and supplementary costs of production not included in col. 3.

Col. 5 : All cash payments including overtime and bonuses as well as social welfare contributions by employed persons and deducted by employers; employers' own contributions are not included.

Col. 6 : Difference between col. 4 and col. 5. Though these figures include non-factor costs other than those in col. 3, col. 6 was used as distributor for part of profits arising in industry.

Col. 8 : Quotient of col. 4 by col. 7. Regarded as comparative over-all measures of productivity, it should be recalled that industrial structure varies considerably between counties.

*Table* 6

*Source: Census of Distribution* 1956–59 compiled by CSO (Dublin, Stationery Office, Pr. 5760), Tables 1B, 2A. *See* Report for definitions, scope and coverage.

*Table* 7

*Sources:* Special returns from all Central Government Departments supplied through Department of Finance; special return for Local Authorities supplied by Department of Local Government. Temporary as well as permanent staff are included. Superannuation is not included in remuneration.

*Table* 8

*Sources:* Cols. 2–4, organisations specified; col. 5, Irish Banks' Standing Committee; col. 6, Department of Education.

*Table* 9

*Source:* Special return prepared by Department of Social Welfare. It covers payments in cash and kind to persons by Central Government and Local Authorities. It does not include value of services rendered to the public through national education, police, etc., or subsidies to cover uneconomic rents. Col. 8 includes the following (with aggregate values): school meals (£189,000), cheap fuel (£171,000), maternity benefit (£108,000), marriage benefit (£63,000), footwear (£74,000). Figures in col. 9 may differ for some counties from the total of cols. 2–8 because of rounding to nearest £1,000.

*Table* 10

Table compiled by present authors from general data contained in Annual Reports of Revenue Commissioners and from information submitted by them; it should be noted that classification is according to county of assessment which may not correspond with county of residence by taxpayers.

Col. 2 : Does not include tax of £1,900,000 levied in Public Departments. Mainly tax in respect of income arising in 1961–62.

Cols. 3–4 : Mainly tax in respect of income (profits of trades, professions, etc., and investment income) arising in 1960–61.

Col. 5 : Estimate based on £95,781 income mainly arising in 1960–61 distributed by col. 2 plus Public Departments 1960–61 income of £26,556,000 distributed by col. 9—Part B of Table 7.

Col. 6 : Notional income of £9,900,000, attributable to ownership of land and buildings and to occupation of land, distributed by rateable valuation of counties plus certain investment income taxed at source of £3,750,000 distributed by number of higher status personnel (*see* col. 7 of Table 12), together with income in col. 4.

Col. 8 : NIE 1961 Table A8 figure of £28·4 million for taxes on personal income, a figure which includes sur-tax and Social Welfare contributions as well as income tax, distributed by county according to the sum of (i) Schedules A–D tax and (ii) Schedule E tax. Estimates (i) were found by applying county rates of tax per £ income arising to personal non-agricultural non-employee income (i.e., "other" in Table 1), aggregating £17,220,000. Estimates (ii) were found by distributing tax total of £11,578,000 (including tax levied in Public Departments—*see* col. 2) according to non-agricultural employee income (Table 1, col. 15). It will be noted that sum of estimated tax at (i) and (ii), namely £28,798,000, was very close to NIE figure of £28,400,000 though the coverage was somewhat different (e.g., the NIE figure includes employee contributions to social welfare).

*Table* 11

This table was used for component analysis—*see* text and Appendix—the original variables $X_j$ being those shown in sequence in cols. 2–7. Basic sources were as follows:—

Col. 2 : Department of Health *Reports on Vital Statistics* (prepared by CSO): classification by area of residence of bridegrooms.

Cols. 3–4 : SA 1961, Tables 322, 331.

Col. 5 : Returns of Local Taxation, 1959–60.

Col. 6 : CP 1951, Vol. III, Part I, Table 4.

Col. 7 : CP 1951, Vol. III, Part I, Tables 7A, 8. By definition, number of higher status personnel=number of farmers and farm managers £100 valuation and over, higher professions, employers and managers and one-third of lower professional plus salaried persons.

