

# Income Cycle in the Life of Families and Individuals

W. S. WOYTINSKY\*

A HISTORICAL STUDY of wages reveals characteristic secular trends and short-term variations in the prevailing level of the nominal and real earnings of workers. Wage censuses, as well as the wage statistics and special studies of the Social Security Board suggest that, at any given time, the average level and the distribution of earnings by intervals vary with the age of the worker. If, however, it were possible to follow the record of real earnings of an average man throughout his whole lifetime—from youth through his working years to retirement and finally to death—his earnings history would show ups and downs very different from those of the recorded trend in prevailing level of wages and different also from the relationships between age and earnings shown in a cross-sectional view in the wage records of the Social Security Board for any given year.

Take, for example, the case of a man who was born in 1865 and died in 1940 at the age of 75. The wage he earned as a boy of 15, in 1880, was probably lower than the average per capita wage at that time. His earnings in 1910, when he was 45 years of age, are likely to have been higher than the prevailing wage before World War I. By 1930, however, it is very probable that his earnings no longer exceeded the average.

Still more complex are the variations in the economic level of an individual, as determined by the economic conditions in the household of which he is a member in childhood, youth, his middle years, and old age.

The relationship between age and income is of prime importance to social security measures which are designed to prevent or alleviate income deficiencies which arise from temporary interruption of current earnings or—at both extremes of the age range—from inability to earn. The following analysis of variations in economic status according to age, both at a given time and over a

period of years, was undertaken with a view toward ascertaining the periods in which the incidence of poverty and insecurity is likely to be greatest in relation to the standards prevailing in the population as a whole.

## *Income Cycle in a Worker's Life*

Cyclical ups and downs in economic level during a worker's life were described for the first time by B. Seeborn Rowntree. In his study of the life of laborers in the city of York, England, Rowntree summarized his observations as follows:

During early childhood, unless his father is a skilled worker, he [the laborer] probably will be in poverty; this will last until he, or some of his brothers or sisters, begin to earn money and thus augment their father's wage sufficiently to raise the family above the poverty line. Then follows the period during which he is earning money and living under his parents' roof; for some portion of this period he will be earning more money than is required for lodging, food, and clothes. This is his chance to save money. If he has saved enough to pay for furnishing a cottage, this period of comparative prosperity may continue after marriage until he has two or three children, when poverty will again overtake him. This period of poverty will last perhaps for ten years, i. e., until the first child is fourteen years old and begins to earn wages; but if there are more than three children it may last longer. While the children are earning, and before they leave the home, to marry, the man enjoys another period of prosperity—possibly, however, only to sink back again into poverty when his children have married and left him, and he himself is too old to work, for his income has never permitted his saving enough for him and his wife to live upon for more than a very short time.<sup>1</sup>

Although, at that time, statistical data were insufficient to check the concept of the income cycle and to measure the importance of the supposed variations in economic level, Rowntree developed an ingenious chart showing the typical ups and downs in the economic condition of a worker as he grew older.

The Rowntree theory appears to be supported by common-sense reasoning. Variations in the economic level of an individual are necessarily

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<sup>1</sup> Rowntree, B. Seeborn, *Poverty: A Study of Town Life*, London, 1901, pp. 136-137.

Table 1.—Income cycle in the life of individuals in South Carolina cotton-mill villages, 1917

Age group	Mean weekly family income per ammain <sup>1</sup>		Percent of persons in specified age groups in families having weekly incomes of less than \$4.50 per ammain <sup>1</sup>	
	Male	Female	Male	Female
Under 5	\$4.83	\$4.87	49.5	47.3
5-9	4.75	4.79	51.9	50.7
10-14	4.91	5.10	46.0	43.7
15-19	5.49	5.03	32.0	29.2
20-24	5.79	5.63	28.8	34.1
25-29	5.08	5.30	30.1	39.2
30-34	5.42	5.27	38.9	40.7
35-39	5.25	5.21	40.6	42.4
40-44	5.44	5.57	35.2	32.7
45-49	5.51	5.51	34.0	33.4
50-54	5.70	5.93	27.6	26.4
55-59	6.00	5.94	21.7	24.3
60-64	5.90	5.78	33.7	29.9
65 and over	5.33	5.00	40.4	32.6

<sup>1</sup> Theoretical consumer unit which represents "adult male-maintenance" cost.

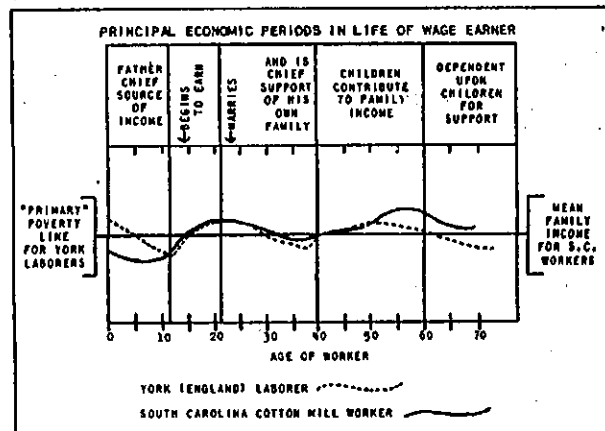
Source: Sydenstricker, King, and Wiehl, *The Income Cycle in the Life of the Wage Earner*, Washington: U. S. Public Health Service, 1924 (Reprint No. 947 from the Public Health Reports, Aug. 22, 1924), p. 6.

determined by variations in the welfare of his family—changes in income and in the needs of the household. In other words, the economic cycle in the life of individuals results from the overlapping of two typical cycles: one in family income, the other in the number of persons dependent upon this income.

