Economic Status of the Elderly in the Era of Industrialization:
The Revisionist View Revisited

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It was widely accepted until recently that industrialization degraded the economic status of the elderly in the United States. Many contemporaries believed that aged workers were forced out of the labor force due to the changing employment conditions in the late nineteenth and early twentieth centuries (Squier 1912; Epstein 1928). It has been claimed that increased intensity of production, the greater need for formal education, new managerial practices, and the rise of age discrimination made older men less useful compared to younger workers (Graebner 1980). In addition to the pressure toward retirement, it is suggested that urbanization broke down the extended family, depriving the elderly of important roles and positions of power they used to have in the family (Cowgill 1974). Poverty and economic dependence at old ages were serious concerns for Progressive Era and New Deal reformers. The deteriorated condition of the elderly population was an important basis for the demand for more comprehensive government welfare programs in the early twentieth century (Armstrong 1932; Epstein 1938; Lubove 1968).

This traditional view of the economic status of the elderly has been questioned on various empirical grounds over the last several decades. A number of studies have suggested that departure from the labor force in the early twentieth century should have been more voluntary than forced and that aged householders should have been better off than previously thought thanks to savings and family supports (Gratton 1986, Weiler 1989, Carter and Sutch 1996a). Some demonstrated that the negative characterization of the old grew from some independent cultural, religious, and intellectual sources, not from industrialization *per se* (Fischer 1977; Achenbaum 1978; Haber 1983; Cole 1992). Historical studies on the family rejected the notion that industrialization and urbanization had brought a discontinuous transformation in the family structure and household relationship (Chudacoff and Hareven 1978, 1979;

Hareven 1979; Smith 1979). Some scholars have suggested that the establishment of public welfare programs in the United States came later as compared to other industrialized countries in Europe because the aged in America were better-off and were more independent thanks to high level of savings and other private devices of old-age security such as life-insurance and industrial pensions (Weaver 1983; Ransom and Sutch 1987, 1993; Carter and Sutch 1996a).

In addition to the above studies that largely focus on the labor market behaviors or family structure of aged workers, the recent study by Brian Gratton (1996) provided more direct evidence as to the economic condition of the elderly, explicitly examining the pattern of earnings, a more comprehensive measure of economic well-being. First, he explored how the size and composition of family earnings changed as householders aged, based on various cost of living surveys in the late nineteenth and early twentieth centuries.[1] He found that the reduction of earnings of breadwinners after middle ages was fully compensated by increased contributions from other family members, especially children. He maintained based on this result that such intra-family transfers, so-called family strategies, promised wage earners a considerable security at old ages. Gratton goes beyond this synthetic cohort analysis based on cross-section data by constructing age-earnings profile for each cohort, combining the earnings data from several different periods. For instance, he estimated the average earnings at ages 22, 50, and 67, for the cohort who were born in 1866 to 1870, using the cost of living surveys for 1888-1890, 1917-1919, and 1935, respectively. The cohort age-earnings profiles drawn in this way turned out to be positive. Based on this result, Gratton reported that male workers had experienced wage increases during the era of industrialization and that the

[1] An earlier joint paper by Gratton and Rotondo (1991) pays exclusive attention to this issue of family strategies.

declines in earnings after age 40 in synthetic cohorts were artifacts of cross-sectional data. These results are based on the samples of families headed by those who were active in the labor force and therefore may not convey the complete picture of the economic condition at older ages. Gratton, in response to this potential criticism, suggested that the aged who were out of the labor force should have fared well, too, citing the results of independent surveys on the well-being of older persons, conducted in the early twentieth century.

In what follows, I challenge this optimistic view on the economic status of the elderly, focusing on the role of family strategies and the trend of income of the elderly.[2] I argue that the portrait of the old-age lives in the era of industrialization may not have been as bright as suggested by Gratton, presenting the following evidence against his view. First, though the total family earnings remained stable after middle ages, economic well-being of individual householders, as measured by individual consumption expenditure, declined substantially as they aged. Second, aged men who were out of the labor force were much poorer than active workers. Further, the labor market activity of older males fell sharply since the late nineteenth century. Therefore, the upward trend in the earnings of active workers given by Gratton would overstate the economic performance of the entire elderly population.