Col. 8 : CP 1961, Vol. I.

*Table* 12

This table is designed for primary analysis of the data in the other tables. Certain other derived figures will be found in Tables 5 and 6.

Cols. 2–4 : Based on Table 1, (*a*) col. 4, (*b*) col. 7 and (*c*) sum of cols. 10, 11 and 14 as percentage of col. 20.

Col. 7 : Quotient of Table 2, col. 6 by col. 2 (or approx. col. 6 by col. 5 of this table).

Col. 8 : Quotient of Table 4, col. 9 by col. 15.

Col. 9 : Quotient of employee renumeration as shown in Tables 5, 6, 7 and 8 by corresponding numbers employed as shown in Tables 6, 7 and 8 together with numbers engaged shown in Table 5 multiplied by the factor 0·987762, ratio of CIP number of employees to number engaged (including proprietors working in business) in transportable goods industries *plus* building and construction in the State as a whole in 1958.

Cols. 10–11 : Quotients of Table 4, col. 9, by (*a*) area under crops and pasture (SA 1961, Table 58) and (*b*) valuation of agricultural land, etc., 1 March 1959 (Returns of Local Taxation 1959–60, Table I).

# APPENDIX — COMPONENT ANALYSIS

This analysis was based on the seven series displayed in Table 11. These series were selected from a vast array of county derived statistics available, as *ex ante* likely to be closely related to county personal incomes per head of population. The following array of correlation coefficients shows that our prescience was, on the whole, verified:—

TABLE A1. CORRELATION COEFFICIENTS BETWEEN EACH PAIR OF SERIES (AS NUMBERED) IN TABLE 11

| Series No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1 | 1 | ·7238 | ·3817 | ·4757 | ·6904 | ·7713 | ·7264 |
| 2 | ·7238 | 1 | ·2874 | ·7493 | ·7131 | ·8640 | ·6357 |
| 3 | ·3817 | ·2874 | 1 | ·0729 | ·1617 | ·3725 | ·2928 |
| 4 | ·4757 | ·7493 | ·0729 | 1 | ·5268 | ·7010 | ·4553 |
| 5 | ·6904 | ·7131 | ·1671 | ·5268 | 1 | ·8528 | ·6747 |
| 6 | ·7713 | ·8640 | ·3725 | ·7010 | ·8528 | 1 | ·7617 |
| 7 | ·7264 | ·6357 | ·2928 | ·4553 | ·6747 | ·7617 | 1 |
| Average (excl. diagonal) | ·6282 | ·6622 | ·2624 | ·4968 | ·6042 | ·7205 | ·5911 |

The magnitude of most of the coefficients indicates that the system is a consistent one. The ten coefficients for the five series numbered 1, 2, 5, 6, 7 all exceed ·6. Correlations between series 3 (radio licences) and the rest are comparatively low, none exceeding ·4, a rather interesting fact in itself as indicating that radio has become nearly a conventional necessity; e.g. the ratio for Leitrim, one of the poorest counties, namely 211, happens to be the third highest for any county. The unexpectedly low coefficients for series 4, valuation, is also interesting. Rateable valuation over the years is a comparatively constant figure whereas population since 1926 (series 7) has changed drastically so that the ratio valuation to population appears to be tending with time towards a relatively constant figure across the counties.

The principal component is a weighted average, using the same weights for each county, of the seven series in such a way as to achieve an average as close as possible to all seven series, by the least squares criterion. All series are standardised in making the calculation, i.e., each is expressed in terms of its own standard deviation, the object being to accord all series the same variance. The process involves the calculation of the latent roots of the foregoing symmetrical correlation coefficient matrix, i.e., of the determinant of the matrix with $1-x$ instead of unity in the principal diagonal, a polynomial of degree 7 in $x$ set equal to zero.