A similar cycle was observed by Sydenstricker, King, and Wiehl in a study of the economic status of about 4,000 worker families (including 21,714 persons) in 24 South Carolina cotton-mill villages in 1917.<sup>2</sup> They attempted to measure variations in the economic conditions of worker families in terms of income per "ammain" (the theoretical consumer unit which represents the "adult male-maintenance" cost). After classifying the canvassed families according to economic level, the variations in economic status at different stages of family life were analyzed from two points of view—that of the family as a unit and that of the individual at different ages. The authors realized that actually they were not following the history of a group of families or individuals but were trying to construct the economic cycle of a typical family from a cross section of a number of families at different economic stages. They believed, moreover, that this picture would be

<sup>2</sup> Sydenstricker, Edgar; King, Wilford I.; and Wiehl, Dorothy, *The Income Cycle in the Life of the Wage Earner*, Washington: U. S. Public Health Service, 1924 (Reprint No. 947 from the Public Health Reports, Aug. 22, 1924, pp. 2133-2140), 8 pp. The study was made in connection with an epidemiological investigation of pellagra.

Chart 1.—Economic life cycles of South Carolina cotton-mill workers and of York, England, laborers, compared<sup>1</sup>



<sup>1</sup> For South Carolina mill workers, data based on study of 21,714 persons in 1917; for York laborers, see Rowntree's "Poverty."

Source: Sydenstricker, King, and Wiehl, op. cit.

free from the influence of variants, such as periods of industrial depression or unusual activity with their changes in opportunities for employment, in wage rates, and in the cost of living.

The series they derived from a cross classification of individual family members by age and family income per "ammain" are shown in table 1. The authors commented as follows on the charts representing these series:

Confining our attention . . . to the graphs for females, it is seen that in the age period 15-19 the income of the families in which they live is relatively high. The modal age at which marriage occurs among women is 18, and soon thereafter their economic status declines, the decline continuing until the age of 40, where a marked improvement is shown. This improvement continues until about the age of 55, when another decline sets in. The variation for males is generally quite similar to that of females except that the decline in economic status in the young adult period does not manifest itself until some five years later, a fact which is accounted for by the older ages at which men marry, the modal age of marriage for males being about 23.<sup>2</sup>

The authors were aware that the result of their analysis could not "be set forth as a generalization applicable to all population classes," but they believed that "because of the fact that the particular population studied was close to the margin of subsistence, the data lent themselves especially well for illustrating in a very elementary manner the character of the variations in economic status at different stages of family life." They

<sup>2</sup> *Ibid.*, pp. 6-7.

concluded their study by a graph, reproduced as chart 1.

It will be noticed that the decline in economic level after age 65, shown by Sydenstricker's curve, is less pronounced than in that suggested by Rowntree. It seems likely that the South Carolina sample was biased in this respect because of a very low proportion of persons aged 65 and over in the canvassed families. But for this disparity, the general shapes of the income cycles suggested by Sydenstricker and Rowntree are exactly the same, and both have three low points: in childhood, in early middle life, and in old age.

The fragmentary observations of Rowntree and Sydenstricker were not a sufficient basis for generalization, however, and more inclusive statistics were necessary to check their theory. Such statistics have been provided by the Family Composition Study.<sup>4</sup>

#### *Variations in Family Income (Family Composition Study)*

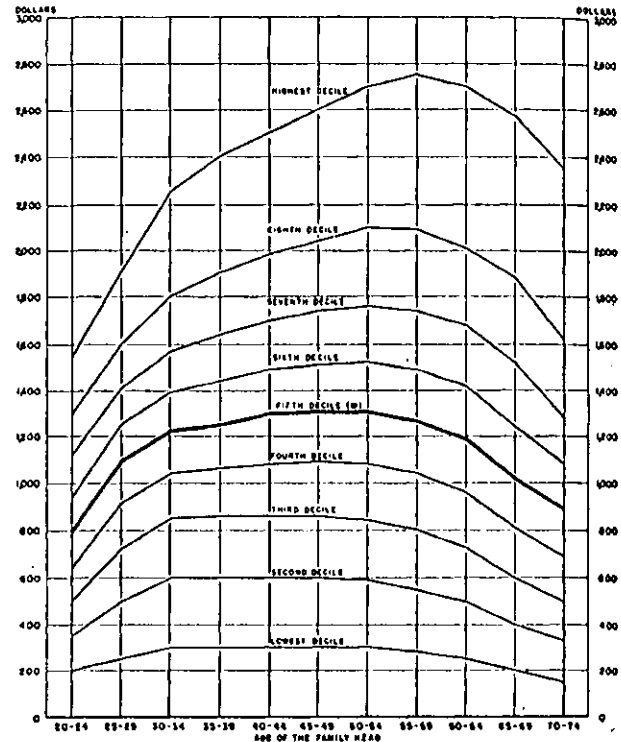
The Family Composition Study classified more than 400,000 single-family urban households by income, age of the family head, and size of the household. This cross classification shows that the proportion of families in the lowest income interval (less than \$1,000, including relief families) declines as the age of the family head increases from age 20 on, is at the low point (37 percent) in the age interval 40-49 years, and rises steadily after age 50. On the other hand, the proportion of families with an income of \$2,000 or more increases with the age of the family head up through the age group 50-54, and that of families with an income of \$3,000 or more continues to increase through the 55-59 age group.

