

SOME CONCEPTUAL PROBLEMS IN THE CURRENT POPULATION SURVEY

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Introduction

Recently, the Bureau of the Census and the Bureau of Labor Statistics convened a series of joint conferences to plan research needed to ensure that the Current Population Survey maintains its status as a leading edge labor force survey. To this end, a joint BLS-Census Bureau Questionnaire Design Task Force² was established and, as part of its work, thoroughly reviewed the CPS questionnaire to identify measurement problems. This paper reports on several conceptual and question wording problems that affect the classification of a person's labor force status as employed, unemployed, or not in the labor force.

Employment

It is useful to begin with the official CPS definition of employed persons (Census Bureau and Bureau of Labor Statistics, 1976). There are two categories:

- (1) All civilians who, during the survey week, did any work at all as paid employees or in their own business or profession, or on their own farm, or who worked 15 hours or more as unpaid workers on a farm or in a business operated by a member of the family, and
- (2) All civilians who were not working but who had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, labor dispute, or various personal reasons.

Three questions in the Current Population Survey are used to determine whether or not a person was employed during the survey week.

20. Did . . . do any work at all LAST WEEK, not counting work around the house? (Note: If farm or business operator in hh., ask about unpaid work.)
Yes
No
21. Did . . . have a job or business from which he/she was temporarily absent or on layoff LAST WEEK?
Yes
No
- 21a. Why was . . . absent from work LAST WEEK?
- *Own illness
 - *On vacation
 - *Bad weather
 - *Labor dispute
 - New job to begin within 30 days
 - Temporary layoff (under 30 days)
 - Indefinite layoff (30 days or more or no def. recall date)
 - *Other

To be counted as employed, a person must answer "yes" to item 20, or answer "yes" to item 21 and give one of the starred reasons in 21a. For people who were not actually working during the survey week, the claim to have a job or business determines whether or not they are classified as employed.

Upon examination, "work," "job," and "business" all turn out to be more elusive concepts than one might suppose at first. Below, we briefly discuss ambiguities in the meanings of "job" and "business."

Webster's dictionary supplies two relevant definitions of job:

- 1a. a piece of work; esp. a small miscellaneous piece of work undertaken on order at a stated rate.
- 2c. a regular remunerative position.

The latter is closest to the CPS definition of job, which the interviewer's manual gives as "a definite arrangement for regular work for pay every week or every month . . . [including] regular part-time or regular full-time work, . . . [and] a formal, definite arrangement . . . to work a specified number of hours a week or days a month but on an irregular schedule during the week or month."

However, many respondents are likely to think of "a piece of work" as a job and it is not clear that the CPS definition rules out this interpretation. First, it is not clear that a "definite arrangement for regular work" excludes an arrangement to produce a piece of work according to a time schedule. Second, the manual does not specify over what period of time there must exist a "definite arrangement." According to a literal interpretation, an arrangement to work for a week could constitute a job. Thus, it is not clear what sort of arrangement is excluded by the CPS definition.

Interpretation of a "piece of work" as a job seems especially likely because of the very short time reference in the question. For example, an odd-job carpenter who was to re-finish a floor the previous week, but got sick, seems likely to answer "yes" to this question. Respondents who say "yes" to this question based on a misinterpretation of a "piece of work" as a job would be classified improperly as employed.

The meaning of "business" in this item is also vague. According to the manual, a "business" exists when one of three conditions is met:

- (1) machinery or equipment of substantial value . . . ,
- (2) place of business . . . , or
- (3) advertisement . . .
 - in the telephone book;
 - by displaying a sign;
 - or by distributing cards or leaflets or

otherwise publicizing that a particular kind of work or service is being offered to the general public.

These criteria are very broad. Advertising could include almost anything, and it is unclear how interviewers should distinguish "placing ads" as a method of looking for work by unemployed people from "publicizing a particular kind of work or service" as a criterion for having a business. Likewise, the criterion of having a "place of business" is virtually meaningless; anyone can say they work out of their home. Finally, it is not clear what "machinery or equipment of substantial value" covers. Would it include vans, cars, trucks? Tools? Many tradesmen own tools, and often are required to supply their own tools to be hired for a job. This could mean that every carpenter who owns his tools by definition has his own business, except for the fact that the interviewer's manual explicitly excludes "casual work" by an odd-job carpenter or plumber. ("Casual work" is undefined; perhaps it is work done without a contract.) Also excluded is "domestic work in other persons' homes." It seems arbitrary to categorically exclude a specific type of work from the definition of "business." For instance, there are individuals who advertise house cleaning services on a contract basis; it is difficult to see why that isn't a business.

Since only one of these vague and inclusive criteria for "own business" must be satisfied, there would seem to be no basis for rejecting a respondent's claim to have a business (unless a respondent was an odd-job plumber or carpenter, or a domestic worker).