Family Strategies and Economic Well-being of the Elderly

As far as a family pools the earnings of its members, the well-being of aged parents would be

[2]Other issues pertaining to the economic status of the elderly in the early twentieth century, including the trend of the labor market activity of older males, the impact of agricultural decline on the labor force participation of the aged, and the reason for departure from the labor market at old ages, are addressed elsewhere (Lee 1998, 1999, 2000).

enhanced by increased earnings of children. However, family income is not a perfect indicator of economic well-being of an individual householder for the following reasons. First, the welfare of each member of a family is determined not only by the size of family income but also by the magnitude of its needs. And the demand for income varies across families with different size and structure. Gratton partially takes into account this demand-side, showing that the per capita family income should have increased after age 50 as the family size gradually decreased (Gratton 1996, p. 49). However, age, gender, and labor force status of family members as well as the family size should have determined the consumption pattern of the family. For example, as children grew up and began to work in the labor market, their shares of family expenditure could have increased.

Secondly, Gratton implicitly assumes an unitary model of household decision-making in which household members pool their income and therefore who controls what proportion of that income does not affect household demand. However, this traditional account of resource allocation within family is not fully evident in light of the recent literature that has disputed the assumption of pooling in both theoretical and empirical fronts. Models which do not impose pooling have been introduced, including general collective models (Chiappori 1988, 1992) and both cooperative and non-cooperative bargaining models (Manser and Brown 1980, McElroy and Horney 1981, Lundberg and Pollak 1993, 1994, Bergstrom 1996). An important implication of these models is that income accruing to different family members may affect household demand differently. A number of studies have attempted to test the pooling hypothesis (Thomas 1990, Schultz 1990, Bourguinon, Browning, Chiappori, and Lechene 1993), generally rejecting pooling. In light of this literature, it is questionable how much of a reduction in own earnings of a person at older ages could have been supplemented by increased earnings of children.

For the reasons given above, the fraction of family income controlled by an householder could have diminished with age as children grew up and contributed more incomes to the family budget. In this case, the economic well-being of individual workers may have deteriorated as they aged in spite of the family strategies. It is difficult to analyze how the intra-family allocation was affected by the structure of family and source of income because the existing expenditure data do not report the expenses of each member. Here, as an indirect approach, I examine how consumption expenditure of a couple changed with age, after controlling for the household structure.

The major source for this analysis is the cost of living survey for 1917-1918 that has been used by Gratton and Rotondo (1991) and Gratton (1996). Another expenditure survey conducted in 1888-1890 used by the above studies, unfortunately, does not provide detailed information on the demographic structure of households, in particular, the age and gender of household members other than children.[3] Henceforce, the household structure can only be incompletely controlled for where this earlier survey is used. I will thus focus on the analysis based on the 1917-1918 survey and only briefly discuss the result from the 1888-1890 survey.

These surveys report the amount spent on clothing for each member of household. From these records, the average clothing expenditure for a couple can be calculated. For other items, however, only the total household expenditure is reported. Therefore, individual age-consumption profiles cannot be directly derived from these data. Accordingly, I approximate the association between the size of expenditure of a couple and the age of the head, performing the following regression:

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[3]The sources are Inter-university Consortium for Political and Social Research (1986a, 1986b).

$$E^k = \alpha + \sum \beta^h D^h + \sum \sum \gamma^{s,a} C^{s,a} + \sum \sum \delta^{s,a} N^{s,a} + \varepsilon$$

In the above model, annual household expenditure on item *k* (denoted E^K) is regressed upon the dummy variables of age of the head (*D*), the number of children (*C*) and other household members (N) of particular gender and age. Here, superscripts *h*, *s* and *a* denote, respectively, age of the head, and gender and age of children. From the estimated parameters of α and β^h, we can calculate the expenditure of a coupe at each age of the head. The intercept α indicates the amount of expenditure of a household in which only husband and wife are present and the husband belongs to the control age group. The expenditure of a couple with the husband aged *t*, for example, can be calculated as $\alpha + \beta^t$.

