AN ACCOUNTING OF THE 1919 BIRTH COHORT

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INTRODUCTION

In the Office of the Actuary in the Social Security Administration (SSA) we often get questions such as : what is the likelihood that neither a worker nor his family will draw Social Security benefits; or, how long does it take a retired worker to recover in benefits the taxes he paid; or, how many persons get their "money's-worth" from the program.

My idea was to select a cohort which spent its entire adult working life under the Social Security program and make an accounting of its actual experience. I chose the cohort born in 1919, whose members were age 17 when earnings were first covered by the program in 1937, and are now past age 65 and, therefore, are likely, if eligible, to have established entitlement to Social Security and Medicare benefits.

About two and three-quarter million persons were born in the United States in 1919[1/], so that the proposed accounting must be done on a sample basis. The obvious choice is the SSA's ongoing 1-in-100 sample of Social Security numbers, the Continuous Work History Sample (CWHS)[2/], on which have been based numerous research and program evaluation initiatives over the years. The Continuous Work History Sample features information drawn from the SSA's two major administrative files, the Master Earnings File and the Master Beneficiary Record. Additionally, the LEED file, part of the CWHS system, contains geographic and industry detail about the employment of wage and salary workers.

I also drew records for Social Security numbers in the 1-percent sample from the following four Social Security Administration administrative files:

1. The Master Beneficiary Record (MBR) as of June 1986, to obtain more current and complete beneficiary information than in the current CWHS edition;
2. The Supplemental Security Record (SSR) for supplemental security income (SSI) beneficiaries;
3. The Death Master File of deaths reported to SSA; and
4. The NUMIDENT file of Social Security number applications, containing, in particular, information on place of birth.

Other files which will be useful in this project, although they all employ sampling designs different from the CWHS, are the CPS-IRS-SSA Exact Match Study[3/], the New Beneficiary Survey[4/], and the 1980 decennial census public-use (B) sample.[5/]

Before moving on to describe the work done so far and soon to be done, I would like to express the opinion that, while the cohort perspective has been adopted by research workers for a number of applications, such as generation life tables and generation working-life tables, there remain many areas where it could be fruitfully applied. Tracking a cohort over time with, say, Census Bureau microdata and printed reports, or with Social Security Administration files, could provide useful information on the shifting distribution of various characteristics of interest in the population.

STUDY DESIGN

As mentioned earlier, the primary goal of the project is to construct an accounting of the 1919 birth cohort with respect to the Social Security program. I have decided to limit the scope to persons born in 1919 in the United States. This decision to exclude immigrants rests on two considerations. First, we know the total number of births in the United States in 1919, but it would be difficult to estimate accurately the total number of persons born in 1919 who ever resided in the United States. Of course, we need some total to serve as the denominator in specifying what proportion of the cohort participated in the program, what fraction became beneficiaries, etc. The second consideration is that immigrants arriving here in their adulthood spent only a portion of their working life under our Social Security system, and their experiences will differ from others'.

Given this decision, the logical place to begin is the one SSA file with country of birth information, the NUMIDENT file of applications for a Social Security number. A logical approach would be to select from the NUMIDENT those Social Security number holders falling in the 1-in-100 sampling scheme used for the Continuous Work History Sample having 1919 as the year of birth and the United States as the country of birth, and then to proceed to determine from the other files the program experience of these number holders.

In fact, I am proceeding in the opposite direction, saving the NUMIDENT for last and beginning, instead, with the benefit entitlement files. There are two reasons for not using the NUMIDENT to define the sample. One is that the machine-readable version of the file is incomplete. Generally speaking, place of birth information is missing for persons on whose record a claim for benefits was filed before 1977, at which time the Social Security Administration was in the midst of a project to convert the paper file to magnetic media. The practice in the paper environment had been that, upon receipt of a claim by a worker or his survivors, the Social Security number application form which was needed in the adjudication and processing of the claim was removed from the file and moved to the worker's claim folder, its place taken in the file by a claims indication record onto which the place of birth generally was not transcribed. A copy of the Social Security number application form in these situations does exist at SSA headquarters, but only on microfilm, and therefore millions of microfilm records would have to be manually searched to identify the few thousand that belong to the sample.

The second problem in using the NUMIDENT to define the sample is that its year of birth information may be incorrect. There generally were no requirements that an applicant for a Social Security number provide evidence of his identity, his age, or his citizenship/lawful alien status prior to the implementation (in April 1974) of the Social Security Amendments of 1972. In particular, during the beginnings of the Social Security program, persons born in and around 1919 were in their teens and some may have overstated their true ages in order to improve their employment prospects.

There is the following evidence to support this suspicion about the quality of the year of birth item on the application form. The year of birth datum in the Continuous Work History Sample is first obtained from the application form, but is changed to reflect the date in the claims record when a claim is filed. Now, almost 1 percent of the persons with 1919 as the year of birth in the 1982 CWHS had a different year of birth--usually either 1920 or 1921--in the CWHS just 1 year later. Presumably, for the most part these are people who filed in 1983 (or early 1984) for early retirement benefits, at which time their true ages were revealed.

