

# THE EFFECTS OF REDISTRIBUTION ON SIZE DISTRIBUTION OF PERSONAL INCOME AND HOUSEHOLD NET INCOME IN GERMANY IN 1955 AND 1959

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## I. THE PROBLEM<sup>1</sup>

THE study deals with some aspects of the income structure of the Federal Republic of Germany. The central problem is that of the redistribution of income, which largely depends upon numerous provisions in the fields of tax and social security law. A numerical approach meets considerable difficulties. The method has been to attempt to follow the process of redistribution; gross income; net income; income of households by size distribution on various characteristics. This project is based on the results of former research of the author on personal income distribution as well as on a recently published analysis of the size distribution of income of households in the Federal Republic.

## II. THE METHOD

The results and basic data of this size distribution of incomes are *not* derived directly from tax statistics. Using all material available in the Federal Republic, the object has been to use macro-economic data compatible with the national accounts; in so doing the concepts and definitions used in national accounting have had to be used to a large extent. Special attention has been given to the co-ordination of data in order to obtain identity with the macro-data not only for income aggregates, but also for the labour force (income receivers) and for *private households* (as there defined) as well. The interdependence of gross income, deductions and transfers permits a useful control of the data found here; in spite of the fact that the macro-data were estimated for other objects, they could be broken down sufficiently to yield at least qualitative results.

Regarding the range of incomes as defined here, the income

<sup>1</sup> In the text of this article a number of references appear concerning the incomes received and taxes paid by workers of various types (wage as opposed to salary earners, men as opposed to women). The major table (Table I) has been condensed for publication so that detailed information relating to matters mentioned in the text may not be given. The full details may be obtained from the author or from the I.A.R.I.W. secretariat.

of private corporations has to be included in gross and net income. The gross income of employees is represented by the gross wage and salary total; thus employer contributions to the national insurance have been excluded. In the disposable net income of private households, finally, net wages and salaries, drawings of self-employed – i.e. distributed profits – and transfers of income have been combined. Undistributed profits, however, have not been included in the household income.

It was certain doubts about their nature which led to the abandonment of the income tax statistics as a source of information, or at any rate to their use as a subsidiary source only, when required. The fiscal income-concept of income differs considerably from the one used here. In addition, it is difficult to extend the interim results to the required totals, within the fiscal definition. The results of sample enquiries of the 'Statistisches Bundesamt' concerning the wage and salary structure have been principally used as basic material for the size distribution of employees' incomes. Special official surveys were available also for the size distribution of pensions. More serious statistical difficulties had to be overcome in obtaining the size distribution of the incomes of the self-employed. The best way of proceeding in this field appears to be a combination of the 'turnover-tax' statistics with statistical results on the cost-profit structure, both of which are classified in the same size-groups for amount of turnover. The most important source for the size distribution of household-incomes was an interview-survey on incomes conducted as part of the Census on Housing.

Concerning deductions, 'income and corporation income tax', 'property tax', 'payments for the equalization of war burdens', and the contributions of employees to the national insurance have been grouped as 'direct taxes'. 'Transfer incomes' have been defined only as current income transfers by public authorities recorded in the national accounts. These are chiefly payments of national insurance, pensions of Civil Servants, payments to war victims, and expenditures of social welfare authorities.

The basic data for the grouping of persons into occupations and social status have been based on current representative surveys of the growth of the labour force (microcensus), and completed from other official sources on employment and on socio-economic groupings in the Federal Republic.

### III. THE INCOMES OF SELF-EMPLOYED AND OF PRIVATE COMPANIES

#### 1. *Gross incomes and deductions*

According to the national accounting figures in 1955 the gross income of all self-employed and private companies of the Federal Republic of Germany amounted to 52.8 mrds. D-Mark. For statistical reasons, as mentioned before, the profits of private companies have also been included in this total. Knowing that during recent years about one-third of all the self-employed have been working in the fields of agriculture and forestry, almost a quarter have carried on handicraft businesses, and another fifth have been engaged in commerce, an approximate picture of the numerical distribution becomes apparent. In comparison, the number of self-employed owners of industrial enterprises has indeed been small. Their share in the total income and the profits of all the self-employed is, however, considerable.

Clearly the size distribution of income of the self-employed, in contrast to the income of the wage earners and pensioners (yet to be investigated), shows little discernible concentration. (See Table I, lines 1 to 4). The differences in income are very great. It must be remembered that the level of income is largely dependent on the type of profession or trade carried on. The 'self-employed' category covers various types. It includes the 'self-employed' worker on his own account, the small farmer and tradesman, the professional man, middle-rank independent entrepreneurs employing a limited number of others, as well as owners of large-scale capital-intensive businesses enjoying monopoly profits. Finally, it must be borne in mind that their income is not only spent, but – to an extent rapidly increasing at the higher levels of income – used also for financing additional investments in their businesses.

Consequently the self-employed income recipients are spread widely over the income groups; a concentration of income recipients in certain income groups, of approximately the same range as is typical for employees and pensioners, cannot be established. It must be remembered that the proportion of farmers and of self-employed without additional employees – mostly craftsmen – is dominant in the lower income groups, by

number. With regard to the distribution by income, however, the picture is completely different. In 1955 the income share of the upper classes – 100,000 D-Mark income and more – was almost 40 per cent. Nevertheless it must be taken into consideration that private corporations, with their profits mostly undistributed, influenced this distribution considerably.

The deductions from gross income in 1955 ('income' – and 'corporation income tax' including special payments for Berlin, 'property tax', and 'payments for the equalization of burdens') constituted a strongly progressive burden. The varying course of the tax-charge (compare Table I, lines 9 and 10) is based upon the differences of tax definitions. The fiscal concept of income, to which the particular rates of taxes are to be applied, departs considerably from the one used in the national accounting and here. Certain earnings, included in the economic definition of income, are missing in the fiscal definition, or are taken into account incompletely, or are explicitly exempted from taxation by legislative concessions. The fiscally permissible depreciation rates, too, are in general considerably above the rates of depreciation used in national accounting. In view of these corrections it is not surprising that personal income tax and corporation tax are nominally imposed at higher rates than those here shown.

Only the personal income tax shows a progression of rate. The corporation tax, like the remaining taxes considered here, is imposed at flat proportional rates – though at a higher level. The property tax permits relatively high exemptions, which is also to some extent the case with the 'payments for the equalization of war burdens' which were assessed upon property held at the time of the currency reform of 1948, or at the end of the war. Since these taxes affect mostly higher – especially unearned – incomes, the fiscal charge on the self-employed income is somewhat strengthened in its progression by these additional payments.