The latent roots in descending order of magnitude and the latent vectors are as follows*:—

TABLE A2. LATENT ROOTS AND VECTORS OF THE MATRIX (TABLE A1)

| Latent root | | Latent vector; coefficient to be applied to variable no. — | | | | | | |
|---|---|---|---|---|---|---|---|---|
| No. | Value | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | 4·5863 | ·8915 | ·9390 | ·4005 | ·7569 | ·8869 | 1 | ·8551 |
| 2 | 0·9927 | ·1908 | −·1422 | 1 | −·4742 | −·1663 | −·0178 | ·1018 |
| 3 | 0·6012 | −·4033 | ·4420 | ·5980 | 1 | −·5433 | ·0476 | −·7223 |
| 4 | 0·3239 | −·2895 | ·0724 | ·1548 | −·3689 | 1 | ·2980 | −·9093 |
| 5 | 0·2728 | 1 | ·3037 | −·2095 | −·1664 | −·2450 | −·2303 | −·6073 |
| 6 | 0·1590 | −·1422 | 1 | −·1182 | −·5868 | −·2752 | ·0390 | ·1357 |
| 7 | 0·0641 | ·0259 | −·2666 | −·1757 | −·1900 | −·4674 | 1 | −·1686 |

It will be observed that the first latent root, i.e. that for the principal component, is very much the largest. The latent vectors follow the computer convention that the highest is unity in each case. In all cases the elements of the vectors are the coefficients of the standardised values of the seven series in Table 11; they are, in fact, the weights to be applied to the Table 11 values to obtain as sum products the seven component transforms for each county. It will be observed that in the case of the principal component the weights are in the same order as the average values of correlation coefficients shown in Table A1, the coefficient (unity) of original variable 6 (higher status personnel) being the largest and that of variable 3 (radio licences) the lowest. It is satisfactory from the viewpoint of estimation of personal income that variable 6 emerges with such credit since this variable, as will be seen from the Notes to Table 2, was (on its merits apart from the present consideration) much used as a distributor in the estimates of the transition from income arising to personal income.

We are now in a position to compute the county values corresponding to each latent root. Let the values in Table 11 be indicated by $X_{it}$ where the cursive symbol $i$ relates to the series number and $t$ relates to the county, e.g., $X_{72}=142$. Then the transforms $Z_{it}$ are given by the formula where $i$ relates to the latent root

$$(1)\quad Z_{it}=\sum_{j=1}^{7} a_{ij}X_{jt}/\sigma_j,\ i=1,\ 2,\ \ldots,\ 7;$$

$$t=1,\ 2,\ \ldots,\ 26,$$

*Kindly supplied by F. M. O'Carroll, The Agricultural Institute, from the Institute's Elliott 803 Computer.

and where the $a_{ij}$ ($i, j = 1, 2, \ldots, 7$) are the coefficients shown in Table A2. Since these values may be used for other analyses it may be well to place them on record, in Table A3.

