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DISTRIBUTION OF WEALTH AND INCOME UNDER THE NAZIS

GENERAL interest in the distribution of income according to size in Nazi Germany arises not only from its close relation to spending-saving patterns influencing the course of the business cycle, but also from its relevance to the question of who benefits from the regime. Moreover, the extent of inequality of both wealth and income is one of the important criteria for the classification of the Nazi economy under state capitalism or socialism.

I

Because of totalitarian censorship and widespread use of the press for the ends of the state, many people have an understandable hesitancy to accept any analysis based on German data. For this reason, questions concerning the validity of Nazi statistics need to be anticipated. After working carefully and critically with German data, one discovers that concealment frequently takes the form of not publishing certain economic facts rather than actually tampering with the figures. It is very difficult to falsify statistics in a consistent manner; for misrepresentation in one area requires changes in others in any one year and necessitates further falsification over time. Business men and bureaucrats require accurate statistics upon which to base their activities, and the official publications used within Germany are identical with those sent abroad. Moreover, the government statistics frequently contradict official assertion as to what has been accomplished, and this contradiction itself is a partial endorsement of their accuracy. The German figures are, of course, open to the defects of statistics for any country. Trustworthy economic interpretation in any case necessitates painstaking criticism — to determine the precise significance of definitions describing numerical items as well as to test the comparability and consistency of the items.

The German data on size distribution of combined income among individuals are fairly comprehensive. The total number of those included is equal to the total number of the gainfully employed minus family members in the family business, plus persons living on the income from their investments; and it amounts to more than 30 million individuals in any one year.[1] The statistics are based on the income tax and the wage tax figures and have certain defects for this study. The chief of these defects are: (1) variations in the period covered by the tax assessment determining income, and (2) lack of precision in the measurement of income because of provisions of the tax laws relating to deductions allowable before arriving at net income.[2] The size classifications are in terms of the amount of statutory net income.[3]

The frequencies of the various size classes as tabulated by the German Statistical Office reveal the extreme skewness such as is customarily found in income data. This skewness not only robs the arithmetic mean and other simple sta-

[1] *Statistisches Jahrbuch für das Deutsche Reich, 1937*, p. 535. The figures for 1936 were not compiled by the statistical office and had to be computed directly from the income tax statistics and the wage tax statistics reported in *Wirtschaft und Statistik*.

[2] Until 1934 the periods covered by the tax assessment were as follows: for agriculture and forestry from July 1 to June 30; for business enterprises, the fiscal year of the undertaking; and for all other taxpayers, the calendar year. After 1934, however, the assessment covers the calendar year in all cases.

The figures do not contain the income for which no tax declaration was required under the tax laws. They do include all the assessed persons, even if tax exempt. Individual wage income of less than 8000 Reichsmarks per year after deductions of the tax exempt amount is liable to the wage tax which is deductible at the source and all those liable are included here.

[3] "Income" for purposes of taxation is defined as the total gross earnings minus losses and special expenditure — the surplus of receipts over "expenditure incurred for the acquisition, securing and maintenance of income." Profits are determined for purposes of the income tax laws by a comparison of the working assets of one year with those of the preceding year. Depreciation charges, etc., may be deducted from the gross income, but outlays for investment and extensions and improvements are not deductible in determining taxable income. Fees and indirect taxes may also be deducted, but income and property taxes may not. Interest due on a debt, whether the debt was incurred for purposes of production or consumption, may be deducted. Previous to 1934, losses could be deducted if offset by earnings from other sources and could be carried forward to the following two years. The 1934 tax law, however, did not contain this provision. Deductions for expenditures on professional education of the tax payer, and contributions to the relief, welfare, and pensions funds by employers were permitted until 1934. Insurance premiums and employees' contributions to social insurance up to 600 RM are still deductible.

tistical summarizations of their significance but also prevents the charting of these data by the simple methods ordinarily used for frequency series.