Finally reference must be made to the fact that German agriculture is freed to a large extent from 'normal' tax payments; its tax payments have, in fact, been heavily reduced during the last ten years. As mentioned above, one-third of all self-employed income receivers are farmers, and generally located in the middle or lower income groups. Therefore the average tax burden of all income recipients in these ranges, compared with the nominal rates of taxes, are remarkably small. In 1955

the direct taxation upon the self-employed – an amount of 12.5 mrds. D-Mark with an average burden of 23.7 per cent – was raised mainly from the higher income classes. The self-employed and corporations with a gross income of 100,000 D-Mark and over and a share of almost two-fifths of the total income paid more than half (56 per cent) of the tax receipts. Considering all self-employed who were taxed at more than one-fourth of their gross incomes, the different fiscal charges become clear. More than three-fourths of all the taxes recorded here were paid by that group, consisting of 8.3 per cent of all self-employed income recipients and companies.

A comparison of the income in 1955 and 1959 shows a remarkable increase and a change of size distribution as well as of tax burdens. During the period investigated total gross income increased by 36 per cent to 71.6 mrds. D-Mark; payments of taxes grew considerably faster, by about one-half, to 18.8 mrds. D-Mark. Thus the proportionate burden increased, in spite of a lowering of tax rates, for self-employed as well as for corporations in 1958. The increase in the average burden, now 26.3 per cent compared with 23.7 per cent of the gross income in 1955, affected the particular income classes very unequally. In the lower and middle income groups, up to 12,000 D-Mark annual income, the reduction of tax rates even made tax payments smaller.

This varying development of tax charges is to be explained largely by some measures of German fiscal policy during this period. On the one hand, besides the tax reduction for the agricultural sector already mentioned, the smaller self-employed were also freed from tax to a larger extent by higher tax exemptions. On the other hand certain fiscal concessions (free depreciation allowances, which had greatly assisted the first phase of reconstruction of the German economy after the currency reform), which, in fact, benefited mainly the bigger firms, were withdrawn. It is a well-known fact that a progressive tax schedule, with rising income, leads to a more than proportionate rise in tax payments. Even at a constant rate of tax for any given income, the aggregate tax burden would increase with changes in the income structure. In the 1955–9 period this change in the distribution of income alone would have made the total tax charge grow from 23.7 to 25.3 per cent (actual level: 26.3 per cent).

The figures of the size distribution for 1959 give further information on this subject. Generally a rapid rise in numbers is to be noticed in the upper classes. With an almost constant number of self-employed, their numerical share in the lower income groups up to 6,000 D-Marks decreased considerably, because of the rapid rise of income. In comparison with 1955 the distribution of income changed even more. Thus in the lower groups up to 6,000 D-Marks even the absolute amounts, between 6,000 D-Marks and 24,000 D-Marks the relative amounts, decreased. In contrast the proportion of income receivers above 100,000 D-Marks was growing rapidly. Now they receive more than two-fifths of the total income and pay almost three-fifths of all taxes.

## 2. *Net income*

The distribution of income after all deductions have been made is much more even. About the method of computation it may be said that the smaller transfers of income to self-employed – less than 1 mrds. D-Mark – which are of considerably more importance to other income receivers, have been excluded in order to simplify statistical procedure. These amounts can be approximately set off against property incomes received by those who are not self-employed.

In comparison with the size distribution of gross income in 1955, the processes of levelling caused a decrease in all upper and middle groups down to a net income of about 8,000 D-Marks. On the other hand, the figures for the lower income groups increased relatively as well as absolutely. In 1959 a similar gross-net-shifting of the distribution of income is to be noted, although on a higher level. Likewise all net income classes which exceed 8,000 D-Marks contain lower numbers than the equivalent gross income classes. On the other hand, all lower net income classes have a larger proportion (Compare Table I, lines 15, 16, 17 and 18).

The more even distribution becomes apparent in the Lorenz Table, too. (Compare Tables II and III.) Compared with the size distribution of gross income in both years the net-shares of the income receivers cumulated by deciles of income units were higher all through up to 90 per cent of the total. In 1955 as well as in 1959 90 per cent of the income recipients received almost 40 per cent of the gross income, but they received 45 per

cent of the net income. Thus between the two years the tendency towards levelling remained comparatively constant.

#### IV. THE INCOME FROM EMPLOYMENT

##### *1. Gross income and deductions*

In contrast to the size distribution of income from self-employment the size distribution of income from employment shows a relatively homogeneous group, of limited range. (Compare Table I, lines 5, 6, 7 and 8.) The earnings of the employed are payments contractually agreed upon for varying personal labour performances. The large variance of undistributed profits, and the heterogeneity of the self-employed professions, which determine the extraordinary range of self-employed income and the income of private companies, scarcely influence the income of non-self-employed labour. As will be shown later, there are considerable inequalities of income between men and women and between wage earners and salary earners. However, these inequalities are not marked enough to widen the relatively small spread.

In 1955, except for the lowest income class (which includes mostly apprentices with their educational grants, and part-time employed), a concentration was found in the three classes between 2,400 D-Marks and 6,000 D-Marks, with gross income chiefly around 4,000 D-Marks: almost two-thirds of all employed belonged to that group. Including the lowest class and the class above it in this group, within the comparatively small range up to 7,200 D-Marks, we have covered more than 90 per cent of all those receiving income from employment.

Because of this narrow distribution – compared with the self-employed – the effects of fiscal progression are also small. It is remarkable that in 1955 and also in 1959 wage tax payments (including 'Notopfer Berlin') amounted to only one-third to one-half of all deductions from income, the remainder consisting chiefly of national insurance contributions. Since national insurance contributions up to a certain income level move proportionally, but after that, regressively, an analysis of changes in the total tax charge becomes more complicated.

For 1955 the wage tax burdens, including the special payment ('Notopfer Berlin'), shows an average charge of 6.3 per cent. In the income distribution as it was less than one-tenth of all

employed paid more than 10 per cent of their incomes as tax and social contributions.

The charges for national insurance depend upon German social security laws. There are not only different rates for the pension, health, and unemployment insurance, which for the majority of employees are deducted in one sum, but the obligation to pay also varies from one service to another. Thus apprentices and others employed at low wages are partly or entirely exempted from national insurance contributions. For the employed of the middle income classes, it can be assumed that the national insurance contributions cover them completely, and as a rule they are charged with a proportional rate of 10–11 per cent. This is not true for Civil Servants, who generally are not subject to national insurance. A slight regression was to be seen at about the annual income of 6,500 D-Marks, caused by the income limits for the separate insurance branches. It is intensified in the upper income classes, because of the exemption of the higher salaries from contributions. Therefore national insurance contributions predominate in the lower income classes, while the wage tax is of more importance in the upper income classes, and dominant in the top income group.