TABLE A3. COUNTY COMPONENT VALUES

| County | $Z_1$ | $Z_2$ | $Z_3$ | $Z_4$ | $Z_5$ | $Z_6$ | $Z_7$ |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Carlow .. | 31·6 | 4·6 | 2·3 | −2·5 | 1·5 | −0·3 | −1·8 |
| Dublin .. | 34·2 | 3·4 | −0·9 | −5·4 | 1·1 | −0·1 | −2·3 |
| Kildare .. | 31·2 | 1·9 | 0·0 | −3·3 | 1·2 | 0·3 | −1·6 |
| Kilkenny .. | 28·5 | 0·9 | 2·0 | −2·6 | 1·3 | 0·4 | −1·5 |
| Laoighis .. | 27·7 | 2·3 | 2·4 | −3·6 | 2·2 | 0·7 | −1·9 |
| Longford .. | 23·8 | 2·9 | 2·6 | −2·7 | 1·0 | 0·1 | −2·3 |
| Louth .. | 29·2 | 5·3 | 1·0 | −4·2 | 1·9 | −0·6 | −2·1 |
| Meath .. | 32·9 | 0·5 | 3·6 | −3·8 | 0·9 | −1·0 | −2·4 |
| Offaly .. | 26·9 | 2·5 | 1·0 | −4·5 | 2·0 | 0·0 | −1·9 |
| Westmeath .. | 29·5 | 3·3 | 3·0 | −3·2 | 1·0 | −0·8 | −1·7 |
| Wexford .. | 28·4 | 2·9 | 0·8 | −1·6 | 1·6 | −0·6 | −2·3 |
| Wicklow .. | 30·9 | 1·1 | −0·9 | −2·0 | 1·6 | −0·9 | −2·1 |
| Clare .. | 22·0 | 2·5 | 1·2 | −3·8 | 1·9 | 0·9 | −1·9 |
| Cork .. | 29·5 | 3·0 | 0·1 | −3·1 | 3·7 | −0·3 | −1·9 |
| Kerry .. | 20·5 | 2·4 | −0·4 | −2·6 | 1·4 | 0·3 | −2·2 |
| Limerick .. | 28·7 | 3·6 | 0·8 | −2·0 | 1·1 | −0·5 | −2·4 |
| Tipperary .. | 29·0 | 2·1 | 2·4 | −2·8 | 1·8 | 0·8 | −2·0 |
| Waterford .. | 31·4 | 4·0 | 1·7 | −2·2 | 2·1 | −0·8 | −1·3 |
| Galway .. | 21·3 | 2·6 | 0·2 | −3·9 | 0·8 | −0·3 | −1·6 |
| Leitrim .. | 20·2 | 4·1 | 3·3 | −3·1 | 2·4 | 0·2 | −2·4 |
| Mayo .. | 17·3 | 3·4 | 0·7 | −3·1 | 0·7 | −0·3 | −1·7 |
| Roscommon .. | 20·2 | 2·5 | 2·7 | −4·1 | 1·3 | −0·7 | −1·8 |
| Sligo .. .. | 22·0 | 3·2 | 1·4 | −3·2 | 1·7 | −0·8 | −1·9 |
| Cavan .. | 21·4 | 1·0 | 1·1 | −3·4 | 2·6 | −0·5 | −2·1 |
| Donegal .. | 20·0 | 3·0 | −0·2 | −2·5 | 1·4 | −0·3 | −2·1 |
| Monaghan .. | 23·6 | 1·1 | 1·6 | −3·4 | 2·6 | −1·0 | −1·8 |

From the viewpoint of multiple regression analysis the $Z$ variables are algebraically identical with the original (i.e. Table 11) variables $X$, in the sense that on regression of $Y$ on the $X$ will yield exactly the same "expected" county values as will regression of $Y$ on the $Z$. The $Z$ variables have the great computational advantage that the respective $Z$ values are orthogonal to one another, i.e.

$$(2) \qquad \sum_{t=1}^{26}(Z_{jt}-\overline{Z}_j)(Z^1_{j^1 t}-\overline{Z}^1_{j^1})=0,$$
$$j, j^1 = 1, 2, \ldots, 7, j \neq j^1$$

This means that the regression coefficient, on regressing any variable $Y$ (e.g., personal income per head) on the $Z_j$, the regression coefficient $b_j$ of $Z_j$ is given by

$$(3) \qquad b_j=\sum_{t=1}^{26} Y_t(Z_{jt}-\overline{Z}_j)/\Sigma_t(Z_{jt}-\overline{Z}_j)^2$$

It will therefore be useful to place on record the values of the means $Z_j$ and the sum squares

$$(4) \qquad \sum_{t=1}^{26}(Z_{jt}-\overline{Z}_j)^2,$$

together with the values of the coefficients $b_j$ when $Y_t$ is personal income per head in county No. $t$. They are as follows:—