Moreover, the interviewer is operating without the benefit of explicit probes to obtain information about the nature of a respondent's business. In a great many cases, the determination that a respondent has a business would seem to be a matter of happenstance, interviewer persistence, and respondent's desire to be (or seem to be) an entrepreneur.

The problem is worse, since the interviewer is also supposed to know whether any other household members have a business. Item 20 instructs interviewers to ask about any unpaid work done by a respondent, if there is a farm or business operator in the household. It is unclear on what basis interviewers know with any certainty whether there is a business operator in the household; there is no explicit probe, and the information is not recorded.

Although the determination of "own business" rests on the respondent's claim in a single question, this classification is very important, because the same work-related activity results in a different labor force classification if there is a business in the household. (Indeed, the labor force classification of some or all adults in the household could be affected.) Namely, (a) activities to find work, and making arrangements to start a new position, are classified as "employment" if a person has a business, and "unemployment" otherwise; and (b) 15 hours or more of unpaid work is classified as "employment" if a related household member has a business, and as "out of the labor force" otherwise. Thus, errors can

affect rates of labor force participation as well as employment rates.

Unemployment

Classification of persons as unemployed is also problematic. Again, it is useful to begin with the definition.

Unemployed persons are those civilians who had no employment during survey week, were available for work, and:

- (1) Had engaged in any specific job-seeking activity within the past 4 weeks, or
- (2) Were waiting to be called back to a job from which they had been laid off, or
- (3) Were waiting to report to a new wage or salary job scheduled to start within the following 30 days.

There are problems with the classification of all three components of unemployed. We begin with components (2) and (3), because the problems are relatively simple ones involving question wording.

Answers to items 21 and 21a (see above) are used to identify people who are on layoff or starting a new job. However, because of flaws in the questions, too many people claim to be on layoff and too few people say they are starting new jobs. One problem is that respondents misinterpret the intended meaning of "on layoff" in item 21. According to the CPS definition, persons are considered to be on layoff only if they expect to return to their jobs. However, a follow-up study showed that many people who do not expect to return to their jobs, or who do not know if they will be called back, still consider themselves "on layoff" and answer "yes" to item 21. One quarter of the respondents classified as on layoff in July 1982 did not expect to return to their jobs. The error had a trivial effect on the unemployment rate, but a substantial effect on the distribution of persons in the components of the unemployed (Rothgeb, 1982b).

Items 21 - 21a fail to identify most persons who are starting new jobs within 30 days (the third component of the unemployed). According to results of a special supplement, only 12 percent of people who are starting new jobs within 30 days answer "yes" to item 21, evidently because they do not consider themselves to be "temporarily absent" from a job (Rothgeb, 1982a). The effect of the misclassification was to understate unemployment for the month of the study by about one-tenth of a percentage point. (The effect on unemployment is small because most people starting new jobs have also looked for work in the past 4 weeks, and this causes them to be properly classified as unemployed. Rothgeb points out that the overall effect on the unemployment rate may be greater due to seasonal factors.) Again, there was a substantial effect on the distribution of persons in the components of the unemployed.

Finally, the classification of people as "looking for work" (the first component of the unemployed) raises complex measurement issues. It is difficult to be precise about what

"looking for work" means, and social desirability is a likely source of response bias. These problems may be compounded because instructions to CPS interviewers are inconsistent.

Determination that a respondent is looking for work is based on two CPS items:

22. Has . . . been looking for work during the past 4 weeks?

22a. (If "yes") What has . . . been doing in the last 4 weeks to find work? (Mark all methods used; do not read list.)

Checked with--

pub. employ. agency
pvt. employ. agency
employer directly
friends or relatives

Placed or answered ads

Nothing

Other (Specify in notes, e.g., CETA, union or prof. register, etc.)

There is a potential for response bias because answers to these questions are not neutral, nor are they entirely factual. Respondents' answers reflect wishes and attitudes as well as actual behavior (see Bailar and Rothwell's 1984 discussion of this point). Many respondents are eager to say they are looking for work because it is socially desirable, even if they are not engaged in a bona fide job search. (Persistent questioning on the subject of work in CPS may increase the pressure on respondents to report they are trying to find work. Getting up earlier in the morning and practicing typing were job search methods reported in one pretest.)