Because the NUMIDENT cannot be used to define the sample, I began with the entitlement files, where the date of birth is most reliable, specifically, the Master Beneficiary Record and the Supplemental Security Record. Records from these files meeting the sample design criteria and with 1919 as the year of birth will later be checked against the NUMIDENT computerized file and microfilm to determine place of birth. I now describe my work with these entitlement files.

RESULTS

An excellent outline of the salient characteristics of the Master Beneficiary Record file is given in a report of the Administrative Records Subcommittee of the Federal Committee on Statistical Methodology.[6] Briefly, regular MBR records contain data for workers and their dependents and survivors who have applied successfully—or, after 1976 (approximately), even unsuccessfully—for Old-Age, Survivors, and Disability Insurance under Title II of the Social Security Act, as well as for other persons who are entitled to health insurance (Medicare) protection under Title XVIII of the Act, except when based on employment covered by the railroad retirement system. There are also regular MBR records documenting lump-sum death payments made to or applied for by persons who are not otherwise beneficiaries, such as funeral directors. Furthermore, shorter cross-reference records exist on the MBR since 1972-75 indicating entitlement to other programs such as railroad retirement, supplemental security income, and black lung.

Records of entitlements terminated before 1962 are not available in the MBR, but otherwise records are not purged from the file after some period of inactivity. The same cannot be said about the SSR, however, a point which I will return to later.

The worker who is a beneficiary will generally have only one Social Security number and one date of birth on the MBR record--his or her own. The beneficiary who is a dependent or survivor of a worker will, on the other hand, have two sets of Social Security numbers and dates of birth: his or her own, and the worker's, as well. In program administration the more important number is the worker's number, as all claims payable on a particular earnings history are housed together under, and referenced by, the worker's Social Security number. Indeed, occasionally the auxiliary beneficiary's record contains no entry for his or her own Social Security number. This occurs with greater frequency among auxiliary beneficiaries who died or were otherwise terminated before the institution of a policy in 1972 that beneficiaries either already have or else get a Social Security number.

As shown in Figure 1, there were 20,597 beneficiaries or applicants for benefits with Social Security numbers falling in the 1-in-100 sample and a year of birth of 1919 represented in the June 1986 MBR. There were another 999 deceased persons in the sample and born in 1919 who were themselves never beneficiaries but on whose accounts benefits were paid to others; more than half of these represented lump-sum payments. Also, there were another 475 persons meeting the sample selection and year of birth criteria who had only a cross-reference record in the file; most of these records referenced the railroad retirement program. In sum, records for 22,071 sample members with Social Security numbers, representing over 2.2 million persons born in 1919, were found in the June 1986 MBR.

The Supplemental Security Record is the computerized master file for beneficiaries of the Federally administered supplemental security income cash assistance program which provides a floor of income for the aged, blind, and disabled who have little or no income and resources. Since mid-1981, a 1-percent sample of SSR records, using the same selection criteria as the Continuous Work History Sample, has been drawn each month. I began with the April 1986 SSR sample, which, however, does not provide information on the full complement of persons ever eligible for SSI, because SSR records are purged after a period of inactivity of about a year, and placed in a suspense file. I am now in the process of drawing a sample from the suspense file; in the meanwhile I have obtained the files current in March 1985 and April 1982 as a means of identifying some of those records not current now.

The three SSR files together yielded another 214 cases which were not in the MBR. As you can see in Figure 1, this brings the total number of 1919 cohort members with Social Security numbers in the 1-in-100 sample to 22,285.

As mentioned earlier, certain records for auxiliary beneficiaries on the Master Beneficiary Record have only the worker's Social Security number but not the beneficiary's, either because the beneficiary has no Social Security number or because the number did not get recorded on the file. I estimate that there are about 35,600 cohort members in this category, so that a 1-in-100 sample chosen on some basis other than own Social Security number would have provided

another 356 cases, approximately, bringing to over 2 1/4 million the number of persons born in 1919 found on the MBR and SSR.

I would like now to turn to a related question: with respect to members of the 1919 cohort alive today and residing in the United States, how close to complete is the coverage of the Master Beneficiary Record and the Supplemental Security Record combined? Now, because there is a record on the MBR for each record on the Medicare master file, coverage of the population by MBR and SSR combined will exceed the coverage in the Medicare file.

The Health Care Financing Administration was kind enough to make available to me a 100 percent file as of the end of March 1986 of active enrollees born in 1919. The number in the file--1,794,104--includes 29,485 persons residing outside the 50 States and District of Columbia and 168 persons entitled under two claims numbers, leaving 1,764,451 as the number of U.S. residents born in 1919 with Medicare coverage at the end of March 1986. You can follow this arithmetic in Figure 2.