For such skewed series, the graphic method devised by Pareto is often helpful, and it is used here as the general means of representation and analysis. The application of the method does not necessitate any implication as to a law of distribution for values of income outside the range covered by the observed data, and is used solely to describe the distribution within the range of the given statistics.[1] According to this method the frequencies are cumulated, from the highest class toward the lowest. A chart is constructed with horizontal measurements representing size of income and vertical measurements representing cumulated frequency. Both scales are logarithmic. The cumulated frequencies are contained in Table 1 and the corresponding Pareto-type curves are shown in Chart 1. Because of the smoothness of the curves in Chart 1 and others to be presented here, the curves joining the plotted points are used rather than "fitted" ones.

TABLE 1.—DISTRIBUTION OF INCOME IN GERMANY ACCORDING TO SIZE *

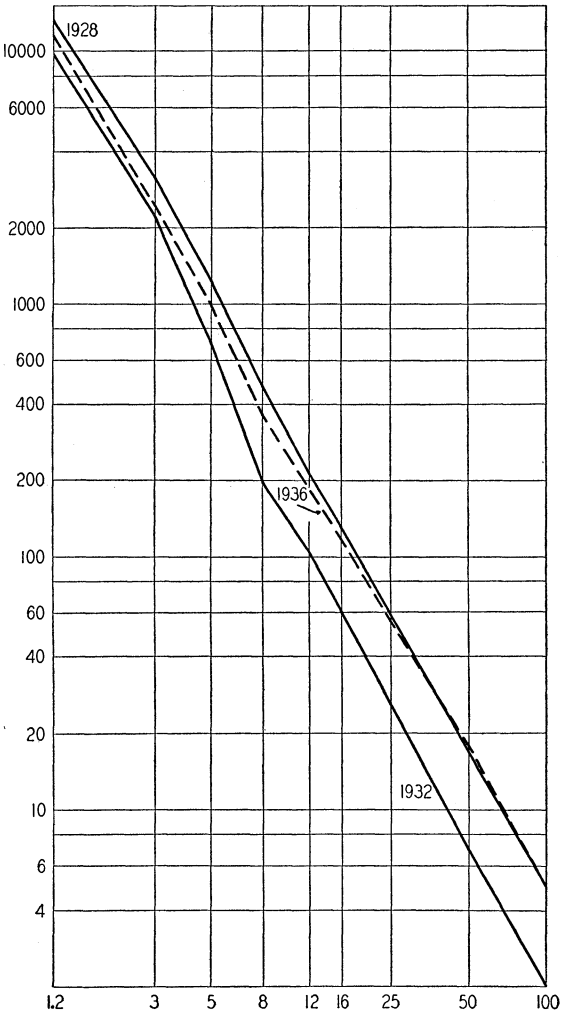
LOWER LIMIT, INCOME CLASS (*1000 RM*)	CUMULATED FREQUENCIES (*1000*)				
	1926	1928	1932	1934	1936
1.2	10,847	13,180	9,863	11,664	11,492
3	2,348	3,239	2,279	2,563	2,504
5	863	1,248	716	821	1,002
8	333	469	196	256	367
12	161	218	103	125	189
16	97	132	60	74	119
25	44	59	26	32	57
50	13	17	7	9	18
100	4	5	2	2	5
Average inequality †	.549	.552	.500	.491	.599

* *Statistisches Jahrbuch für das Deutsche Reich, 1937*, p. 535, and *Wirtschaft und Statistik*, 1938, pp. 922, 961, give numbers in each specified item. Cumulated frequencies and average inequality are computed figures.

† For explanation, see text.