The problem of respondents who are overeager to claim they are looking for work has been recognized for a long time, and their answers are not taken at face value. In response to a recommendation made in 1962 by the President's Committee to Appraise Employment and Unemployment Statistics, item 22a was added as a follow-up to ask respondents to specify what they had done to try to find work. Respondents who answer "nothing" in 22a are not counted as "looking for work."³ Provision was also made to screen out reports which are not bona fide job searches. Interviewers are instructed that a respondent is not to be counted as looking for work in 22 "if the person did nothing specific to find work in the past 4 weeks." However, as defined by the interviewer's manual, "looking for work" includes activities which are not actual job searches, such as "working without pay to get training or experience." It also includes some activities (such as "checking with friends or relatives") which are vague, and allow respondents to report social activities which are not really job searches. In addition, it is not completely clear how actively a respondent must be searching. The restriction that a person must do "something specific" to find work implies that passive "looking" is excluded. However, the phrase "looking for work" invites responses of the "watching and waiting" sort. (Examples of such responses from computer-assisted telephone interviews (CATI) are "looked in the

newspaper," "watching the store windows," "waiting for word from some people," "church bulletin board.") One form of passive search (looking at newspaper ads) is explicitly ruled out by the interviewer's manual but others are not, and the boundary between active and passive "looking" seems fuzzy.

Although the intent of item 22a is to screen out activities which are not actual job searches, interviewers are not given consistent instructions on how to treat such mentions. On one hand, interviewers are instructed to "Mark all methods used." On the other hand, some activities (reading want ads) are explicitly excluded by the manual, and interviewers are presumably not to mark them. The probable consequence is that some interviewers screen out answers which they judge not to be job searches, while others follow the instruction to "mark all methods used." Differences in how interviewers interpret the instructions could increase interviewer variability in classification of unemployment status.

Interviewers who censor responses must make difficult judgments about borderline activities. Because the definition is not always clearcut, they must rely on their own judgments of what constitutes a bona fide job search. Decisions that a respondent is seriously looking for work may vary systematically over time and among interviewers, and may be influenced by irrelevant characteristics of respondents. The amount of censorship by interviewers is unknown, but it is a potentially important, and entirely undocumented, source of bias in classification of respondents as unemployed.

Interviewers who accept all responses to the follow-up probe would presumably classify activities that were not actual job searches in the "other" category, which counts as "looking for work." Assuming no additional activity, such cases would be classified improperly as unemployed, when they were in fact out of the labor force. An examination of "other" entries for this item in CATI interviews suggested that as many as a third of them were questionable.⁴

The fuzziness of what it means to "look for work" implies that in large part interviewers and respondents apply their own standards to decide what constitutes a bona fide job search. This implies, for example, that respondents (as well as interviewers) will vary in whether they think casual job searches should be reported. As Bailar and Rothwell (1984) note, exactly the same activity (for example, talking to a friend about whether he knew of any jobs) is likely to be a "yes" answer for some respondents and a "no" or "not really" for others. This activity is a legitimate search method by the CPS definition, but respondents who apply a more stringent standard for what it means to "really" look for work will not report it and will be counted as out of the labor force. Others with less stringent standards will report it and be counted as unemployed. This implies that, to an unknown extent, different labor force classifications reflect different standards rather than different activities.

It might be hoped that, even with these problems, experienced CPS interviewers still

can be relied on to probe and properly classify labor force status according to CPS criteria. However, since the criteria are somewhat vague and instructions are not consistent, interviewers must develop their own interpretations of the questions and concepts. Experience apparently does not teach CPS interviewers to be careful and correct in how they ask the questions and probe respondents' answers. This conclusion is suggested by an analysis of the errors made by a sample of CPS interviewers in tape-recorded mock interviews (Rustemeyer, 1977). Rustemeyer found, as one would expect, that experienced CPS interviewers had lower overall error rates than inexperienced interviewers. However, experience apparently does not reduce the likelihood of some serious interviewer errors. Experienced CPS interviewers were much more likely than inexperienced interviewers to alter the scope of CPS questions by incorrectly wording questions, by nonstandard, biased, or directive probing, by failing to make criteria clear to respondents, or by applying the wrong criteria. Assuming the same results hold true for real as well as mock interviews, this study implies that interviewer experience does not compensate for deficiencies in CPS questions and concepts. Indeed, it is quite likely that these deficiencies create problems for interviewers which they attempt to overcome by rewording questions, and by developing and applying their own criteria for classifying labor force status.

Discussion

Several measurement problems affect the classification of labor force status in the CPS. One problem is question wordings which are ambiguous or misleading (for example, the ambiguity of "on layoff" in item 21). A second problem is operational definitions of key labor force concepts which are inconsistent or vague (for example, "looking for work" in item 22). A third problem is potentially great interviewer control over labor force classifications. A fourth problem is that respondents' attitudes and standards may influence their labor force status classification, apart from the effect of real differences in activities.

Perhaps the root of all four problems is that fundamental labor force concepts are really much more complex and ambiguous than at first they seem. "Job" and "business" (for example) are such common, real, everyday concepts that it is easy to take for granted that their meanings are simple and uniformly shared across the population. However, this is not necessarily the case. To the extent that it is not, then the measurement properties of the CPS vary over the population, resulting in error and bias.