The variation of family income with the age of the family head is best described by the decile incomes of families with the head in the different age intervals.<sup>5</sup> As chart 2 shows, these deciles constitute a set of slightly asymmetric bell-shaped series. At the lower end of the frequency distribution ( $D_1$  and  $D_2$ ), the peak is reached when the family head is 30-34 years of age. The median income increases up to the age group 45-49 years.

<sup>4</sup> For a description of this study and analysis of data from it, see Sanders, Barkev S., "Family Composition in the United States," *Social Security Bulletin*, Vol. 2, No. 4 (April 1939), pp. 9-13; further analyses have been carried in the Bulletin from time to time.

<sup>5</sup> Limitations of this method are evident. The lowest income interval (under \$1,000, including relief families) in tabulations of the Family Composition Study is too large, and its freehand interpolation is open to criticism.

**Chart 2.—Decile annual incomes of families<sup>1</sup> classified by age of the family head**



<sup>1</sup> Urban, single-family, husband-and-wife households canvassed by the Family Composition Study, 1935-39.

The peak of the highest decile is reached only when the family head is 55-59 years of age. The decline of income in families headed by elderly persons is most pronounced at the lower end of the frequency distribution.

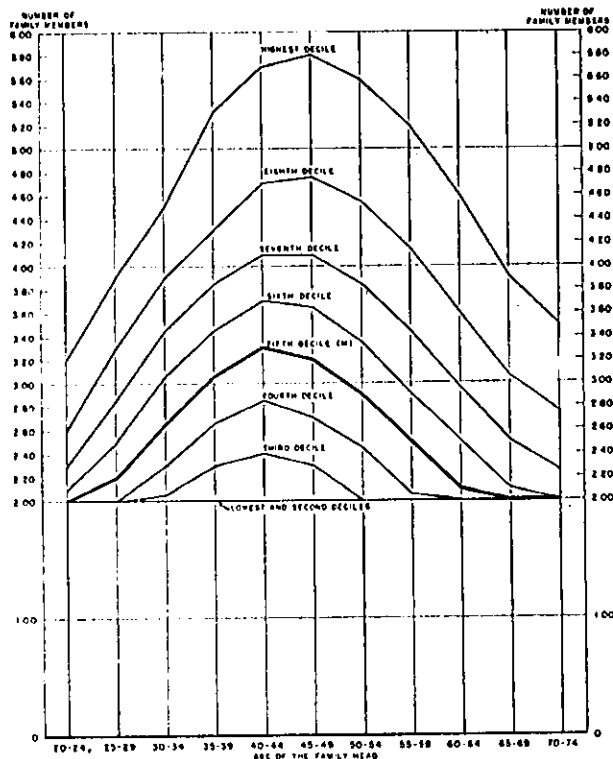
Because of appreciable differences in the shape of the family income cycle at different points of the frequency distribution, the cycle characteristic of all the canvassed families cannot be described properly by the variation of the mean income of the household with the age of the head. In fact, the mean tends to overweight the comparatively high incomes of the upper 10 or 15 percent of families headed by aged persons, and presents the economic condition of the whole group of families in too favorable a light. A variation of the median income seems to provide a more realistic picture.

#### *Economic Cycle in the Life of Families (Family Composition Study)*

To visualize the way in which the economic level of typical families is related to the age of the head, variations in their incomes as shown in chart

2 should be compared with variations in their economic needs. The proportion of small families (with two or three members) declines as the age of the family head increases up to the 40-44 age group, and increases thereafter, while the proportion of large families (with six members or more) increases up to age 45-49 and declines thereafter. Thus, the size of the family and the economic responsibilities of the head tend to vary with his age in the same direction as the family income. It should be kept in mind, however, that husband-and-wife families by definition must have at least two members, so that their size deciles cannot drop below two. Moreover, since many families consist of the married couple only, the two lowest deciles of family size in all family-head age groups amount to two. This fact explains the characteristic shape of the decile curves in chart 3. Apart from the flattening of the two lowest deciles, the rest of them have the characteristic bell shape, with the top in the middle-aged classes (40-44 years for D<sub>3</sub>, D<sub>4</sub>, M, and D<sub>5</sub>; 40-49 years for D<sub>7</sub>; and 45-49 years for D<sub>8</sub> and D<sub>9</sub>).