In the actual regression, householders are grouped into five age categories, 20-29, 30-39, 40-49, 50-59, and 60-69. The household heads ages 20 to 29 were chosen as the control group, and thus the variable $D^{20\text{-}29}$ is omitted from the regression. I classify children and other family members of each gender into seven age categories, under 5, 5-9, 10-14, 15-19, 20-24, 25-29, and 30 and older. The household budget is divided into seven items, namely, clothing, food, housing, furniture and furnishings, fuel, medical costs, and all other expenses. The parameters $\gamma^{s,a}$ and $\delta^{s,a}$ indicate the amount of expenditure on item *k* demanded by an additional child and by an additional family member other than children, respectively, of particular gender and age. In the regression analysis, the small number of households headed by a single parent or by a person under age 20 or 70 and older are excluded from the sample. In addition to the above model, an alternative specification is also tried in which polynomials of age of the head is included in place of the dummy variables. For the regressions using the 1888-1890 survey, the total number of other household members is used in stead of $N^{s,a}$ because the age and gender of these persons are not given in the data.

Table 1 presents the regression results based on the 1917-1918 survey for the total household expenditure, and seven individual items. Though the main purpose of the regression analysis is to obtain the age-consumption profile of a couple, not the detailed pattern of household expenditure, it would be relevant for the present study to discuss several features of the result. The magnitude of the parameter $(^{s,a}$ generally increases with age, confirming the conjecture that older children may have controlled more resources within family. It is also notable that the increase in the size of the parameter $(^{s,a}$ is particularly pronounced between ages 10-14 and 15-19 for both male and female children. This result indicates that the entry into the labor market of children may have been responsible in part for the positive association between the size of expenditure and the age of children. Employment of children in the labor market could have increased their expenditure either through greater demand for household resources associated with work or through income effect resulting from additional earnings of children, not fully captured by the age of the head.

Before deriving individual age-consumption profiles, let us examine whether the expenditure estimated from the result of regression would be accurate. Row A of Table 2 compares the actual amount spent on clothing by husband and wife reported in the survey and the amount estimated from the result of regression. It shows that the estimated size of expenditure is much greater than the actual amount for all age groups. This result indicates that the absolute size of the estimated expenditure may not be precise. A possible explanation for these discrepancies is that the demographic factors affecting household expenditure are not fully controlled for in the regression analysis. In terms of the shape, however, the two age profiles of clothing expenditure of a couples are reasonably similar. For example, the clothing expenditure of an aged couple as a percentage of the amount spent by a prime-age couple is 67 percent and 64 percent for, respectively, the actual and estimated figures (col. 6 of Table 2). Since the main concern of the present analysis is the shape rather than the level of the age-consumption profile, the result suggested below would be at least suggestive.

Rows B and C of Table 2 present the age profiles of expenditures on six individual items of household budget calculated from regression results based on two different specifications. The first specification (Model 1), of which result is presented here, employs the dummy variables on the age of the head. The other model (Model 2) includes age and age squared of the head. The results for these two models are generally similar. Raw D of Table 2 provides the age profiles of the total expenditure made by a couple. The first and second figures (Model 1 and Model 2) are calculated from the actual expenditure on clothing, and the expenditure on other items estimated from the regression results employing models 1 and 2, respectively. The third estimate (Model 3) comes from the result of the regression using the aggregate expenditure, of which result is reported in col. 1 of Table 1. Though the Model 3 estimate is considerably larger than the other two, the three profiles look generally similar in terms of shape.

It is clear from the result that the consumption of householders decreased with age even though the total household income was maintained thanks to the increased earnings from children. A couple with husband aged 60 to 69 spent about 80 percent of the amount that a prime age couple did (col. 6 of Table 2). It appears that the age-expenditure profile of individual householders followed more closely the life-cycle change of their own earnings than the shift of the total household income.

Male workers experienced a slight increase in household income and expenditure between ages 30 to 39 and 60 to 69, as seen in rows E and F of Table 2. Meanwhile, householders who were in their sixties earned 71 percent of the earnings of men at ages 30 to 39 (row G). This result suggests that family strategies may not have been able to keep the standard of living of male workers from declining when their earnings fell at older ages. The result based on the 1888-1890 survey provides a similar implication, exhibiting about 15 percent decline in expenditure of a couple between ages 30 to 39 and 60 to 69.