CHART 1.—DISTRIBUTION OF INCOME IN GERMANY

(*Horizontal scale represents size of income; unit, 1000 RM. Vertical scale represents cumulated frequency; unit, 1000. Both scales logarithmic*)



The plotted curves are, moreover, so nearly straight lines that the average inequality of the range covered, except for the lowest class interval, can be inferred from the direction of a straight line joining two widely separated points

[1] For similar analysis applied to American data see: W. L. Crum, "Individual Shares in the National Income," this REVIEW, XVII (1935), pp. 116–30. F. R. Macaulay in *Income in the United States* (National Bureau of Economic Research, New York, 1922), pp. 341–94, has given a general criticism of the Pareto law and the method, with emphasis upon (1) the linearity of the plotted points, (2) the validity of the least-squares fit, (3) the constancy of the slope of the fitted line, and (4) the wisdom of projecting the line. See also G. F. Shirras, "The Pareto Law and the Distribution of Income," *The Economic Journal*, XLV (1935), pp. 663–81; D. H. MacGregor, "Pareto's Law," *ibid.*, XLVI (1936), pp. 80–87; N. O. Johnson, "The Pareto Law," this REVIEW, XIX (1937), pp. 20–26; Rufus S. Tucker, "The Distribution of Income among Income Taxpayers in the United States, 1863–1935," *Quarterly Journal of Economics*, LII (1938), pp. 547–87.

of the plotted curve.[1] The points chosen are for statutory net income of 1,200 RM and 100,000 RM. The slope of this line gives the ratio of the percentage change in number of individuals to percentage change in size of income. An increase in steepness means a decrease in inequality, for if the percentage change in the number of individuals is relatively large for a given percentage increase in individual income, people are closely alike with respect to size of income. Thus, to obtain an index of inequality, the slope is inverted, and the minus sign is neglected; hence, the average index of inequality, as given by the reciprocal of the slope, reflects increase in inequality. The estimated reciprocal slopes, for lines visually located, are given in Table 1. Inadequate data may account for small discrepancies among these items, but considerable differences are undoubtedly significant.[2]

There was a slight tendency for the slope to be greater in depression than in prosperity, as can be seen from a comparison of the curve for 1932 with those for 1928 and 1936. Average inequality was not only greater in prosperity than in depression, but it was also larger in the Nazi boom year of 1936 than in 1928. Comparisons of this sort must be qualified by due consideration of the somewhat treacherous way in which the Pareto method of charting condenses the statistical evidence.

A more detailed picture of the changes in inequality can be obtained from a close examination of the steepness of slope between different points of the curves for 1928 and 1936. The slope of the line between the 50,000 RM and the 100,000 RM points is slightly steeper for 1936 than for 1928; on the other hand, it is less steep in 1936 between 8,000 RM and 50,000 RM. This means that the percentage number of individuals receiving very large incomes increased in 1936 in comparison with 1928, while the percentage number of medium-sized incomes diminished. There is little variation from year to year in the percentage number of lower income receivers.

The distribution of wage income is shown in Chart 2 and the distribution of salary income in Chart 3. The Pareto method of analysis applied to the combined income data is also used for wages and salaries. The unit along the horizontal axis now becomes size of wage income, or of salary income. The wage data are reported by the *Invalid* Insurance and the salary

CHART 2.—DISTRIBUTION OF WAGE INCOME IN GERMANY

(Horizontal scale represents size of wage income; unit, 1 RM. Vertical scale represents cumulated frequency; unit, 1000. Both scales logarithmic)

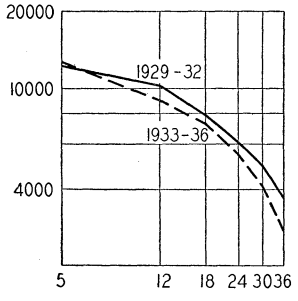
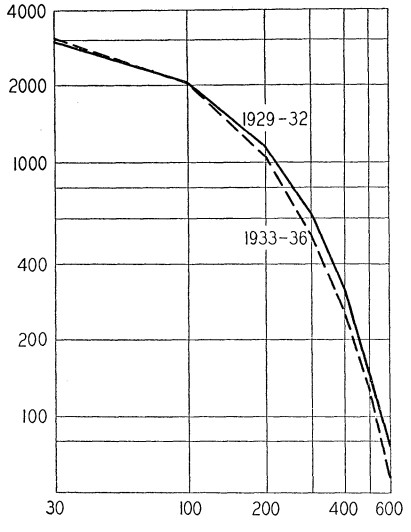