Selected population projections (middle series) by single year of age as of July 1 made by the Bureau of the Census are also shown in Figure 2.[7] The counts along the upper diagonal refer to persons born between July 1, 1919 and June 30, 1920; those along the lower diagonal to persons born between July 1, 1918 and June 30, 1919. Using linear interpolation, I estimate the size of these two July-to-June cohorts on April 1, 1986, to be 1,984 thousand and 1,884 thousand, respectively.

Tabulating the 1-percent public-use 1980 decennial census microdata file, I find that, at the time of the census in April 1980, persons born in 1919 accounted for 47.67 percent of the July 1919-June 1920 group and for 48.56 percent of the July 1918-June 1919 group. Assuming that these percentages hold approximately in April 1986, as well, I estimate the size of the 1919 cohort residing in the United States on April 1, 1986, to be 1,861 thousand.

Thus, coverage of the population born in 1919 by the Medicare system is 1764 ÷ 1861, or nearly 95 percent, in April 1986.

CONCLUSION

Next I expect to use the Continuous Work History Sample and the Death Master File to identify cohort members who did not appear on the entitlement files, the Master Beneficiary Record and the Supplemental Security Record. Also, I will then use the NUMIDENT to identify which cohort members are native-born and which are foreign-born.

I am sorry that I do not have these other results ready today to present to you, but hopefully you have found interesting the early results and the description of the scope, objectives, and methodology of this study to give an accounting of the 1919 birth cohort.

FOOTNOTES

1/ National Center for Health Statistics, Vital Statistics of the United States: Natality, 1984, table 1-1.

2/ Warren Buckler and Creston Smith, "The Continuous Work History Sample: Description and Contents," in Policy Analysis with Social Security Research Files, Research Report No. 52, HEW Publication No. (SSA) 79-11808, 1978.

3/ Beth Kilss and Frederick J. Scheuren, "The 1973 CPS-IRS-SSA Exact Match Study," Social Security Bulletin, October 1978; and Bert Kestenbaum, "Update of the 1973 Exact Match, " 1984 American Statistical Association Proceedings, Social Statistics Section, 1985.

4/ Linda Drazga Maxfield, "The 1982 New Beneficiary Survey: An Introduction," Social Security Bulletin, November 1983.

5/ Census of Population and Housing, 1980: Public-Use Microdata Sample B, prepared by the Bureau of the Census. 1983.

6/ Data Linkage Work Group, Administrative Records Subcommittee, Federal Committee on Statistical Methodology, "Record System Description of the Master Beneficiary Record File," Statistical Uses of Administrative Records: Recent Research and Present Prospects, Internal Revenue Service, vol. 1, 3-84, pp. 33-36.

7/ Obtained by phone from Louisa Miller, Bureau of the Census, April 1986.

Figure 1: Persons Born in 1919 Found on the Entitlement Files: 1-in-100 Sample Basis

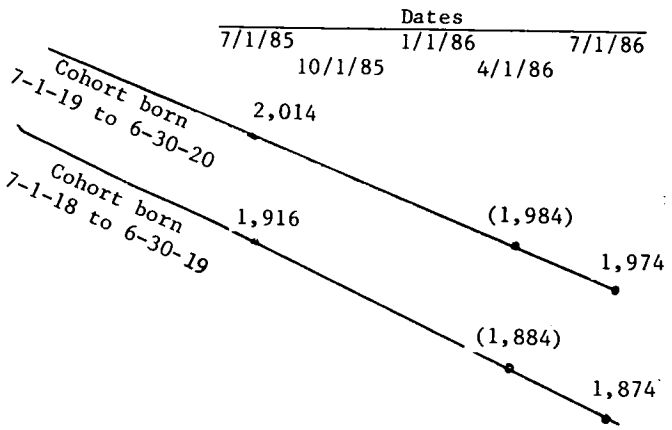
Category (where first found)	Number	Cumulative total
With own Social Security number		
Social Security beneficiary	20,597	20,597
Deceased worker on whose account benefits paid to others	999	21,596
Beneficiary of other programs cross-referenced on MBR	475	22,071
Supplemental security income beneficiary	214	22,285
Without own Social Security number		
Social Security beneficiary	356	22,641

Figure 2: Coverage of the 1919 Cohort in the Medicare File, April 1, 1986

Part 1.--MEDICARE

Raw count	1,794,104
Not U.S. residents	- 29,485
Duplicate entitlements	- 168
Adjusted count	1,764,451

Part 2.--CENSUS



Size of cohort born in 1919, in thousands, 4/1/86, is: (.4767) x (1984) + (.4856) x (1884.5), or 1,861 thousand

Part 3.--PERCENT COVERED: MEDICARE ÷ CENSUS

1764.5 ÷ 1861 = .948, or 94.8%