Examination of the total deductions at different income ranges generally shows that progression of the wage tax is taking place, but, because of the regression of payments for national insurance contributions, the total charge increases slowly, and rises rapidly only in the top income classes.

Though the detailed figures are not presented here, certain characteristic differences between male and female employed become apparent in the size distribution. On the one hand, the distribution of women's incomes, since these are considerably lower, is even more intensely concentrated in the lower income classes – almost 90 per cent of all female income receivers earned less than 4,800 D-Marks. On the other hand, the wage tax charge from women in the comparable ranges of income is higher than for men, because the tax allowances from income (especially for children) are smaller. The average total tax charge from male employed is somewhat higher only because the share of the upper income classes is higher.

Variations in the distribution of gross income also arise from the occupational position of the individual employee. Thus the



most part. Since these additional payments did not show an equal share in all groups, but went to a large extent to receivers of smaller or middle earned income, the levelling of the size distribution of income was increased further. Thus in 1955 in the gross size distribution almost two-thirds of all employed were concentrated in the three lower income classes up to 4,800 D-Marks; in the net income distribution almost three-fourths of all income receivers were found in the same classes. (Compare Table I, lines 19, 20, 21 and 22.)

The overwhelming part of the transfer payments was for the benefit of wage earners, extending therefore the equalizing effects of the redistribution far more than in the case of salary earners. The unemployed compensation had a big share in this, since its payments, especially for seasonal unemployment, are claimed mostly by wage earners. Sickness benefits, too, are paid to wage earners to a considerably larger extent than to salary earners, whose salaries generally continue to be paid at least for another six weeks in case of illness. The payments from accident insurance were also claimed in the main by wage earners, because of their heavier accident risk. Finally the proportion of pensioners continuing to work is generally greater among wage earners. Therefore it is not surprising that, unlike salary earners, the revenues deducted from the income of wage earners almost come back as transfer payments.

In 1959 the structure of the net income from employment was influenced by the same factors, with similar effects; the increase in net wages and salaries and in transfer payments turned out to have approximately the same extent. (Compare Table I, lines 20 and 22.) The income levelling was similar. Allowing for the rising number of employed, and the remarkable decline in the number of unemployed, the mode, in contrast to 1955, moved into the group 4,800 D-Marks to 6,000 D-Marks, and the share of the lowest income classes was reduced considerably. Because of the reasons mentioned above, in 1959, too, the process of levelling took place considerably more intensively among wage earners (transfers of income almost reaching deductions) than among salary earners, who again had a relatively small share in the transfers.

#### V. INCOME OF PENSIONERS

The results of redistribution are of special interest in this

social group. In the definition, used here, pensioners are recipients of income transfers who receive trivial or no compensations for working. Predominantly they are recipients of payments from national insurance, Civil Servants' pensions, war victims' compensations, and expenditures of the welfare authorities; the old age pensions of the social insurance represent the largest share.

In 1955 and in 1959 pensioners living exclusively on transfers, received about two-thirds of the total of transfers of income. A look at the 1955 income structure leaves no doubt that a large number of income receivers had insufficient incomes, which did not yet reach the minimum standards of the welfare authorities. Thus two-thirds of the whole group remained below 2,400 D-Marks, and among the female pensioners there were even four-fifths of all recipients who had to be contented with less than this amount. Therefore it is not surprising that the spreading of the pension income was very small. In 1955 only the relatively high pensions of the Civil Servants reached the middle and upper income classes. (Compare Table I, lines 25 and 27.)

The reform of the pension insurance in 1957, however, led to a rapid increase in benefits; mostly they increased by more than half, very often even reached twice the amounts paid in 1955. The financing of these additional payments was made possible by an increase in contributions, by higher Federal grants, and finally by a reduction in the accumulation of financial assets by the national insurance.<sup>1</sup>

The size distribution of pensions whose total amount rose from 14.1 to 22.5 mrds. D-Marks between 1955 and 1959 had changed relatively more than in other income categories. The share of pensioners in the lowest income class went down from two-thirds to one-third of the total, while the share in all other classes increased rapidly – generally by more than double. (Compare Table I, lines 25, 26, 27 and 28.)

## VI. TRANSFER INCOMES AND NET INCOME

Before entering the sphere of household income, it may be useful to throw some light on the significance of transfers for

<sup>1</sup> The financial risks originally feared turned out to be unfounded. In view of favourable economic developments, the payments, though increased already several times, could be met without difficulty, and the minimum reserves demanded by the Legislature were not endangered.

net incomes (transfers defined as before: undistributed profits included).

How much the transfers were able to equalize distribution is shown by the fact that the average share of transfer payments in all net income groups of 16·8 per cent in 1955 was surpassed by far in the two lowest income classes (55 and 27 per cent respectively), and decreased rapidly in the higher ranges of income. (Compare Table I, lines 29 to 38.)

The more than average increase of pensioner incomes intensified the degree of redistribution in 1959; compared with the share of 1955, in 1959 an increase occurred in all income classes. The relative change was especially great in the ranges between 2,400 and 4,800 D-Marks, typical for pensioners. (Compare Table I, lines 25 and 26.) The tendency is quite clear: the extraordinarily different inflows of transfer income to the classes in question contributed to a considerably more even distribution of net income than in 1955.

## VII. INCOME OF HOUSEHOLDS

### *1. Personal income and income of households*

Only the co-ordination of personal income and household income data makes it possible to find out more about the importance of transfers in the material situation of the individual.

To facilitate the next step towards ascertaining the incomes of households, it may be useful to sum up once again the total amounts and the number of income receivers or households – arranged according to the main groups – for the net income tables. Thus in 1955 and 1959 the wage earners got the biggest portion of the personal net income with 55 and 59 mrds. D-Marks respectively, but this amount had to be shared by 12·8 and 13·0 mill. income receivers respectively. The net income of the self-employed – the second largest group – amounted to 40 and 53 mrds. D-Marks respectively, and was available to 3·2 mill. self-employed income receivers. The salary earners whose number increased, between the two years, from 4·9 to 6·0 mill. received 25·9 and 39·6 mrds. D-Marks respectively. Finally 14·1 and 22·5 mrds. D-Marks respectively fell to the share of the pensioner group.

