

# A PRELIMINARY COMPARISON OF SELF-REPORTED JOB HISTORY WITH SOCIAL SECURITY ADMINISTRATION RECORDS

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Because income is one of the key indicators of success in a job training program, a number of methods have been proposed to assess income levels more efficiently and perhaps more accurately than self-reports [1]. One of the data sources suggested for studies of job training programs is the Social Security Administration (SSA) record [2]. However, a number of limitations must be considered before a decision is made to utilize such data [3,4].

First, it has been estimated that 10 percent of employment may not be covered by SSA records. Secondly, income is reported only up to a maximum amount that is taxable. However, this limit is high enough so that it may not be a problem for studies of low income groups. A final problem is that individual records are not generally available. Researchers are usually limited to aggregate quarterly income figures for specified groups of respondents. Even if signed release forms could be obtained from individual respondents, these authorizations would expire in a year and the records give only total quarterly wages for each employer.

On the other hand, in an interview more detailed information can be elicited from self-reports. However, such reports can be affected by question format [1,5,6,7] and recall ability [8,9]. Consequently, the purpose of this paper is to compare information obtained from individual Social Security records with that derived from self-reports of job history for participants in a job training program. Hopefully, the results of this comparison will raise some issues that will aid researchers in the job training area to make a more knowledgeable selection of a method to assess income levels and secondly to emphasize the continuing need for methodological studies of such issues.

## METHOD

The respondents were 126 male applicants to, students in, or graduates of a Manpower Development and Training Act institutional job training program. The interviewers were recruited from a local community college and had no previous interviewing experience. They were given two days of training with the administration of the interview and conducted at least two practice interviews with paid volunteer respondents at the local employment service office.

All respondents were initially interviewed in July and August of 1970 as part of a larger study. After the completion of approximately a one-hour interview, a detailed job history was obtained for a six-month period immediately preceding the interview or entry into the training program. With the aid of a calendar, the interviewer asked the respondent if he was working and receiving pay on the initial day of the six-month period. If he was, questions were asked covering starting and termination dates, job description, wage rate, hours worked, overtime rate, overtime hours, and the dates of any unpaid days of work missed. The

interviewer proceeded chronologically covering every day of the six-month period up to the date of the interview.

Following the job history, each respondent was asked to sign a release form for his SSA record for a two-year period. Signed forms were obtained for 126 men or 76 percent of the sample for the larger study. A number of respondents left the program before the final form of the release authorization was approved. Attempts to obtain signed forms from these respondents by mail were not successful.

In the first quarter of 1972, 97 of the original 126 respondents were reinterviewed. As a part of this followup, job histories since the date of the initial interview were collected. The same interviewing procedures were used and the interviewers were recruited and trained in the same manner as in the first study.

## RESULTS

Six sets of results raise some important issues that should be considered prior to a decision to select SSA records, self-reports, or both as indicators of income levels.

### Quarterly Income

In the first analysis, total incomes for each of five consecutive quarters were computed from both data sources; see table 1. The correlations between the income figures in each quarter ranged from .85 to .57. These correlations may be inflated due to the number of respondents who were unemployed in a particular quarter. Up to one-third of the respondents were unemployed in a particular quarter. As expected, the highest correlation was found in the quarter in which the interview was conducted. The lowest was found in the last quarter of 1970, a quarter covered in the followup interview conducted in 1972. It appears that accuracy of recall tends to diminish over time. Thus, SSA records would seem to be a more appropriate source of data for long-term followup studies.

### Pretraining and Posttraining Income

Total incomes were also computed for the six-month periods immediately preceding and following training. With the job history, incomes could be calculated from the exact date of enrollment and termination. However, because SSA records are reported by quarters, total incomes were calculated for the first two full quarters preceding or following training. Despite the inexact correspondence between the six-month periods covered by each type of index, the correlations were .62 for the pretraining period and .73 for the posttraining period; see table 2.

It should be noted that the self-reports of income averaged \$100 more than SSA records in the pretraining period and \$300 more in the posttraining period. Consequently, the job history reports might be interpreted as indicating a \$200 increase in income after training while SSA records showed

TABLE 1  
Means, Standard Deviations, Differences and Correlations  
Between Job History and SSA Records of Quarterly Income

Quarter	n	SSA Record		Job History		Job History- SSA Record	Pearson r
		Mean	S.D.	Mean	S.D.		
Jan-Mar, 1970	126	361	486	418	529	+ 57	.68
Apr-Jun, 1970	126	340	515	375	471	+ 35	.75
Jul-Sep, 1970	108	321	557	315	524	- 6	.85
Oct-Dec, 1970	97	341	482	401	556	+ 60	.57
Jan-Mar, 1971	95	384	604	493	602	+107	.77

TABLE 2  
Means, Standard Deviations, Differences and Correlations Between  
Job History and SSA Records of Income Six Months Before and After Training

Six-month period	n	SSA Record		Job History		Job History- SSA Record	Pearson r
		Mean	S.D.	Mean	S.D.		
Before Training	85	683	719	796	808	+ 113	.62
After Training	76	685	820	979	960	+ 294	.73

no change. Such results suggest that care must be taken to avoid attributing differences in outcome measures solely to training impacts. Measures of training impacts could vary as a function of the method used to assess income levels and consequently affect the way in which the results are interpreted.