CHART 3.—DISTRIBUTION OF SALARY INCOME IN GERMANY

(Horizontal scale represents size of salary income; unit, 1 RM. Vertical scale represents cumulated frequency; unit, 1000. Both scales logarithmic)



[1] If the frequencies for the lowest class interval, under 1,200 RM, are included, the plotted curve reveals convexity. The practical problem of charting is the reason the interval is not included. It seemed wise to discuss distribution of income less than 1,200 RM in connection with wages and salaries for which there are frequencies related to smaller class intervals. Probably most of the income in this lower bracket represents wages and salaries, although this is not completely true. Unfortunately, there is no classification according to smaller class intervals for income other than wages and salaries. Moreover, it was possible to use the social insurance figures which are far more inclusive than the wage tax statistics.

[2] An example of an insignificant discrepancy is the small decline in average inequality in 1934.

figures by the Insurance for Office Employees.[1] The former data include not only industrial wage earners but also workers receiving remuneration in agriculture and trade — young clerks, journeymen, apprentices, and domestic servants. Included in the wage income in addition to money wages are industrial bonuses received by wage earners, payments in kind, and all other items with the exception of pure gifts which the wage earner receives in place of wages or in addition to them. Salaries cover all clerical employees, including managers who do not earn more than 7,200 RM per annum, and are under 60 years of age at the time of first insurance.

Table 2 shows the cumulated frequencies for salaries and wages for all years between 1929 and 1936 inclusive. The similarity in the curvature of these frequencies from year to year for both salaries and wages was so great that it was necessary to take an average of several years in order to make a clear graphical presentation. Inasmuch as the plotted curves are decidedly convex upwards rather than straight lines, no average inequality indices were computed.[2] Considerable information can be gained from a study of the relationship of the convex curves. The wage chart reveals an increase for the period 1933–36, as compared with 1929–32, in the percentage number receiving an income between 30 and 36 RM. An increase likewise appears in the percentage number of those receiving incomes below 12 RM. Salaries also show an increase in the percentage number in the lowest class interval, but there is no significant variation in other parts of the curves.

This slight variation in the distribution of individual wage and salary income is probably influenced by cyclical factors. The average covering the years 1929–32 includes two depression years while the period of the Nazis contains

TABLE 2.—DISTRIBUTION OF WAGES AND OF SALARIES IN GERMANY *

Lower Limit, Wage Class (*weekly wages in RM*)	Cumulated Frequencies (*1000*)								Average for 1929–32	Average for 1933–36
	1929	1930	1931	1932	1933	1934	1935	1936		
0	14,760	13,364	11,553	9,985	10,890	12,566	13,377	14,184	12,416	12,754
12	12,426	11,259	9,563	7,771	7,962	9,299	9,995	10,754	10,255	9,503
18	9,994	9,013	7,409	5,500	5,689	7,877	7,877	8,704	7,979	7,341
24	8,077	7,096	5,555	3,876	4,090	6,068	6,068	6,908	6,151	5,578
30	6,769	5,872	4,414	2,806	2,903	4,539	4,539	5,311	4,963	4,145
36	5,577	4,832	3,493	1,910	1,883	3,091	3,091	3,732	3,703	2,794
Lower Limit, Salary Class (*monthly salary in RM*)										
0	3,155	3,178	2,929	2,689	2,786	2,970	3,169	3,423	2,988	3,087
100	2,263	2,266	2,038	1,757	1,730	1,925	2,165	2,420	2,081	2,060
200	1,311	1,327	1,159	898	853	949	1,109	1,313	1,174	1,056
300	718	735	623	440	412	455	542	668	629	519
400	359	375	314	210	198	220	268	345	315	258
500	162	179	149	97	93	106	133	179	147	128
600	84	95	80	50	49	48	57	76	77	58

* Compiled from figures in *Vierteljahrshefte zur Statistik des Deutschen Reichs*, 1937, Heft III, p. 102.