The household incomes have been first classified according to the occupational position of the head of the household,

usually also the family member with the highest income. For the use of the data which follow it is important for the undistributed profits of the self-employed and of private companies not to have been included in the household income. So smaller amounts are shown here than in the personal income distribution.

The number of income receivers (1955: 26,740 mill. persons; 1959: 28,670 mill. persons) surpassed the number of private households considerably (1955: 16,370 mill. households; 1959: 17,225 mill. households). Thus in numerous cases a family has more than one income receiver. So it is easy to see that information about the size distribution of income for individuals in general is not sufficient to give a conclusive account of their economic resources. The standard of living of the household is, quite apart from the income level of its head, dependent on the number of further members of the household, and on their contributing or not contributing to the income of the family. Almost half of the population of the Federal Republic lives in households of three or four persons. The uneven distribution of these characteristics, that is to say the level of the individual income, the number of income receivers, and the number of members of the household to be provided for; and, finally, the exclusion of undistributed profits, led to a considerable *increase* of differences among the employee and pensioner households, but to a decrease among the employer households, and, because of the large part which employers' households play in widening the dispersal in the national table of income distribution, to a *decrease* in dispersal here, too.

This study can only examine in detail the redistribution of personal income among individual households. The consequences of this second redistribution depend not only upon a multifarious distribution between income strata, but also on the social structure of the population. A survey of the arrangement of the private households in Western Germany shows that in 1955 the wage-earner households with 35 per cent of the population stood at the top, followed by the pensioner households (28 per cent), the households of salary earners (20 per cent), and the households of the self-employed (17 per cent). The share of the salary earner and pensioner households has slightly increased during the last years, at the cost of the households of wage earners and especially of the self-employed.

Since the average incomes in the main groups show considerable differences, other relations arose for the income shares: 32 per cent of the total income of private households, which in 1955 amounted to 111 mrds. D-Marks, fell to the share of the wage earners' households, 27 per cent to the households of self-employed, 24 per cent to the households of salary earners and civil servants, and 17 per cent to the pensioner households. These proportions remained almost the same in 1959, although the total income had increased rapidly (159 mrds. D-Marks). Only the households of pensioners were able to improve their relative position slightly. (Compare Table I, lines 39 to 58.)

All that has been said about the interrelationship of the different household characteristics in general, is valid for the transfers of income, too. Distinction has to be made not only between transfers to pensioners and to employed persons; often pensioners are living as additional income receivers in households whose head is working and *vice versa*.

## 2. *Income of households and transfers*

This study could not examine the different sizes of households, because such a classification would have been out of place. Thus conclusions from the total size distribution can be drawn within narrow limits only. As a rule it can be said that in the lower income classes households with a relatively small number of dependents – often single person households – prevail, and therefore resources, measured by the income per household member, show a rather more even distribution than is to be seen in the following figures.

The size distribution of the income of households for 1955 is – compared with the personal size distribution of income – characterized by the fact that the lower as well as the top classes had a smaller share, and in general a more even structure prevailed. (Compare Table I, lines 39 to 58.)

When the head of the household has a relatively low income, the employment of further members of the family becomes necessary. Considerable cumulations of income not infrequently occur, so that the actual situation may be very different from that indicated by the distribution of individual incomes. The varying distribution structure of the income of self-employed, employees and pensioners is still perceptible on the level of

households, but its spread was somewhat smaller. Finally it must be mentioned that in the households of pensioners – very frequently one or two person households – in comparison with the other household categories on an average the average number of household members was outstandingly lower.

The improvement in the income situation of private households between 1955 and 1959 is marked not only by the large increase in total income, which rose from 111 to 159 mrds. D-Marks, it was intensified by a rising degree of income cumulation – the number of income receivers grew faster than the number of households. Regarding size distribution of incomes, it is apparent that the number of households in the three lowest income classes was reduced considerably in favour of a higher density in the middle and upper classes, predominantly because of the great increase of pensions.

The share of transfer incomes is greater in the income of households than in the total and the disposable personal incomes, because undistributed profits are now not included. Thus in 1955 more than two-thirds of the income in the lowest income classes up to 2,400 D-Marks consisted of transfer payments, and in the two following classes this share still amounted to one-third and one-fourth respectively. With regard to the distribution of transfer incomes by absolute amounts, a different picture appeared; the transfer incomes being distributed more evenly, and being found to a considerably greater extent in the upper classes of income.

Of course, transfer incomes predominate in the households of pensioners. In absolute terms, however, payments to the remaining categories of households, are higher in the upper income classes (above 8,400 D-Marks). The causes of this result can finally be traced back to the numerous possibilities of cumulation in the households in question.

In 1959 the share of transfer incomes amounted to 20.5 per cent (1955: 18.9 per cent). Transfer incomes rose proportionally in all ranges of incomes, but the increase was especially rapid in the lower classes. Incomes of households below 2,400 D-Marks consist exclusively of transfer incomes. The share of the transfers amounted to more than half in the income group up to 4,800 D-Marks, and it still reached 45 per cent in all income classes up to 6,000 D-Marks. In the next higher income classes the share is considerable, too. It drops to less than one-tenth

only in the two top income groups, that is at an income above 18,000 D-Marks.

In this period the share of all transfer incomes going to the households of pensioners increased more than the share of total transfer incomes. More than half of all transfer incomes were received by the incomes below 12,000 D-Marks.

#### VIII. A BALANCE OF REDISTRIBUTION

In view of the numerous influences affecting redistribution, some method must be sought of determining its total dimensions. The previous steps were designed to trace out the details; for giving the more general aspect individual gross and net incomes must be compared. The intention is to find out how different amounts of deductions and transfers affect the original (gross) incomes in each group. A comparison between the gross income and the income of households indeed would have been more desirable, but was not possible because of statistical difficulties in apportioning deductions between households.

In both of the years examined the total deductions and transfers are nearly equal, but accidentally. The statistical definitions used here impose no requirement for such identity.

Of decisive importance for the degree of the redistribution in each income class is the action of the two opposed income flows: the taxes increasing progressively, the transfers declining regressively. This is seen in the distribution of the absolute amounts. In 1955 one-third of the transfers – 7.2 mrds. D-Marks – contributed to enlarge the lowest incomes up to 2,400 D-Marks. On the other hand, one-third of the total deductions were paid by the two top classes, constituting a substantial reduction of these incomes.