Some negative aspects of family strategies have already been noted by previous studies. Under these strategies, the economic security of parents were practically based upon sacrifice of children in the form of private taxation on earnings and lost opportunity for human capital accumulations (Thernstrom 1964, Goldin 1981). The intergenerational friction within family arising from co-residence and forced transfers from children to parents are well documented (Gratton 1993). Gratton admitted that such problems of family strategies may have generated the demand for social security (Gratton 1996, p. 58). If parents were altruistic to children in the early twentieth century, the welfare of aged householders may have been further impaired by the psychological costs accompanied by family strategies.

Trend of Income of the Elderly

Another evidence for the optimistic view of the economic status of the elderly is that their earnings increased over time from the late nineteenth through mid twentieth centuries, both absolutely and relative to younger workers. Gratton (1996) reported that older workers in 1949 made three times the nineteenth-century level and that the ratio of earnings of men aged 55 to 59 to those 35 to 39 increased from 81 percent to 88 percent between 1890 and 1935. He also showed that earnings of household heads in each birth cohort increased with age.

A serious defect of the samples of households the above result is based on is that they include only active workers with spouse present. Gratton admit this potential problem, noting that "If the inactive were uniformly impoverished or if the labor force participation of the elderly fell drastically across the period examined, the benefits of economic growth may not have extended to many of the aged" (Gratton 1996, p. 53). Therefore, at least one of following two assumptions needs to be true in order to accept the above trend of earnings of aged workers as the sign of the improvement of economic condition common to the entire elderly population. First, the economic status of retired persons in the early twentieth century was comparable to that of active workers. Second, the relative size of the retired population had remained unchanged over time.

Gratton (1996) justifies the first assumption on the economic status of the retired largely based on the results of various surveys of the 1920s and 1930s, maintaining that even the elderly who were no longer economically active had achieved relatively secure economic standing. For example, he cites the surveys conducted by the Massachusetts Commission on Old-Age Pensions in 1924 and by National Civic Federation in 1927/27, noting that a quarter of the elderly population possessed or shared with a spouse assets exceeding $10,000 and another 15 percent had at least $5000. Though suggestive, it is still hard to compare systematically the economic conditions of active workers and the retired from the given evidence. It is unclear whether the samples covered by these surveys represent well the elderly population at large in the early twentieth century. Other surveys conducted in the same era suggest a more gloomy picture of the lives of older persons. Taking an extreme example that Gratton denounced as biased, a study based on a 1930s survey reported that about two thirds of the population 65 and older were supported wholly or partially by public or private agencies or were dependent on friends and relatives (Shearon 1938). The large size of assets possessed by the elderly is inconsistent with the result of Alter, Goldin, and Rotella (1994) who reported that life cycle accumulation was not a major motive for savings in the mid nineteenth century, and with the recent study of James, Thomas, and Palumbo (1997) who found that working-class Americans around the turn of the century saved very little. Moreover, a large portion of the wealth holdings should have been represented by home ownership in the early twentieth century. Certainly, many aged home owners should have received additional incomes from boarding, especially in urban areas. However, not many persons would have liquidated their homes for financing retirement. Therefore, the actual cash incomes received by the elderly may not have been as great as the magnitude of assets suggests.

It may be unavoidable to rely upon rather fragmentary evidence in exploring the economic condition of the inactive prior to 1940 due to the lack of data on income for the entire population. However, it is possible to compare more accurately the economic status of aged workers and the retired for the mid twentieth century. The 1940 census asked all respondents their labor incomes. Later, the 1950 census reported the total income from all sources for the entire population. Given that non-labor incomes should have been more important for the retired than for active workers, the 1950 census is the first complete source needed for the purpose of this analysis. Exploiting this source, I estimate below the average incomes of older males separately for active workers including the unemployed and for those who were out of the labor force.[4]

Table 3 compares the average personal and family incomes between active male workers and retired men 60 and older. It is evident from the result that the economic status of men who were out of the labor market was much lower than that of active workers at similar ages. In terms of total personal income, the average income of the retired 60 and older was slightly greater than a third of the amount active

[4]The source is the Integrated Public Use Micro Samples (IPLUMS) of the 1950 census (Ruggles and Sobek 1995).

workers earned. This result does not change much by counting in incomes of other family members. The average family income of retired men 60 and older was about 40 percent of the amount earned by the families headed by an active male worker. Since the family size was virtually the same for the retired and participants, as seen in Table 3, the result remains true if per capita income is considered.