[1] These fairly comprehensive figures are not reported directly but are calculated by the German Statistical Office from the insurance reports. The collected data give only the number of weekly contributions paid in each of eight wage income classes. The annual number of premium payers in each wage class was divided by 52 on the assumption that all the insured paid premiums for each week in the year. This hypothesis is particularly unrealistic during years of great unemployment. The error involved, however, is not very important as judged by a comparison of the total number of employed so calculated and the total given by the employment statistics reported directly. Wage tax statistics which omit tax exempt incomes could not be used because they are very incomplete. (Until January, 1935, this tax exempt amount was 100 RM monthly; since that time the amount varies according to family status.) *Wage* statistics which are reported directly are limited to industrial reports and hence are also too narrow in scope. Source: *Vierteljahrshefte zur Statistik des Deutschen Reichs*, 1937, Heft III, pp. 95–112; 1933, Heft IV, p. 112 ff.; 1934, Heft III, pp. 74–76.

The number of salary workers according to size of salary income was calculated by the official source in the following way: the number of monthly premium payments in each of seven classes was divided by 12. Before January 1, 1935, the data do not include salaries above 700 RM monthly. *Ibid.*

[2] The lower limit for the smallest class of wages or of salaries is zero as can be seen in Table 2. Because zero can not be plotted on a logarithmic scale, it was assumed that no income receivers represented here got wages less than 5 RM or salary less than 30 RM.

only one. During times of large unemployment, the lowest income classes probably go on relief to a greater extent than those receiving higher wages and in so doing are removed from the insurance statistics. The increased percentage in the highest wage-class interval for the Nazi period as contrasted with the preceding four-year average may be attributed to the unusual amount of skilled labor, particularly machine and tool die workers, required for the armament boom.

The general picture of the distribution of individual income shows that inequality has increased during the Hitler regime. There may have been shifts in the particular individuals falling within the income classes. Although the "rich" may not be the same individuals as before the Hitler government, there is, nevertheless, a greater inequality of money income. This, of course, does not indicate the distribution of real income, nor the distribution of income after deductions for taxes and other contributions to the State.[1] Unfortunately there are no available data showing total taxes paid according to income classes. Taxation and insurance contributions in 1937 amounted to 28.6 per cent of national income against 18.6 per cent in 1928 and 25.4 per cent in the depression year 1932. The distribution of *income* tax according to income classes shows that all classes except the largest one shared in the increase of total income taxes paid in relation to taxable income.[2] The bulk of the taxation, however, is of a non-progressive nature with labor sharing a greater percentage of the total tax revenue in 1937 than in 1929 or 1932. Taxes mainly on propertied groups — income tax, corporation tax, property tax, and inheritance tax — contributed 29.3 per cent of total revenue in 1928–29 while taxes mainly on labor — wage tax, turnover tax, excise, and duties — amounted to 58.6 per cent. The share of total tax revenue contributed by the properties group had grown by one per cent in 1937–38, while labor's burden had increased 3.4 per cent.[3]

II

This picture of the inequality of income is in general agreement with that for the inequality of wealth in 1931 and 1935, the only years for which comparable data are available. The unequal distribution of property tends to carry with it inequality in income derived from property, not only directly through its existence, but also indirectly through its effect on the production of other incomes.