The surplus of transfers over deductions (and vice versa) in the particular income groups of the gross and net figures indicates the change of the original income structure. In 1955, with deductions amounting to 23 mrds. D-Marks and transfers amounting to 21 mrds. D-Marks, more than 12 mrds. D-Marks went to the income classes up to 6,000 D-Marks, while the upper ranges of income were reduced by an amount of more than 14 mrds. D-Marks, of which about 10 mrds. D-Marks alone were deducted from incomes above 24,000 D-Marks. (Compare Table I, lines 33 to 38.)

The absolute amounts of 'net-transfers' are not sufficient to analyse the effects of time on the redistribution. A coefficient for the degree of redistribution can be obtained by entering the difference between deductions and transfers as a share of the original gross income. For 1955 the following structure becomes apparent: a large surplus in the lowest ranges of income (128 per cent) which decreases in the following income groups (33 per cent; 9 per cent), and leads to an equalization of deductions and transfers in the incomes around 6,000 D-Marks. Then in the upper classes the income is reduced more and more because of the preponderance of the taxes. The maximum figures of the redistribution of income show an increase by 128 per cent in the lowest class, and a decrease by 35 per cent in the top class, varying steadily along the scale.

In 1959 the degree of the redistribution increased once again (in absolute figures deductions and transfers rose to about 34 and 33 mrds. D-Marks respectively). The importance of the transfers in the lower classes, as well as of the tax charge in the top income group, was increased. Now the balance between duties and transfers is reached at a higher level, on incomes of about 7,000 D-Marks. The difference between the maximum figures of distribution also grew; the proportion of the transfers to the lowest income class increased to 132 per cent, and the share of the taxes in the top class to 37 per cent.

In order to extend this comparison of the effects of the redistribution to the incomes of households, at least by way of trial, the Lorenz-Table must be used once again. (Compare Tables II and III.) A trend towards a more even distribution of income – thus toward the levelling – is found, when the lower groups of income receivers can claim a bigger share of total income for themselves.

The figures of income for 1955 in the Lorenz approach show that proportionate shares rise as we proceed from personal gross to personal net incomes, and further as we proceed to incomes of households. (This is true for the sum of all incomes only.) In 1955, 90 per cent of all income receivers (including companies) had a share of 58 per cent of the gross income, 64 per cent of the net income, and finally 71 per cent of the household incomes. Up to 1959 there was little change in this graduation, only that the shares received by the 90 per cent were higher in all income groups, so that a more even distribution



**TABLE**  
*Incomes, direct taxes and transfer payments by income*  
Range of

					Under 2,400	2,400- 3,600	3,600- 4,800	4,800- 6,000	6,000- 7,200
<i>Pre-tax distributions</i>									
1.	Self-employed and private companies	Numbers	000	1955	227	350	441	358	277
2.				1959	36	135	246	350	344
3.		Income	DM	1955	443	1,097	1,891	1,943	1,835
4.			million	1959	78	422	1,048	1,899	2,265
5.	Wage and salary earners	Numbers	000	1955	3,360	3,309	3,976	3,128	1,488
6.				1959	2,358	2,336	3,142	3,748	3,304
7.		Income	DM	1955	4,928	10,150	16,811	16,776	9,675
8.			million	1959	3,410	7,180	13,294	20,238	21,599
<i>Direct taxes as percentage of pre-tax income</i>									
9.	Self-employed and private companies		%	1955	1.4	3.2	4.9	7.1	9.5
10.				1959	1.3	2.6	4.6	6.7	9.0
11.	Wage and salary earners			1955	5.7	12.1	13.5	14.5	15.5
12.				1959	4.2	12.9	14.8	15.1	15.2
13.	National insurance contributions by wage and salary earners (included above)			1955	5.1	9.0	9.2	9.0	8.4
14.				1959	4.0	11.0	11.4	11.2	10.8
<i>Distributions after direct taxes and transfer payments</i>									
15.	Self-employed and private companies	Numbers	000	1955	248	397	502	389	337
16.				1959	51	185	330	418	389
17.		Income	DM	1955	483	1,246	2,146	2,114	2,234
18.			million	1959	111	578	1,404	2,255	2,562
19.	Wage and salary earners	Numbers	000	1955	3,906	4,370	4,691	2,810	972
20.				1959	2,507	2,690	3,947	4,403	2,750
20.		Income	DM	1955	6,041	13,450	19,814	15,004	6,325
22.			million	1959	3,769	8,312	16,703	23,745	17,891
23.	Transfer incomes received by wage and salary earners (included above)	Income	DM	1955	665	1,427	2,022	1,470	582
24.			million	1959	459	971	1,869	2,515	1,823
25.	Non-earning recipients of transfer incomes (pensioners, etc.)	Numbers	000	1955	3,866	1,196	487	227	85
26.				1959					
27.		Income	DM	1955	6,515	3,496	1,989	1,188	544
28.			million	1959	4,284	6,249	4,395	3,499	2,304
<i>General summary all incomes (classified by pre-tax income)</i>									
29.	Pre-tax income		DM	1955	5,371	11,247	18,732	18,719	11,510
30.			million	1959	3,488	7,602	14,342	22,137	23,864
31.	Direct taxes and national insurance			1955	286	1,260	2,360	2,564	1,676
32.				1959	145	938	2,009	3,178	3,497
33.	Transfer income			1955	7,180	4,923	4,011	2,658	1,126
34.				1959	4,743	7,220	6,264	6,014	4,127
35.	Net gain or loss			1955	+ 6,894	+ 3,663	+ 1,651	+ 94	- 550
36.				1959	+ 4,598	+ 6,282	+ 4,255	+ 2,836	+ 630
37.	Net gain or loss as percentage of pre-tax income		%	1955	+ 128.4	+ 32.7	+ 8.8	+ 0.5	- 4.8
38.				1959	+ 131.8	+ 82.6	+ 29.7	+ 12.8	+ 2.6
<i>Households classified by income after direct taxes and transfer payments</i>									
39.	Households headed by self-employed	Numbers	000	1955	114	168	285	332	302
40.				1959	7	17	58	122	205
41.		Income	DM	1955	201	518	1,208	1,801	1,987
42.			million	1959	12	51	249	664	1,358
43.	Households headed by salary earners and military	Numbers	000	1955	189	355	518	499	411
44.				1959	28	117	278	441	490
45.		Income	DM	1955	366	1,109	2,207	2,710	2,713
46.			million	1959	57	368	1,186	2,380	3,224
47.	Households headed by wage earners	Numbers	000	1955	462	871	1,083	930	687
48.				1959	83	335	702	1,029	905
49.		Income	DM	1955	901	2,707	4,503	5,043	4,528
50.			million	1959	173	1,049	3,012	5,580	5,973
51.	Households headed by pensioners	Numbers	000	1955	1,897	832	499	399	320
52.				1959	974	914	612	535	498
53.		Income	DM	1955	3,160	2,506	2,099	2,160	2,104
54.			million	1959	1,821	2,747	2,571	2,893	3,278
55.	All households	Numbers	000	1955	2,662	2,226	2,385	2,160	1,720
56.				1959	1,092	1,383	1,650	2,127	2,098
57.		Income	DM	1955	4,628	6,840	10,017	11,714	11,332
58.			million	1959	2,063	4,215	7,018	11,517	13,833

roups in Federal Republic of Germany, 1955 and 1959  
income (DM)