The relative economic status of retirees as compared to active workers should have been even lower in the early twentieth century than the above result for 1949 suggests. In the 1930s and 1940s, a series of social welfare and insurance programs for the elderly were created. In 1935, the Old Age Assistance (OAA) program was established under Title I of the Social Security Act to provide assistance to the elderly poor, mostly those who were out of the work force. By 1940, 21.7 percent of all individuals 65 years of age and older were receiving benefits and the average monthly payment was about 20 dollars. The Old Age and Survivors Insurance (OASI), a contributory insurance program, also started pay benefits in 1940. In 1949, therefore, a considerable fraction of incomes of the retired should have come from these sources. Without receiving these transfer incomes, the relative economic status of the inactive elderly should have been even poorer prior to the social security era.

The next question is how the share of the inactive among the elderly population changed from the late nineteenth century through 1950. If the labor force participation rate (LFPR) of older males did fall, the trend of earnings of active workers estimated by Gratton would overstate the actual increase in the economic well-being of the entire elderly population. The traditional belief is that the LFPR of older men remained relatively high until the end of the nineteenth century and began to decline thereafter (Durand 1948, Long 1958, Moen 1987a). In contrast, Ransom and Sutch (1986) reported that the LFPR of men 60 and older was stable at a relatively low level until the enactment of Social Security in 1935. Gratton accepted this result of Ransom and Sutch in defending the representativeness of his estimate of the earnings of the elderly. According to the evidence recently suggested, however, the labor market activity of older men appears to have started to decline in the late nineteenth century. Although this issue has been addressed in detail elsewhere (Lee 1998), I will briefly discuss it for making this note self-contained.

The main source of the disagreement on the LFPR of older men is how to determine whether an old man participated in the labor force by looking at his gainful occupation (Moen 1987b; Ransom and Sutch 1986; 1989; Margo 1993; Carter and Sutch 1996b). The conventional way of selecting nonparticipants is to exclude from the counting of the labor force persons who were not gainfully employed and those whose occupation was recorded as "retired" or a nonoccupational title. Ransom and Sutch (1986) suspected that some of those who had a gainful occupation, such as men who were unemployed for a prolonged period during the census year, may have been practically out of the labor force. Moen (1987b) and Margo (1993), on the other hand, suggested that the long-term unemployed should be regarded as participants, based on the guidelines for census enumerators and the differences in the characteristics between the long-term unemployed and nonparticipants. For a more decisive test, Lee (1998b) examined the pattern of labor market transition of older workers between 1900 and 1910, using a longitudinal sample of aged Union army veterans. The result indicates that the long-term unemployed were behaviorally closer to the employed than to nonparticipants. Even if we exclude from the work force the maximal number of the long-term unemployed who could have been actually retired, the LFPR of older men exhibits a clear downward tendency between 1880 and 1940, indicating that a dramatic change in the working lives of old men was underway in the late nineteenth century.

According to the conventional estimate, the LFPR of men 60 and older fell from 85 percent in 1880 to 55 percent by 1950.[5] Suppose for simplicity that the income of aged nonparticipants was 34 percent of the amount that active workers received, as provided by the 1950 census (Table 3), throughout the periods under study. Suppose also that the average income of active workers tripled between the late nineteenth century and 1950, following the estimate of earnings of nonagricultural male workers given by Gratton (1996). If this was the case, the average income of all males 60 and older, active in the labor market or not, should have roughly doubled between 1880 and 1950.[6] Crude as it may be, this result indicates that the trend of earnings of active workers may exaggerate the improvement of the economic status of the entire elderly population.