#### Job Reports

Because it was estimated that 10 percent of employment may not be covered by SSA records, an analysis was conducted to determine if the job history procedure did elicit more reports of jobs. An attempt was made to match occupational information in the job histories with the employers listed in the SSA records. In the two quarters immediately preceding the initial interview, 76 and 78 percent of the reports of jobs or unemployment corresponded in both methods; see table 3. Both methods produced the same number of job reports.

TABLE 3  
Number of Jobs Matched and Unmatched  
on SSA Records and Job History

Quarter	n	SSA	Job	Job	No
		Record Only	History Only	Match	Job
Jan-Mar, 1970	126	19	16	70	44
Apr-Jun, 1970	126	18	17	70	52

#### Income for Matched Jobs

In order to examine patterns of over and under reporting of income derived from the self-report, percentages of over and under reporting were computed for jobs that were judged to match in the two quarters prior to the initial interview; see table 4. Forty-three percent of the matched jobs had self-reported incomes that were within 10 percent of the income reported in the SSA records. Income for 20 percent of the matched jobs was substantially underreported. In 23 percent of the jobs, there was substantial over-report, up to twice the income reported in SSA records. For another 14 percent of the jobs, the income figures from the self-reports were more than double those in the SSA records. Thus, income generally appears to be overreported more frequently in self-reports.

#### Income for Unmatched Jobs

Next, a more detailed inspection of the unmatched job reports was conducted. Jobs reported in one method and not in the other were categorized according to income level. Jobs that were listed in the SSA records but overlooked in the self-report were mostly jobs with low quarterly incomes. In over 70 percent of these jobs, the quarterly income was less than \$200; see table 5. Even at the minimum wage, these jobs would have lasted at most three or four weeks. Thus, they might have been easily forgotten or overlooked by respondents in their reports. On the other hand, almost two-thirds of the jobs reported only in the job history had quarterly incomes of over \$200.

From this analysis it appears that the job history method produced more reports of jobs with

TABLE 4

## Over and Under Reporting of Income for Matched Jobs

Job History-SSA record SSA Record	Jan-Mar, 1970	Apr-Jun, 1970
-1.00 < x < -0.50	0	0
-0.50 < x < -0.30	2	2
-0.30 < x < -0.10	12	13
-0.10 < x < +0.10	30	28
+0.10 < x < +0.30	5	8
+0.30 < x < +0.50	6	9
+0.50 < x < +1.00	5	1
+1.00 < x	10	9

TABLE 5

## Quarterly Income for Unmatched Jobs

	\$0- 25	\$26- 100	\$101- 200	\$201- 550	Over \$550
Jan-Mar, 1970					
SSA Records Only	6	4	4	4	1
Job History Only	1	2	1	6	6
Apr-Jun, 1970					
SSA Records Only	5	5	3	5	0
Job History Only	0	1	5	6	5

higher income levels. Many of these jobs appeared to be similar to ones that had substantially higher self-reports of income. It did not appear that these jobs were a portion of the 10 percent of employment not covered by SSA records, and at the time the records were obtained 98 percent of the reports from employers should have been collected.

Interviewer Differences in Job Reports

It also seemed important to assess the performance of individual interviewers to determine whether training or experience could improve the quality of the self-report data. Comparisons were made among the three interviewers who conducted most of the interviews in the initial phase of this research. In the two quarters immediately preceding the interview, one interviewer obtained reports of 20 jobs that were not listed on the SSA records; see table 6. Only six jobs listed in SSA records were not reported. Five had quarterly

TABLE 6

## Inter-interviewer Differences in Obtaining Reports of Matched and Unmatched Jobs

Interviewer	n	SSA Record Only	Job History Only	Job Match	No Job
#1	29	8	3	24	30
#2	39	17	8	48	25
#3	39	6	20	42	21

incomes less than \$100 and the other income was less than \$200. The other two interviewers elicited substantially less accurate reports. Together they missed 25 jobs reported on the SSA records and picked up only 11 jobs that were not listed. The inexperience of the interviewers may have produced this considerable variance in performance. Intensive training of experienced interviewers may lead to less variability in performance and more complete self-reports.

## SUMMARY

Based on the comparisons presented in this paper, it appears that a self-report of job history can provide a detailed and relatively accurate coverage of employment over short periods of time. In such self-reports, it is possible to assess wage rates and hours worked compared to the gross quarterly income figures from SSA records. However, for studies with large samples or requirements for long-term followups, the SSA records would be the more practical source of data.

In addition, the results of this study suggest that it might be wise to utilize other sources of income data to buttress whatever index of income is selected. In some cases, it appeared that self-reports may have tapped sources of income not included in SSA records. Other archival or self-report data could be useful for validity checks of the principle measure of income used in a study and suggest possible correction formulas for the index appropriate to the sample being studied.

## FOOTNOTES

1. The material for this paper was collected as a part of studies at the Survey Research Center, The University of Michigan, conducted under Grants #91-24-70-15 and #91-26-72-12 from the Manpower Administration, U.S. Department of Labor. The points of view or opinions stated in this paper do not necessarily represent the official position or policy of the Department of Labor.

2. Certain data used in the preparation of this paper were derived from statistics furnished by the Social Security Administration. The author did not at any time have access to any information relating to specific individuals without their

written permission. The author assumes full responsibility for the analysis and interpretation of the data.

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