7,200- 8,400	8,400- 9,600	9,600- 12,000	12,000- 15,000	15,000- 18,000	18,000- 24,000	24,000- 50,000	50,000- 100,000	100,000 1,000,000	1,000,000 and over	Total
253	237	282	224	105	138	172	53	35	3	3,155
326	315	382	310	147	197	254	82	56	5	3,185
1,964	2,113	3,016	2,999	1,720	2,880	6,105	3,894	10,400	10,500	52,800
2,535	2,819	4,098	4,154	2,403	3,807	8,866	6,016	14,610	16,580	71,600
621	353	255	128	56	42	39				16,755
1,536	855	684	311	123	97	91				18,585
4,801	3,142	2,717	1,703	911	868	1,418				73,900
11,869	7,608	7,290	4,115	2,007	2,002	3,201				103,800
11-5	13-1	15-0	17-1	18-9	21-4	25-6	29-2	31-9	34-5	23-7
11-3	13-0	14-9	17-9	19-2	21-7	26-2	30-0	33-6	36-8	26-3
16-0	16-2	16-9	17-3	18-9	20-5	29-7				14-2
15-0	14-9	14-9	14-8	14-3	15-6	22-6				14-7
7-4	6-4	5-4	4-0	3-4	1-6	1-3				7-9
9-8	8-7	7-3	5-5	5-4	1-9	1-4				9-4
290	201	257	149	104	90	130	31	28	2	3,155
345	278	359	246	172	135	184	47	43	3	3,185
2,252	1,792	2,749	1,995	1,703	1,860	4,424	2,097	7,260	5,945	40,300
2,683	2,488	3,852	3,297	2,812	2,728	6,127	3,107	10,117	8,679	52,800
399	209	162	81	36	32	17				17,685
1,157	621	489	246	112	99	39				19,060
3,088	1,864	1,750	1,082	589	662	631				70,300
8,948	5,529	5,204	3,284	1,825	2,041	1,349				98,600
266	151	131	76	38	40	32				6,900
867	519	452	268	140	140	77				10,100
19	8	12								5,900
89	49	25	17	9						6,425
146	71	151								14,100
685	443	264	225	152						22,500
6,765	5,255	5,733	4,702	2,631	3,748	7,063	4,234	10,520	10,500	126,700
14,404	10,427	11,375	8,269	4,410	5,809	11,352	6,591	14,750	16,580	175,400
992	785	910	807	497	794	1,834	1,245	3,363	3,627	23,000
2,066	1,497	1,696	1,322	747	1,139	2,858	1,951	4,956	6,101	34,100
412	222	197	161	38	40	30	2	—	—	21,000
1,552	962	716	493	245	187	73	4	—	—	32,600
- 580	- 563	- 691	- 702	- 425	- 754	- 1,804	- 1,243	- 3,363	- 3,627	- 2,000
- 514	- 535	- 980	- 829	- 502	- 952	- 2,785	- 1,947	- 4,956	- 6,101	- 1,500
- 8-6	- 10-7	- 12-1	- 14-9	- 16-2	- 20-1	- 25-5	- 29-4	- 32-0	- 34-5	- 1-6
- 3-6	- 5-1	- 8-6	- 10-0	- 11-4	- 16-4	- 24-5	- 29-5	- 33-6	- 36-8	- 0-9
252	215	337	319	215	182	109				2,830
263	279	448	482	367	360	242				2,850
1,960	1,927	3,613	4,261	3,507	3,750	5,867				30,600
2,050	2,505	4,864	6,450	5,976	7,417	12,004				43,600
306	219	295	245	130	91	52				3,310
417	330	481	435	256	200	117				3,590
2,384	1,967	3,167	3,270	2,122	1,874	2,511				26,400
3,232	2,962	5,162	5,794	4,236	4,114	5,085				37,800
464	305	396	268	112	47	15				5,640
675	482	681	533	257	133	50				5,865
3,613	2,736	4,238	3,567	1,823	966	675				35,300
5,248	4,305	7,304	7,106	4,208	2,748	1,994				48,700
211	133	157	90	30	17	3				4,590
376	253	341	231	100	67	19				4,920
1,639	1,188	1,672	1,185	517	347	123				18,700
2,919	2,265	3,642	3,068	1,629	1,377	690				28,900
1,233	872	1,185	922	487	337	179				16,370
1,731	1,344	1,951	1,681	980	760	428				17,225
9,596	7,818	12,690	12,283	7,969	6,937	9,176				111,000
3,449	12,037	20,972	22,418	16,049	15,656	19,773				159,000

within each classification – and thus of course on the whole – was brought about.

For the self-employed, the employees and the pensioners, however, there are some large deviations from the total figures outlined above. The change is especially marked for the income of the self-employed: in 1959, 90 per cent of all self-employed and private companies shared 40 per cent of the gross income, 45 per cent of the net income and 70 per cent of the income of households (without undistributed profits). For the income of the salary and wage earners, greater equality is to be noticed as we proceed from the distribution of gross income to the distribution of net income, although in this case the change is less marked. However, the change is found to be cancelled when we come to the distribution of the income of households; the same is true for the income of pensioner households. Here income cumulation is taking place. This leads to a perceptibly *smaller* share of income going to the lower income classes.