Chart 3.—Decile sizes of families<sup>1</sup> classified by the age of the family head



<sup>1</sup> Urban, single-family, husband-and-wife households canvassed by the Family Composition Study, 1935-36.

Table 2.—Economic cycle in the life of urban husband-and-wife families according to the Family Composition Study, 1935-36

Age of family head (1)	Median family income (2)	Number of persons per family		Per capita income in families, computed on the basis of—	
		Median (3)	Mean (4)	Median family size (2+3) (5)	Mean family size (2+4) (6)
20-24	\$790	2.00	2.65	395	330
25-29	1,090	2.20	3.01	495	380
30-34	1,220	2.65	3.42	460	355
35-39	1,250	3.05	3.75	410	335
40-44	1,300	3.30	3.95	395	330
45-49	1,310	3.20	3.92	410	335
50-54	1,310	2.90	3.70	450	355
55-59	1,270	2.50	3.41	510	370
60-64	1,190	2.10	3.09	565	385
65-69	1,020	2.00	2.80	510	365
70-74	890	2.00	2.63	445	335

If, because of an increasing number of children the economic needs of a family grow more rapidly than its income, or for some other reason its income declines more rapidly than its needs, the economic level of the family will decline. Inversely, its economic condition will improve if family income grows at a greater rate or declines at a smaller rate than its needs. Very roughly, the cycle of economic level in the life of a family may be characterized by the varying ratio of its median income to its mean or median size, as shown in table 2.

These ratios indicate three low points in the economic level of families; in the age group 20-24, at the beginning of married life; when the family head is in his 40's; and when he is 65 or over. This rhythm is similar to that observed by Rowntree and Sydenstricker.

It is recognized, however, that the method used here is too rough to be conclusive. Its weakest point is that it prorates the income among family members as if the needs of a family were strictly proportional to its size. As a rule, the economic needs of a family, including expenditures for food, clothing, housing, fuel and light, personal care, and so forth, do not increase in direct proportion to the number of persons in the household. Several formulas have been developed to measure the needs of families of different sizes in terms of consumer units,<sup>6</sup> but none has received general acceptance. Therefore, a set of alternative

<sup>6</sup> See Williams, Faith M., and Hanson, Alice C., *Money Disbursements of Wage Earners and Clerical Workers, 1934-36; Summary Volume*, U. S. Bureau of Labor Statistics, Bulletin No. 638, 1941, pp. 362 ff.

methods which control one another has been used by the author: (1) the first two family members (husband and wife) were counted as one unit each, and the other family members as 0.5 of one unit; (2) the first two family members were counted as one unit each, and the others were weighted on a scale which increased with the age of the family head. For example, the third, fourth, and additional members of a family with the head aged 20-24 years were counted as 0.4 of a consumer unit each; a weight of 0.5 was set for families with the head 30-39 years of age, a weight of 0.6 for families with the head 40-44 years of age, and so on.

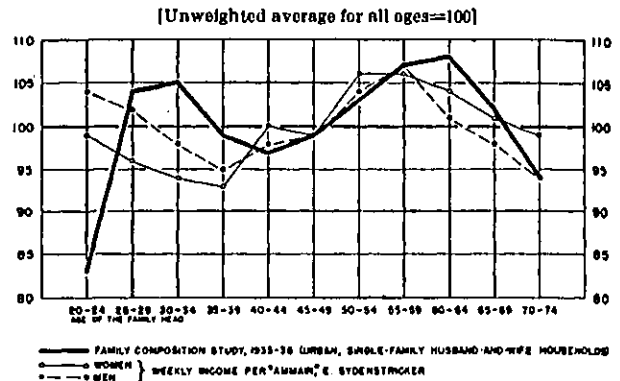
Both formulas, as well as the crude procedure used in table 2, were applied subsequently to all families with heads of the specified age and to those of this group of families which fall into the median income intervals. In this way, six alternative series were developed to measure the economic needs of the specified groups of families.

All six series reveal the same general rhythm, with high points in the age classes 25-34 and 55-64, and a trough between them in the 40-49 age group. Similar results are obtained if the median income is compared with the median number of consumer units per family, either for all families with the head in the specified age group or for families whose income is in the median income interval (column 5 in table 2).

All the procedures of comparison corroborate the following observations. As the age of the family head increases from 20 to 30 years, the median family income grows more rapidly than the family's economic needs. When the family head nears the age of 50, variations in income and family needs tend to counterbalance each other. As the age of the head advances from 50 to 65, the needs of the family decline proportionately more than does its median income, and after age 65 the family income declines more rapidly.

The resulting economic cycle is illustrated in chart 4, which presents an index of median income per consumer unit computed as the mean of the six series described above. The variations in economic level shown by this chart confirm the observations of Sydenstricker, with only one difference: all inflection points of the new curve occur 5 years later than those of Sydenstricker's cycle for men and women in South Carolina villages. An explanation of this lag between the

Chart 4.—Index of median income per consumer unit of families classified by age of the family head



two cycles may be that in the urban areas canvassed by the Family Composition Study in 1935-36 the usual ages of entrance into gainful work and of marriage were higher than in the South Carolina cotton-mill villages in 1917.