There is little doubt that the average income of older people rose considerably in the course of industrialization, sharing the fruits of the rapid economic growth. However, the extent of the increase may not have been as impressive as suggested by Gratton (1996). Moreover, even after the six decades of rising incomes, older persons does not appear to have fared well either absolutely or relative to the young. In 1949, the median income of families headed by men 60 and older was less than two-thirds of the amount earned by a typical family. The families headed by a person 65 and older, whose number was only 12 percent of all families, accounted for more than 27 percent of the families at the bottom fifth. On the other hand, more than 11 percent of the richest 5 percent families were represented by older families, implying

[5]Calculated from the IPUMS of the 1880 and 1950 censuses, counting the long-term unemployed in the labor force.

[6]Suppose that the average income of active workers 60 and older was y in 1880 and $3y$ in 1950. The average income of all men 60 and older in 1880 can be calculated as follows, applying the LFPR of older men and the ratio of income of the inactive to the active:

$$(0.85*y)+(0.15*0.34*y) = 0.9y$$

Similarly the average income of all males 60 and older in 1950 is given as:

$$(0.55*3\,y)+(0.45*0.34*3\,y) = 0.21y$$

that economic status was presumably more diverse among the elderly as compared to the young. (U.S. Bureau of the Census 1970, G154-156). Given that the average income was lower and income was more unevenly distributed among the aged, it is no wonder that poverty was a more serious problem for the elderly than for younger individuals. In 1949, about 40 percent of males 60 and older had family incomes lower than the half of the median income for all families. As late as the mid 1960s when President Johnson declared the war against poverty, just under a third of the U.S. population 65 and older were below the official poverty line, whereas the poverty rate for those aged 18 to 64 was about 10 percent. The relatively unfavorable economic state of the elderly circa 1950 implies the following: If the economic progress of the aged was truly impressive during the era of industrialization, as suggested by Gratton, we cannot avoid the conclusion that the economic hardship among the elderly should have been extremely severe around the turn of the century. Otherwise, we would have to admit that improvement of the economic status of the elderly during those periods was rather slow.

Concluding Remarks

A conventional account of the forming of the welfare state in America is that urbanization and industrialization undermined the economic well-being of the elderly and made social security programs necessary. The revisionist view suggested by a number of recent studies, including Weaver (1983), Carter and Sutch (1996), and Gratton (1996), challenges this explanation, conveying a more optimistic picture of the economic status of the elderly in the era of industrialization. Regarding the negative depictions of the economic state of the aged provided by contemporaries, they maintain that the extent of poverty and dependence of the elderly should have been overstated by Progressive and New Deal reformers for political purposes.

The result of this study suggests that the contemporary concerns about the economic difficulties of the elderly in the early twentieth century were real rather than simply the outcome of political propaganda. If the entire elderly population including the economically inactive are considered, the average income of aged individuals increased slowly over the first half of the twentieth century, judging from a comparison with the growth rate of the whole economy. Therefore, the economic status of the elderly may have declined relative to the young, if not absolutely. It should also be kept in mind that the target of welfare programs is not the average person but those at the bottom. The need for public transfer programs for the elderly poor may have been even more serious than the average statistics tell. Among men 60 and older, as noted earlier, the inactive earned only a third of the personal income of active workers in 1949. The percentage of nonparticipants among males at those ages increased from 15 percent in 1880 to 45 percent in 1950. The disadvantages of aging in the labor market, as measured by the relative incidence of long-term unemployment, was particularly severe for aged salesmen, craftsmen, and operatives in the early twentieth century (Lee 2000). The percentage of males ages 50 to 59 who were employed in these occupations increased from 25 percent in 1880 to 37 percent in 1940. On the other hand, the percentage of aged men employed in more favorable jobs for older workers including professionals, farmers, managers and proprietors shrank from 56 percent in 1880 to 35 percent in 1940.