TABLE A4: MEANS AND SUM SQUARES OF $Z$ AND REGRESSION COEFFICIENTS FOR $Y$ ON $Z$

| | $Z_1$ | $Z_2$ | $Z_3$ | $Z_4$ | $Z_5$ | $Z_6$ | $Z_7$ |
|---|---|---|---|---|---|---|---|
| Mean .. | 26·2269 | 2·6962 | 1·2885 | −3·1769 | 1·6462 | −0·3038 | −1·9615 |
| Sum squares | 586·8912 | 34·1496 | 40·2465 | 18·3662 | 11·5846 | 6·8296 | 2·2016 |
| Coefficients $b_j$ | 4·4928 | −2·4246 | 0·7727 | 1·5463 | −3·0471 | 8·6242 | 13·0360 |

The regression analysis of any dependent variable $Y$ is as follows:—

$$(5) \qquad Y_t=b_o+b_1Z_{1t}+b_2Z_{2t}+\ldots+b_7Z_{7t}+u_t,$$

the coefficients $b_j$ being given by (3), and the analysis is

$$(6) \qquad \sum_{t=1}^{26}(Y_t-\overline{Y})^2=b_1^2\Sigma(Z_{1t}-\overline{Z}_1)^2$$
$$+b_2^2\Sigma(Z_{2t}-\overline{Z}_2)^2+\ldots+b_7^2\Sigma(Z_{7t}-\overline{Z}_7)^2$$
$$+\Sigma u_t^2,$$

from (5) and using the orthogonal property (2) of the $Z$. The term on the left of (6) has 25 degrees of freedom; each of the first seven terms on the right has one d.f. so that the residual variance $\Sigma u_t^2$ has 18 d.f. The actual analysis is as follows

TABLE A5. ANALYSIS OF VARIANCE FOR SEVEN REGRESSION TERMS IN COMPONENT ANALYSIS FOR PERSONAL INCOME PER HEAD

| Term | Degrees of freedom | Sum squares | Mean sum squares | Ratio F |
|---|---|---|---|---|
| 1 | 1 | 11,847 | 11,847 | 240·14 |
| 2–7 | 6 | 1,259 | 209·8 | 4·25 |
| Remainder | 18 | 888 | 49·3 | 1 |
| Total .. | 25 | 13,994 | — | — |

The term in (5) in $Z_1$, the principal component, therefore accounts for 11,847 (or 85%) of the sum squares of $Y$, 13,994. Furthermore, while the $F$ statistic for the remaining six components ($Z_2$—$Z_7$) is significant for (6, 18) degrees of freedom at the one per cent. point (4·01) the strong tendency towards linearity of regression of $Y$ on $Z_1$ is apparent. In fact tests have shown that quite small changes in the $Y$'s for a few of the more aberrant county personal incomes per head (e.g., Louth), well within what one conceives to be the errors of estimation, can effect a reduction in the value of $F$ from the 4·25 shown to the 5 per cent. point of 2·66. At any rate one feels that the small departure from linearity is more the result of errors of estimate than an inherent tendency towards curvilinear relationship between $Y$ and $Z_1$. This result is the more remarkable for the fact that $Z_1$,

the weighted average of seven series very disparate in kind, has no objective significance in the sense that $Y$ has. *A priori* one would expect the principal component values merely to array counties in rank order, Dublin 1, Meath 2, etc., but they evidently do better than this.

There is, of course, no valid reason for thinking that the exact values of the estimates $Y$ (if we knew them) would lie on the regression line displayed on the Chart in the text proper. Actually the correlation coefficient between the $Y$ and the $Z_1$ is ·91 : one surmises that if one knew the exact values of $Y$ it could not be much higher than this. Lest it be thought that the high correlation found was appreciably influenced by the fact that $X_6$ was used in the estimation of $Y$—see notes to Table 2—as well as being one of the basic series for component analysis, it may be stated that the correlation between $Y$ and a revised statistic $Z_1'$ (i.e., $Z_1$ with $X_6$ omitted) is ·90.

Having regard to the object of this component analysis, namely the appraisal of $Y$, it indicates that a *general* degree of confidence may be reposed in the estimates of $Y$, whatever one's views may be about the values for a few individual counties. In fact, as stated in the text, the main object of this component exercise was to identify the aberrant income values.

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