### Economic Cycle in the Life of Individuals (Family Composition Study)

Statistics of the Family Composition Study showing the distribution of individuals in the canvassed urban areas by age and by type, size, and income of the family, can be transformed into a classification of the individuals by income per consumer unit. For this purpose, the first two family members may be counted as two consumer units, while each of the other family members is counted as one-half a consumer unit.<sup>7</sup>

<sup>7</sup> This procedure implies the following interpretation of family income in terms of income per family unit:

Number of persons in family.....	1	2	3	4	5	6	7	8	9	10
Number of consumer units.....	1	2	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0

#### Income per consumer unit

Family Income	\$1,000	\$500	\$400	\$333	\$286	\$250	\$222	\$200	\$182	\$167
\$1,000.....	1,000	1,000	800	667	572	500	444	400	364	333
2,000.....	3,000	1,500	1,200	1,000	868	750	667	600	546	500

Specifically, the reported distribution of families with specified number of persons by income intervals was represented by a cumulative ogive. Then the horizontal scale of the graph (showing family incomes) was transformed according to the number of consumer units per family, and the percentage of individuals in the specified economic intervals was read from the transformed graph. From the ascertained percentage distribution, absolute numbers were computed. Apart from its simplicity, the formula used here for computing the income per consumer unit has no special merits in comparison with other formulas which may be developed for this purpose.

The Family Composition Study distinguishes two groups of urban households—single-family households and multi-family households. Since the worksheets of the Family Composition Study preclude a uniform age classification of individuals in these two groups, 5-year intervals should be used for all persons under 80 years of age in single-family households, while members of multi-family households can be distributed only by larger age classes. In view of this difference in classification, the two groups should be examined separately.

*Single-family households.*—Variations in the deciles of income per consumer unit by age of individuals in single-family households are shown in chart 5. The median of the economic level of children under 5 is less than \$300 per consumer unit. It is even lower in the age classes 5–9 and 10–14, and probably reaches its lowest point of approximately \$280 at the age of 10 when there are most likely to be several minors in the family

and no supplementary earner. The situation begins to improve after age 15. Supplementary earners in the family are likely to begin working, and the income per consumer unit increases rapidly, although this is the time the family head is approaching the age at which his earnings begin to decline. The median income per consumer unit continues to rise in the 20's, the age when most young people leave the parental home and start a household of their own. A high point is reached between 30 and 34, and then a decline begins as the responsibilities and economic needs of the family increase more rapidly than its income. The withdrawal of married women from gainful work is probably an additional factor in the declining economic level of individuals at this stage. The period during which the individual is less well off, economically, than before lasts about 10 years. From 45 to 49 years an improvement becomes apparent, partly because of the supplementary earnings of the younger members of the family, and partly because of the diminishing family responsibilities of the head. The gradual upswing lasts until the age of 60 and is followed by a new decline, slow at the beginning, steep and abrupt after age 65. This general pattern is repeated, with slight variations, by the deciles on both sides of the median.

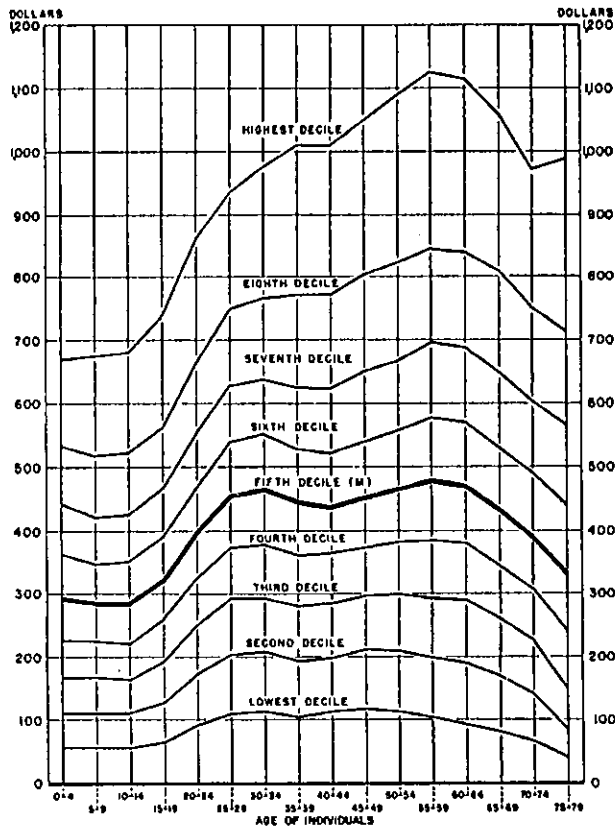
The two lowest deciles in the 60–64 age class are lower than for persons 25–29 years of age, and the third decile is at about the same level in both age classes. Beginning with the fourth decile the economic level in the ages 60–64 is higher than in the 25–29 age group, and the contrast in favor of the aged increases toward the upper end of the frequency distribution. The ratio of the economic levels in the two age classes, at the specified points of the frequency distribution, is as follows (in percent):

D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	M	D <sub>5</sub>	D <sub>6</sub>	D <sub>7</sub>	D <sub>8</sub>	D <sub>9</sub>
83	94	99	102	104	106	109	112	119	

If variation of economic level with advancing age is described by the arithmetic mean of incomes on each age level, the upward tendency in the upper deciles will conceal the relative deterioration of the economic conditions in the middle and lower income groups. Apart from this, the economic cycle of individuals is very similar to that of husband-and-wife families shown in chart 4.