If we do not believe the survey results of the Social Security Board published in 1937 reporting that three-fourth of the U.S. elderly were in the state of dependence, it is also difficult to dispute that a substantial number of the elderly population were in severe economic hardship in the early twentieth century. Family strategies were not as effective device of maintaining the well-being of individuals at old ages as some scholars thought if we take into account the reduced allocation of family income to aged parents, as suggested in this note, and the potential intergenerational friction. Further, the proportion of the elderly who were in need of assistance should have increased over time in the course of industrialization as the labor force participation rate fell and the industrial structure changed. Concluding his article, Gratton asserted that "Until convincing evidence proves otherwise, we should assume that most older people in the early twentieth century fared relatively well by the standards of the time" (Gratton 1996, p. 57). I do not claim that this study provides entirely convincing evidence to reject his view. This note points out, however, the recent optimistic view of the economic status of the elderly provided by Gratton (1996) and other scholars does not have completely robust empirical basis, either. It is too early to close the case.

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TABLE 1
Results of OLS Regression: Household Structure and Expenditure

Variable s	Mean	Total	Clothing	Food	Housing	Furniture	Fuel	Medical	All other

Interce		1250.47 ***	203.93 ***	407.80 ***	185.73 ***	96.81 ***	65.53 ***	35.2
pt	0.2020	NI	NI	NI	NI	NI	NI	N
D^{20-29}	0.4455	23.52 ***	-4.77 *	7.66 ***	26.28 ***	-24.67 ***	4.78 ***	1.6
D^{30-39}	0.2665	-13.37	-22.58 ***	2.41	35.10 ***	-35.45 ***	5.86 ***	1.5
D^{40-49}	0.0724	-102.14 ***	-50.30 ***	-7.84	28.46 ***	-50.15 ***	5.66 ***	-2.5
D^{50-59}	0.0133	-232.47 ***	-74.58 ***	-56.36 ***	19.50 **	-59.02 ***	1.80	-4.2
D^{60-69}	0.5428	8.75 *	-2.78 **	34.81 ***	-7.56 ***	-3.07 ***	0.56	2.2
C^{M00-04}	0.3743	50.46 ***	13.27 ***	52.13 ***	-5.81 ***	-1.88 *	0.50	-0.0
C^{M05-09}	0.2398	77.45 ***	26.23 ***	59.87 ***	-4.90 **	-2.63 **	0.79	-0.7
C^{M10-14}	0.0892	302.11 ***	81.58 ***	123.84 ***	3.74	11.79 ***	4.43 ***	2.7
C^{M15-19}	0.0096	415.56 ***	104.57 ***	124.72 ***	12.69	12.71 **	6.32 ***	21.1
C^{M20-24}	0.0015	366.17 ***	61.06 ***	159.50 ***	6.75	11.78	1.55	21.3
C^{M25-29}	0.0010	89.11	-25.06	74.53 **	16.94	-32.92 *	3.98	12.0
C^{M30+}	0.5249	7.98 *	-1.48	34.54 ***	-6.99 ***	-2.40 ***	0.58	0.5
C^{F00-04}	0.3687	39.76 ***	11.38 ***	48.84 ***	-6.28 ***	-1.62	1.33 ***	-0.5
C^{F05-09}	0.2492	66.39 ***	21.44 ***	55.40 ***	-5.48 ***	-0.43	1.77 ***	-1.9
C^{F10-14}	0.1043	222.01 ***	84.40 ***	91.65 ***	2.00	11.37 ***	5.19 ***	1.5
C^{F15-19}	0.0217	386.72 ***	115.45 ***	155.55 ***	18.99 ***	13.95 ***	6.75 ***	5.7
C^{F20-24}	0.0039	243.21 ***	91.34 ***	122.04 ***	21.77	-3.13	10.22 ***	10.7
C^{F25-29}	0.0020	168.74 ***	58.29 ***	89.64 ***	-6.12	-4.13	3.61	16.9
C^{F30+}	0.0337	32.56 **	3.51	-0.67	35.09 ***	4.27	5.83 ***	-0.8
N^{M00-04}	0.0025	1.49	6.80	28.16	-5.61	1.43	-2.51	-11.1
N^{M05-09}	0.0022	61.25	-4.44	54.47 ***	-0.90	-17.12	-4.74	-11.3
N^{M10-14}	0.0033	52.75	21.17	52.21 ***	-5.76	-7.47	-3.03	10.3
N^{M15-19}	0.0068	59.31 *	18.81 **	4.02	19.12 *	8.60	8.15 ***	-7.4
N^{M20-24}	0.0087	133.76 ***	9.46	31.40 ***	61.02 ***	3.16	1.83	-2.7
N^{M25-29}	0.0303	120.72 ***	22.98 ***	29.02 ***	34.78 ***	3.20	4.49 ***	4.1
N^{M30+}	0.0988	88.20 ***	12.89 ***	2.15	13.03 ***	11.14 ***	5.95 ***	15.0
N^{F00-04}	0.0041	-21.44	2.29	19.62	-15.01	-4.63	-0.13	-6.0
N^{F05-09}	0.0068	43.30	7.45	32.80 ***	-10.01	3.34	-1.94	-0.3
N^{F10-14}	0.0137	102.60 ***	20.33 ***	4.42	5.73	12.85 **	3.64 *	15.2
N^{F15-19}	0.0157	112.81 ***	25.17 ***	12.42 *	-1.11	13.33 ***	4.11 **	11.7
N^{F20-24}	0.0270	105.91 ***	13.97 ***	14.71 **	8.98	9.14 ***	3.20 **	20.7
N^{F25-29}	0.1044	88.50 ***	8.84 ***	21.92 ***	7.52 **	1.93	3.84 ***	15.1
N^{F30+}		(R^2 = 0.224)		(R^2 = 0.224)	(R^2 = 0.426)	(R^2 = 0.035)	(R^2 = 0.041)	(R^2 =
			(R^2 = 0.241)					