TABLE II  
*Share in total income per decile of income units*  
*Federal Republic of Germany, 1955*  
 (Estimation)

Percentage number of income units	Gross income			Private net income				Net income of households			
	Self-employed	Salary-earners	Wage-earners	Self-employed	Salary-earners	Wage-earners	Pensioners	Self-employed	Salary-earners	Wage-earners	Pensioners
	Percentage share in total income										
10	1.4	4.2	4.7	1.7	4.2	5.1	7.1	2.4	3.1	3.5	4.1
20	3.4	8.8	10.6	4.2	10.1	10.8	14.1	6.3	7.5	8.4	8.2
30	5.9	16.3	18.0	7.5	16.3	18.9	21.2	11.3	12.8	14.5	12.3
40	9.0	23.2	24.0	11.2	24.3	26.9	28.2	17.2	19.3	21.1	16.4
50	12.7	31.8	35.4	15.5	32.4	35.7	35.3	24.1	26.5	29.2	23.3
60	15.0	40.6	45.6	20.8	41.6	46.8	42.3	32.5	34.9	38.0	30.9
70	22.7	50.7	56.2	27.0	51.8	57.8	51.7	42.4	44.9	48.5	41.2
80	29.6	62.0	69.1	33.8	63.2	69.4	63.9	54.5	57.2	60.8	54.7
90	39.4	74.2	82.5	45.0	76.6	83.4	78.1	69.1	72.5	76.5	72.0
100	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0



TABLE IV

*Aggregate income totals of the tables 'The Effects of Redistribution on Size Distribution and household Net Income in Germany' and national accounts, 1955-1959*

(Milliards DM.)

	1955	1956	1957	1958	1959
<i>A. Gross Income</i>					
Gross income from self-employment and of private companies	52.8	57.4	61.7	64.8	71.6
Surplus of Government enterprises	2.8	2.9	3.6	3.7	3.8
Gross income from employment	73.9	82.9	89.7	96.8	103.8
Salary receipts	28.8	33.0	36.8	40.8	44.3
Wage receipts	43.9	48.6	51.5	54.5	58.0
Compensations of apprentices	1.2	1.3	1.4	1.5	1.5
Employer contributions for social insurance	8.0	8.9	10.8	12.3	13.0
Indirect taxes minus subsidies	26.0	27.8	29.5	31.0	34.9
Net national product	163.5	179.9	195.3	208.6	227.1
Capital consumption allowances	14.8	16.5	18.3	19.9	20.8
Gross national product	178.3	196.4	213.6	228.5	247.9
<i>B. Net Income</i>					
Net income from self-employment and of private companies	40.3	43.1	45.7	48.8	52.8
Net income from employment <sup>1</sup>	70.3	78.4	86.2	92.3	98.6
Net income of salary earners <sup>1</sup>	25.9	29.2	32.8	35.9	39.6
Net income of wage earners <sup>1</sup>	43.2	47.9	52.0	54.9	57.4
Compensations of apprentices <sup>1</sup>	1.2	1.3	1.4	1.5	1.6
Net income of pensioners	14.1	15.9	18.9	20.9	22.5
Other Government transfer payments	2.0	2.5	4.2	5.2	6.1
Disposable income of Government	36.8	40.0	40.3	41.4	47.1
Net national product	163.5	179.9	195.3	208.6	227.1
<i>C. Expenditures</i>					
Disposable net income of private households	111.0	122.0	137.0	148.0	159.0
Income of households of self-employed	30.6	33.3	36.8	40.1	43.6
Income of households of salary earners	26.4	29.3	32.8	35.1	37.8
Income of households of wage earners	35.3	38.6	42.6	45.7	48.7
Income of households of pensioners	18.7	20.8	24.8	27.1	28.9
Personal saving	6.9	6.9	10.9	13.0	14.7
Personal consumption expenditure	104.1	115.1	126.1	135.0	144.3
Government expenditure	23.0	25.7	26.8	30.5	33.5
Gross investment	47.0	49.0	52.0	54.2	61.6
Net exports of goods and services	4.2	6.6	8.7	8.8	8.5
Gross national product	178.3	196.4	213.6	228.5	247.9

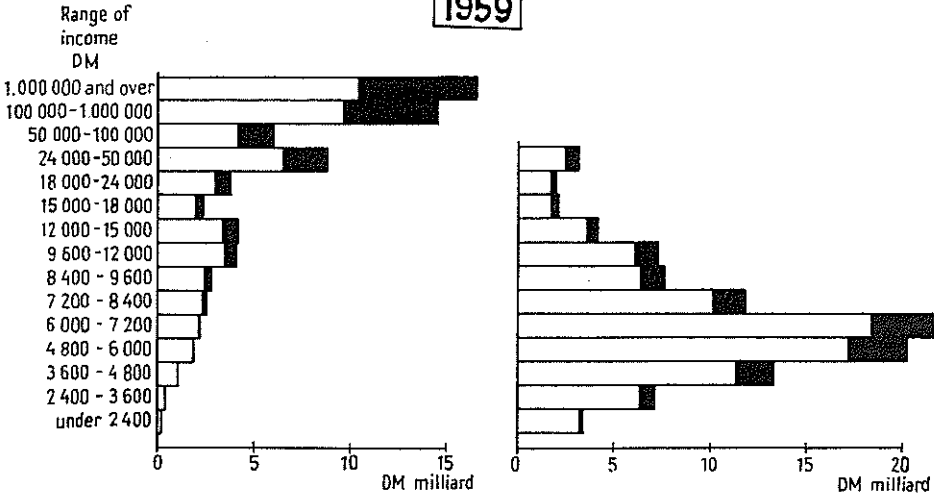
<sup>1</sup> Including transfer income.