The sample analyzed covers almost 1.7 million individuals in urban areas scattered over the

Chart 5.—Deciles of the economic level in the life of individuals<sup>1</sup>



<sup>1</sup> Members of urban, single-family, husband-and-wife households canvassed by the Family Composition Study, 1935-39.

United States, and is more than 100 times that used by Sydenstricker.

**Multi-family households.**—The general pattern of correlation between the age of individuals in multi-family households and their economic level may be ascertained from the distribution of more than 600,000 individuals by large age classes, by family income, and by size of household.<sup>8</sup> A comparison of these statistics with the respective data for single-family households reveals considerable difference in the age distribution of these two groups:

Age group	Percentage distribution	
	Single-family households	Multi-family households
All ages	100.0	100.0
0-14	26.7	20.6
15-24	17.6	16.5
25-44	33.4	31.3
45-59	15.8	17.1
60-64	2.8	4.5
65-79	3.7	10.0

<sup>1</sup> Includes persons 80 years and over.

The proportion of aged individuals in multi-family households is remarkably high in comparison with that in single-family households, while the relative number of children under age 15 is low. Aside from this variation, the distributions by economic level are similar; the only difference is that children and aged persons are somewhat better off in multi-family than in single-family households, while the opposite relation is characteristic for the age classes from 15 to 65 (table 3). This difference is probably due to the high proportion of three-generation households among multi-family units. The theory of an economic cycle in the life of families and individuals presumes in fact that grown children, able to support themselves, leave the parental home. If they stay with their parents, the typical cycle is ironed out to some extent.

**All households.**—When both types of families are considered together, variations in the economic levels of individuals, by age groups, appear smoother than they are for members of single-family households alone. Therefore, deciles of economic level presented in the upper panel of table 3 should be adjusted—upward for children

<sup>8</sup> Includes households of three types: husband-and-wife households, broken families with male heads, and broken families with female heads. Households with more than 10 members or with persons not related to the head are excluded.

Table 3.—Economic cycle in the life of individuals (decile incomes per consumer unit) in urban families, 1935-36<sup>1</sup>

Age of individual	Lowest decile	Second decile	Third decile	Fourth decile	Median	Sixth decile	Seventh decile	Eighth decile	Highest decile
Single-family households									
0-14	\$55	\$110	\$165	\$220	\$280	\$350	\$430	\$525	\$685
15-24	70	145	220	290	380	430	510	615	800
25-44	100	200	300	370	450	530	635	765	980
45-59	110	210	300	380	465	555	665	820	1,100
60-64	90	190	288	380	472	570	687	840	1,115
65-79	75	150	230	320	405	500	620	745	1,025
Multi-family households									
0-15	\$55	\$115	\$175	\$235	\$305	\$380	\$470	\$485	\$825
16-24	65	130	200	265	335	410	500	615	825
25-44	90	185	270	345	425	505	605	750	1,025
45-59	95	185	270	350	440	530	635	790	1,100
60-64	90	185	270	350	440	530	625	780	1,080
65 and over	90	180	260	340	425	500	600	750	1,020
All households									
0-4	\$55	\$110	\$167	\$230	\$302	\$373	\$447	\$538	\$685
5-9	55	110	167	229	295	357	426	523	675
10-14	55	110	163	225	295	367	430	528	680
15-19	63	123	183	250	315	385	461	562	747
20-24	90	167	240	313	380	458	538	663	872
25-29	108	198	282	363	450	538	613	743	940
30-34	110	202	282	368	460	550	623	755	980
35-39	102	188	268	350	440	527	610	760	1,015
40-44	110	193	275	355	433	522	608	760	1,015
45-49	110	200	285	363	447	535	635	802	1,050
50-54	105	198	286	372	462	552	653	822	1,085
55-59	97	188	265	376	475	572	680	844	1,125
60-64	90	185	263	375	460	560	670	830	1,100
65-69	80	168	260	350	440	530	643	810	1,050
70-74	70	150	240	315	405	500	597	760	992
75-79	50	120	180	260	350	460	560	730	975

<sup>1</sup> Data from the Family Composition Study.

and especially for aged persons, downward for the middle age classes. In this way the deciles of income for almost 2.3 million individuals in all canvassed families have been computed (lowest panel in table 3).

### Economic Cycle in the Life of Individuals and Long-Range Trend in Earnings

The economic cycle in the life of individuals, as described by the decile income per consumer unit in table 3, was derived from the distribution of persons of each age by economic level at a specified date rather than from actual life histories. This conventional method is similar to that used by Rowntree and Sydenstricker, and contains similar pitfalls.