TABLE 2

Age-Consumption Profile of an Average Adult Couple, 1888-90 and 1917-19 (current dollars)

	Age of the Head					(6) (5) / (2)
	(1) 20-29	(2) 30-39	(3) 40-49	(4) 50-59	(5) 60-69	

Number of Obs.	2584	5697	3408	927	171	
A. Clothing (actual)	158	138	118	102	93	0.674
Clothing (estimated)	204	199	181	154	128	0.643
B. Model 1 (dummy)						
Food	408	416	418	410	354	0.851
Housing	186	212	220	214	205	0.967
Furniture	97	72	61	47	38	0.528
Fuel	66	70	71	71	67	0.957
Medical	35	37	37	33	31	0.838
Other	255	268	255	230	196	0.731
C. Model 2 (polynomials)						
Food	408	417	412	393	360	0.863
Housing	186	211	222	219	203	0.962
Furniture	96	74	57	43	33	0.446
Fuel	66	71	73	73	70	0.986
Medical	36	37	36	34	29	0.784
Other	258	275	271	247	203	0.738
D. Total Expenditure						
Model 1	1205	1213	1180	1107	984	0.811
Model 2	1208	1223	1189	1111	991	0.810
Model 3	1250	1274	1237	1148	1018	0.799
E. Household Expenditure	1313	1393	1509	1548	1469	1.055
F. Household Income	1372	1461	1588	1653	1590	1.088
G. Earnings of the Head	1312	1373	1328	1164	975	0.710

Source: Cost of Living Surveys for 1917-1919.

Note: Consumption expenditure on each item in each age range was estimated using regression methods except for clothes for which the amount of individual expense is reported.

TABLE 3

Average Income and Family Size of Older Men by the Labor Force Status, 1950

	60 and Older		60-69		70-79		80 and Older	
	Work[a] (14494)[b]	Retired (11414)	Work (10993)	Retired (3888)	Work (2545)	Retired (4716)	Work (273)	Retired (1879)

Total family income[c]	3033	1261	3228	1484	2400	1226	1999	933
Personal income[d]	2541	854	2707	993	1986	831	1714	636
Other income[e]	493	407	521	791	414	395	285	297
Family size	2.75	2.72	2.79	2.74	2.63	2.68	2.81	2.78

Source. Calculated from IPUMS of the 1950 census.

Notes. a. It includes persons who were unemployed. b. In parenthesis is the number of observations. c. It gives the family's total pre-tax money income from all sources for the previous year, as reported to the census. The family includes only household members related to the household head. For a man who lived alone, his personal income is treated as family income. d. It indicates each respondent's total pre-tax personal income from all sources for the previous calendar year. e. The difference between total family income and personal income.