SIZE DISTRIBUTION OF GROSS INCOME

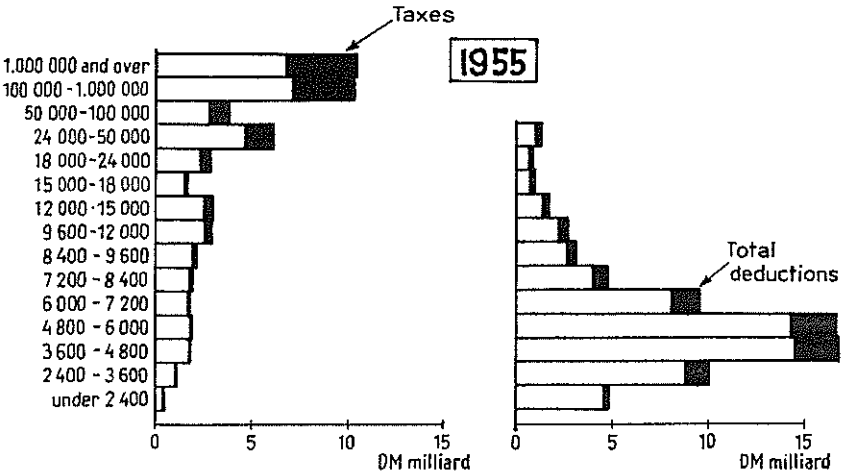
INCOME FROM SELF-EMPLOYMENT  
AND OF PRIVATE COMPANIES

INCOME FROM EMPLOYMENT

1959



1955



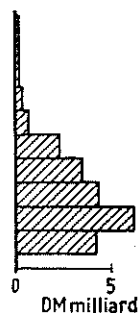
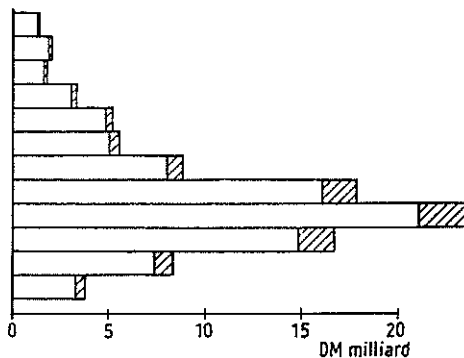
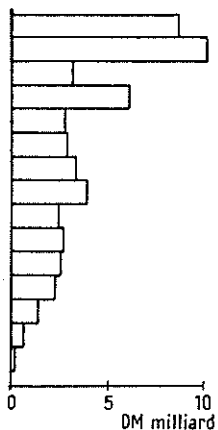
## SIZE DISTRIBUTION OF NET INCOME

INCOME FROM  
SELF-EMPLOYMENT  
AND OF PRIVATE  
COMPANIES

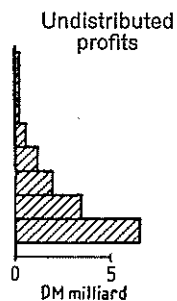
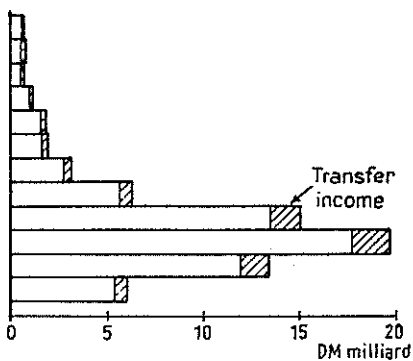
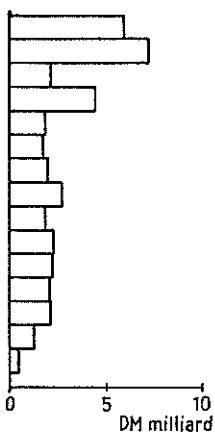
INCOME FROM  
EMPLOYMENT

INCOME OF  
PENSIONERS

1959

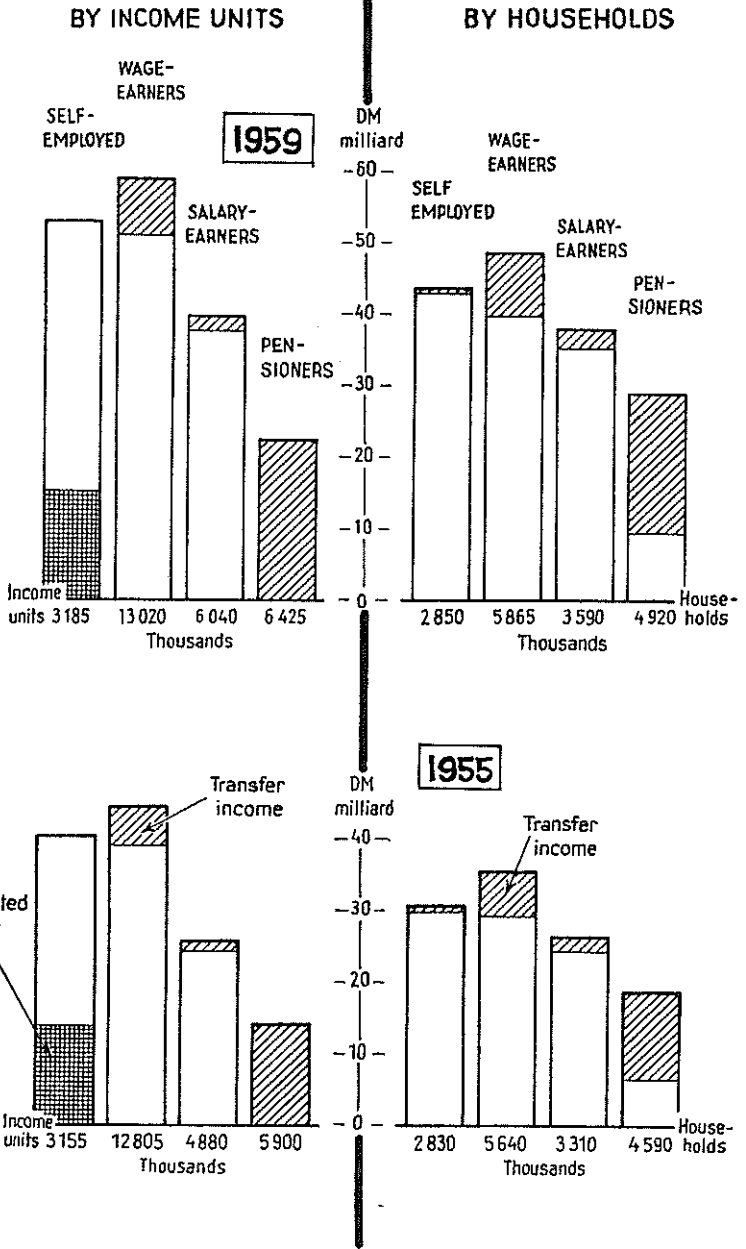


1955



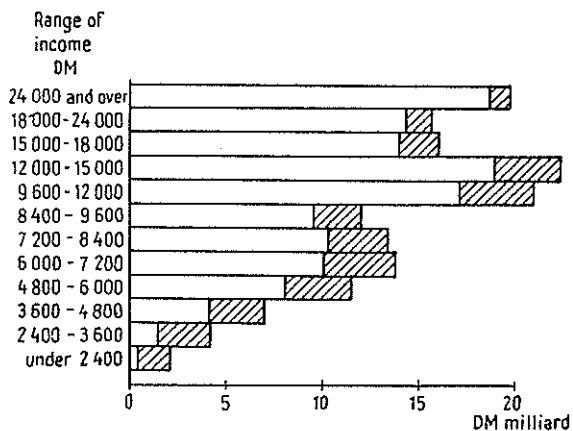


INCOME AND WEALTH: SERIES X  
 TOTAL DIVISION OF PRIVATE NET INCOME



## SIZE DISTRIBUTION OF NET INCOME OF HOUSEHOLDS

1959



1955