Suppose that all incomes in the Nation are distributed according to the general pattern shown in table 3, and that the same relative ups and downs in an individual's economic level could have been found 20, 30, and 50 years ago. In this case, in any given year the median economic level of a

man aged 75-79 was 22 percent below that of a man aged 25-29. This statement would not imply that the median economic conditions of the aged at the present time are 22 percent below their personal economic level of half a century before. First of all, there is no evidence that the median individuals at the age of 75-79 had a median income also in their youth. The presumption is rather that individuals with higher than average income in the 25-29 age group had more than the average chance of reaching the age of 75. On the other hand, it is extremely difficult to compare the actual economic level of an aged man with that of his family half a century ago, and, if such a comparison were attempted, changes in general economic conditions in the Nation would have to be considered.

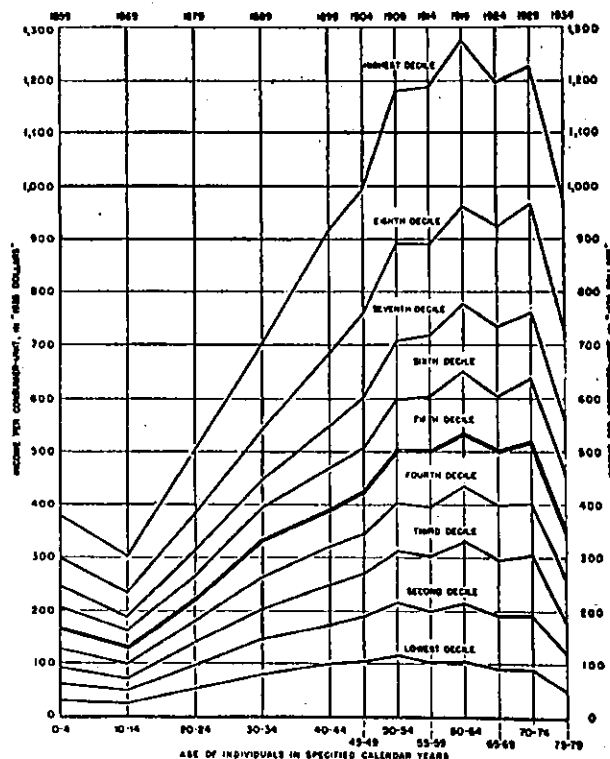
According to the income and wage statistics already examined by the author,<sup>9</sup> per capita real income in the 1880's was approximately 33 percent lower than in the middle 1930's. Assuming that the pattern of income distribution in the 1880's was the same as that suggested in table 3, the decile incomes of persons aged 25-29 years in the 1880's may be deduced by discounting those in the table by 33 percent. The following amounts are found (in "1935-36 dollars"):

D<sub>1</sub> D<sub>2</sub> D<sub>3</sub> D<sub>4</sub> M D<sub>6</sub> D<sub>7</sub> D<sub>8</sub> D<sub>9</sub>  
 \$72 \$132 \$188 \$242 \$300 \$359 \$408 \$495 \$626

A comparison of these figures with the decile income per consumer unit of persons aged 75-79 years in 1935, shown in table 3, indicates that by 1935 a deterioration had taken place only in the lower 20 percent of the distribution; while the lower quartile of incomes per consumer unit in 1935 was the same as in the 1880's, the median had increased by 17 percent, the upper quartile by 43 percent, and the highest decile by 56 percent.

In more general terms, if the pattern of differences in economic level by age of individuals remains steady as time goes on, the typical history of the economic ups and downs in the life of a generation is determined by superimposing the life cycle upon the variation in economic level of the Nation as a whole. The result of the combination of the long-range trend in wages with the cycle of a generation is illustrated by chart 6, on which the economic cycle suggested by table 3 is applied to the generation aged 75-79 years in 1935. The

Chart 6.—Hypothetical variation in economic level of individuals born in 1854-59, from childhood to age 75-79



model is developed on the assumption that the economic level of the Nation as a whole—in terms of real income per consumer unit—varied in direct proportion to the per capita real national income as estimated by R. F. Martin.<sup>10</sup> Short-time variations in the economic level of individuals at different points of the frequency distribution are ironed out in this model by the selection of years observed. For the 19th century, only decennial census years are shown, but each fifth year is represented during the period after 1899. All deciles show a continuous upswing from 1869 to 1909 (or from the specified individual's age of 10-14 to the age of 50-54), a slight improvement in the following decade, and a decline thereafter, with a secondary upswing in the late 1920's.

A similar story may be reconstructed for generations which, in 1935, were in the age groups 70-74 or 65-69 years. It appears that in the long run the economic cycle in the life of individuals is overshadowed by the secular variation in the eco-

<sup>9</sup> See the Bulletin, December 1942, pp. 31-39.

<sup>10</sup> *Ibid.*, p. 35. See also Martin, Robert F., *National Income in the United States, 1799-1938*, New York, National Industrial Conference Board, 1939.



conomic level of the Nation as a whole, and it is likely that only feeble traces of the cycle related to the age of individuals would be found in individual life histories, if such histories could be obtained.

A comparison of the hypothetical life history of individuals presented in chart 6 with the decile incomes of individuals in 1935-36, as shown on chart 5, suggests that there is no evidence that most of the aged persons now living are worse off than they personally were several decades ago, although households which include aged persons no longer in the labor force are likely to be in economic need in comparison with other families.