TABLE 3.—DISTRIBUTION OF WEALTH IN GERMANY, 1931 AND 1935 *

LOWER LIMIT OF CLASS (*1,000 RM*)	1931		1935	
	Number	Cumulated number	Number	Cumulated number
30	234,548	481,647	131,780	488,052
40	.....	.....	82,243	356,272
50	155,676	247,099	97,242	274,029
70	.....	.....	67,868	176,787
100	68,925	91,423	79,510	108,919
250	15,048	22,498	19,056	29,409
500	5,126	7,450	6,790	10,353
1000	2,324	2,324	3,563	3,563
Average inequality †	....	.649	....	.721

* *Statistik des Deutschen Reich*, Band 519, pp. 10, 13. Figures do not include tax exempt.

† See text, p. 180.

[1] There is not space here to discuss difficulties in making adjustments for changes in the cost of living or to go into tax adjustments in any great detail. These have been considered in a doctoral dissertation which is to be published sometime in the future. The conclusion there is that allowances for these two factors do not substantially change the results based on distribution of money income received. It is obvious, moreover, that the figures given here do not show the distribution of consumption income. Consumption of all income classes is limited by government propaganda and policies so as to divert buying power into capital investment. It is not possible to determine quantitatively how these restrictions limit consumption of various income classes. Rich and poor alike are pressed for contributions to campaigns such as *Winter-Hilfe*. Levies placed upon industrial corporations to subsidize export trade merely have the effect of redistributing income between industry in general and the export business. Nor should the dividend limitation law be looked upon as modifying the general outline of the picture presented here; for it is already allowed for in the distribution of money income received. The law provides that no company can pay cash dividends in excess of 6 per cent (in certain cases 8 per cent). Any dividends in excess of 6 per cent or 8 per cent must be invested by the company in government bonds and hence this excess is not reported in individual income until it is actually received. Early in the spring of 1938, the government bonds so purchased, amounting to 100 million RM, were distributed in the form of non-interest bearing tax certificates which could be used for paying taxes in 1941 and following years.

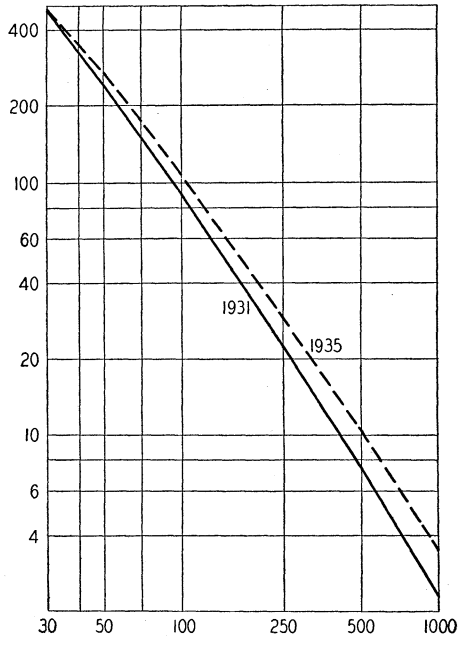
[2] *Wirtschaft und Statistik* for various years.

[3] Annual issues of *Statistiches Jahrbuch für das Deutsche Reich.*

The results of the Pareto method applied to the distribution of wealth according to size classes can be seen in Table 3 and Chart 4. The data are derived from the property tax statistics and are remarkably good for the range of total property covered, from the 30,000 RM size class to the 1,000,000 RM and over class. Total property, which is the criterion of the size class, is defined in the law in the following manner. The gross property, composed of property in agriculture and forestry, real estate, business undertakings, and other property comprising mainly stocks and bonds, is determined by the tax assessment.[1] Gross property minus debts and other liabilities and tax exemptions constitutes the total property.[2] The total property of all physical persons who normally reside in Germany is liable to the tax.