### Losses in Family Income Caused by Retirement of Aged Members

Roughly one-third of the population 65 years and over are either gainful workers or spouses of gainful workers, while two-thirds are retired workers, their spouses, or their widows. The composition of the two groups by sex, age, occupational background, and economic level, however, is different. Characteristic of the first group is a com-

paratively high proportion of farmers, employers, and self-employed persons. The group includes also some of the most highly paid workers in the various professions who, because of their ability and experience combined with good physical health, continue working beyond the age at which average workers can no longer retain their jobs.

The contrast between wealth and poverty in the advanced age group is reduced if the aged still at work are segregated from those no longer in the labor force. Similarly, a clear distinction should be made between families with aged gainful workers and those with superannuated persons not in the labor force. The difference in the economic level of these two groups of families is illustrated by table 4, in which multi-family households with persons of 65 years and over, canvassed by the Family Composition Study, are classified by work status of the aged and household income. Approximately one-third of the aged gainful workers in these families were out of work at the time of enumeration, and, since it may be questioned whether they still belonged to the labor force, they are tabulated separately.

It appears that multi-family households with aged members gainfully employed were better off than the rest of the multi-family households. The fact that, on the average, the economic condition of all persons of 65 and over in 1935-36 was less favorable than those in the younger age classes is accounted for exclusively by the low income level of the aged not in the labor force. By a rough measurement, the incomes of households with aged members not in the labor force were lower than those of households with aged gainful workers by the following amounts:

Table 4.—Distribution of persons aged 65 and over living with relatives in urban multi-family households, by work status and income of household, 1935-36<sup>1</sup>

Item	Men			Women		
	Gainful workers		Non-gainful workers	Gainful workers <sup>2</sup>		Non-gainful workers
	Em-ployed	Unem-ployed		Em-ployed	Unem-ployed	
Total number.....	11,254	5,214	18,163	4,157	1,499	42,206
Percentage distribution by household income: Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Relief families.....	5.1	37.5	17.1	5.0	36.5	14.1
Nonrelief families.....	94.9	62.5	82.9	95.0	63.5	85.9
Nonrelief families with income:						
Under \$1,000.....	18.5	29.0	23.8	21.0	31.2	27.0
1,000-1,499.....	21.8	15.2	21.9	22.0	18.7	22.1
1,500-1,999.....	19.4	10.0	16.3	18.8	9.0	10.4
2,000-2,999.....	18.7	5.6	12.7	18.4	4.5	12.3
3,000-4,999.....	10.4	1.4	5.5	9.5	1.3	5.4
5,000 and over.....	6.1	.4	2.8	5.2	.2	2.7
Decile household income: <sup>3</sup>						
Lowest decile.....	\$550	\$200	\$325	\$500	\$200	\$300
Second decile.....	900	350	600	850	350	675
Third decile.....	1,150	700	800	1,100	500	775
Fourth decile.....	1,375	925	975	1,325	600	950
Median.....	1,600	750	1,175	1,550	725	1,150
Sixth decile.....	1,875	900	1,425	1,810	875	1,400
Seventh decile.....	2,200	1,075	1,725	2,125	1,050	1,700
Eighth decile.....	2,700	1,400	2,050	2,600	1,350	2,025
Highest decile.....	3,750	1,800	2,750	3,600	1,750	2,740

<sup>1</sup> Data from the Family Composition Study.

<sup>2</sup> Includes spouses of gainful workers.

<sup>3</sup> Computed by the freehand method. The incomes of relief families are set at less than \$650, and it is assumed that the incomes of nonrelief families in the interval under \$1,000 range from \$650 to \$999.

Deciles	In dollars		In percent of family income	
	Men	Women	Men	Women
D <sub>1</sub> .....	\$225	\$200	41	40
D <sub>2</sub> .....	300	275	33	32
D <sub>3</sub> .....	300	325	31	30
D <sub>4</sub> .....	400	375	29	28
M.....	425	400	27	26
D <sub>6</sub> .....	450	410	24	23
D <sub>7</sub> .....	475	425	22	20
D <sub>8</sub> .....	650	575	24	24
D <sub>9</sub> .....	1,000	800	27	24

The losses of families with retired superannuated members varied from less than \$20 monthly at the lowest end of the frequency distribution to more than \$80 at its upper end. The following

are the monthly amounts of losses at the specified points of the distribution:

	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	M	D <sub>6</sub>	D <sub>7</sub>	D <sub>8</sub>	D <sub>9</sub>
Men.....	\$10	\$25	\$30	\$33	\$35	\$37.5	\$40	\$44	\$53
Women.....	17	23	28	31	33	34.0	36	48	72

These figures suggest that old-age benefits ranging from \$20 to approximately \$80 a month

would compensate families for the loss in income of their aged members. It should be pointed out, however, that the figures above relate to families canvassed by the Family Composition Study in 1935-36 and show family incomes at an early phase of recovery from the depression. Benefits would have to be appreciably higher in order to fit the economic conditions of 1941 or 1942. Specifically, the median benefit would have to approach \$50 rather than \$35.