CHART 4.—DISTRIBUTION OF WEALTH IN GERMANY

(*Horizontal scale represents size classes; unit, 1000 RM. Vertical scale represents cumulated frequency; unit, 1000. Both scales logarithmic*)



Curves for both 1935 and 1931 reveal a striking approach to linearity, and average inequality is greater in 1935 than in 1931. The two years are not perfectly homogeneous because of slight changes in the amount of tax exemption permitted in the law,[3] as well as some modification with respect to prices and hence valuation. Because of the stable price policy pursued by the Nazis, price changes were not large. Moreover, even though these rather small price changes were not uniform, and hence affected different forms of property differently, the curve would merely shift provided the various total properties were made up of similar forms. Cyclical variations may also bring about changes in individual total property and thus cause shifts in the distribution of wealth. The outstanding feature of the picture drawn here is the fact that the Nazi economy can hardly be looked upon as a "socialist" regime so far as ownership of private property is concerned. Whatever may have been the specific reasons, whatever may have been the changes in identity of individuals owning property, the average inequality in the distribution of wealth was greater in 1935 than in 1931.

III

The increase in the inequality of wealth contemporaneously with increased inequality of income is, of course, not decisive in determining all the causal factors at work. According to Pareto, the distribution of income is determined not by the economic structure of society and by its institutions, but by the distribution of certain natural qualities inherent in men. He based his conclusion on the results of a statistical investigation which revealed a striking stability of the income curve in different epochs and places. But not long after the enun-

[1] Stocks are assessed at their full market value. *Statistik des Deutschen Reich, Band* 519, pp. 3–10.

[2] The general tax exemptions for 1935 were as follows: 10,000 RM for the taxpayer, 10,000 RM for his wife, 10,000 RM for each minor dependent child; and an additional tax exemption of 10,000 RM if the taxpayer is over 60 years of age, or if he will probably be disabled for not less than 3 years, provided his last annual income did not exceed 3,000 RM. In 1931, there was a uniform exemption of 20,000 RM. In addition, the following items were exempt from the property tax in 1935: (1) dwelling houses, small apartments, and one-family houses constructed during 1933–35, and (2) property exempt because of double taxation.

[3] *Ibid.*

ciation of this theory, variations in the slope of the Pareto line from time to time and from place to place, and deviations from linearity, were recognized as sufficient to cast doubt upon the accuracy and universality of the "law." [1] A recent study of inequality of incomes in Prussia for selected years between 1821 and 1928 revealed that very distinct shifts occurred in periods of economic or political unrest.[2] The statistics shown in this present study also contradict Pareto's contention that the distribution of income is hardly affected by changes in economic structure, or institutions, and indicate that inequality increased under the National Socialist regime. The average inequality during a properous year under the Nazis was greater than that for a prosperous year before the dictatorship.

The increase in inequality of income, moreover, has significance over and above its relevance to the characteristic of the institutional changes under Hitler. Generally speaking, the more unequally distributed is income the greater will be the amount saved by the community at each level of total national income. The increase in inequality of incomes thus assists the more direct attempts of the Nazis to cut consumption drastically in order that the remainder of the national income may be devoted to armaments.

[1] Studies of Sir Josiah Stamp [*Wealth and Taxable Capacity* (London, 1922), p. 87, and *British Incomes and Property* (London, 1920), p. 443] and Professor A. L. Bowley [*The Change in the Distribution of the National Income, 1880–1913* (Oxford, 1920), p. 27] show a striking stability of the income curve for England. But these studies pertain to a period of flourishing capitalism and therefore tell us nothing about the influence of different social institutions upon distribution. Schmoller studied the income distribution in Bale, Frankfort, and Augsburg in the fifteenth century and in Saxony and Oldenburg in more recent years ("Die Einkommensverteilung in alter und neuer Zeit," *Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft*, 1895, p. 1067). He also concluded that differences in personal qualities were the basic cause of inequality but admitted the influence of chance, violence, economic situation, and social institutions. The statistics for the fifteenth and sixteenth century are too meagre to be conclusive and lack of homogeneity may explain Schmoller's results rather than any fixed system of causation.

[2] C. Bresciani-Turroni, "Annual Survey of Statistical Data: Pareto's Law and the Index of Inequality of Incomes," *Econometrica*, VII (1939), pp. 107–33.

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