What is unknown is the actual effect upon the unemployment rate and other measures of labor force status and participation. The problems discussed above are undoubtedly irrelevant in the vast majority of cases, because in most cases labor force classification is cut-and-dried. However, even if their numbers are not great, those persons for whom classification of labor force status is problematic

can introduce bias in comparisons among groups, and in estimates of labor force trends over time. First, it is probable that the meanings of labor force concepts vary among groups defined by educational level, age, income, and race, for example. To the extent this is so, estimates of intergroup differences in rates of unemployment (among others) can be biased. As a hypothetical example, suppose young people have a more relaxed, less demanding notion of what it means to look for work than their elders, and as a result they report as job searches activities that an older person wouldn't bother to mention. (As we have noted, the definition of "looking for work" is vague and procedures for recording respondent's job search are inconsistent, so the instrument will not necessarily screen out non-bona-fide mentions.) The result would be an estimated unemployment rate for young people that is artificially inflated, relative to the rate for older people.

Second, trends over time may reflect, to an unknown extent, changes in attitudes and standards rather than changes in labor force behavior. Again, a hypothetical example is useful to illustrate the point. Using CPS data, Becker (1984) finds an increase in self-employment of 23 percent from 1976 to 1983, with the increase about 5 times greater for women than for men. As we have noted, the CPS criteria for "own business" are so general that there is almost no basis for rejecting a respondent's claim to have his or her own business. To what extent, then, do CPS trends in self-employment reflect changes in labor force behavior, and to what extent do they reflect changes in attitudes and desires related to self-employment (perhaps especially among women)?

In order to explore the meaning of fundamental labor force concepts and find the answers to some of these questions, the Census Bureau and Bureau of Labor Statistics are planning some joint research. One focus of this research is the questionnaire and the concepts it embodies. We plan to conduct debriefing interviews with respondents to find out how they interpret and answer CPS questions, and to explore the meaning of work and related concepts. Some of this exploratory research will be done in a laboratory setting, in which people are brought in for individual or group sessions involving intensive questioning. Some of the research will be done in the field, by means of post-interview debriefing questions asked of respondents who have just completed the CPS interview. The goal of this research is to assess variation among respondents in how they understand labor force concepts, and to design alternative questions and procedures. Eventually, more formal tests of alternative questionnaires will be conducted by means of split-ballot experiments.

A second focus of research is the interviewer. Currently, CPS (and other household surveys conducted by the Census Bureau) place a good deal of reliance on the interviewer to make basic decisions related to classification of labor force status. Does a person have a job, or business? Is a person looking for

work? In all of these decisions, substantial interviewer discretion is allowed, and considerable judgment may be required. Some determinations (e.g., presence of "own business") require the interviewer to either improvise her own probing questions, or rely on volunteered information from the respondent, because there are no standard CPS questions to elicit the needed information. Finally, the bases on which interviewers make these decisions (and sometimes the decisions themselves) are undocumented. Therefore, the number of interviewer decisions made in error, and the magnitude of the bias introduced, are difficult to assess.

Several studies can shed light on the interviewers' contribution to error in classification of labor force status. A useful first step would be to calculate interviewer variances for individual CPS items using CATI data; the (partially) randomized assignment of interviewers to households in CATI makes this possible. Observation and monitoring of CPS interviewing at the centralized CATI facility at Hagerstown can provide suggestive data on the extent to which interviewers are making decisions that influence the data. Ultimately, the goal is to reduce the reliance on interviewer judgment by improving the CPS questionnaire so that classification criteria are explicit and uniformly applied, and so that the information is documented as part of the record.

Footnotes

¹This paper reports the general results of research undertaken by Census Bureau staff. The views expressed are attributable to the author and do not necessarily reflect those of the Census Bureau.

²The task force was chaired by John Bregger (BLS), and included Cathryn Diplo, Harvey Hamel, and Marilyn Manser from BLS, and Kathleen Creighton, Jennifer Rothgeb, and Elizabeth Martin from the Census Bureau.

³In June 1986, 6,579 persons (6 percent of the total sample) reported they were looking for work. Of these, 118 (2 percent) said (or were coded as saying) "nothing" in response to item 22a. (A total of 118,087 respondents were interviewed in June. These figures are not adjusted for seasonal components, and include respondents who were not classified as unemployed because they worked during survey week, had a job, or were unavailable for work.)

⁴"Other" write-in entries to this item ("What has . . . been doing in the last 4 weeks to find work?") were printed out for approximately 4,450 CATI interviews conducted June - September 1986. Of the 88 "other" entries,

22 percent definitely should have been excluded, and 14 percent were "don't know" or were too vague to determine if an actual job search was being described or not:

Entry does not describe actual job search:
 "Looked at newspaper, read ads" (n=13);
 "fishing"; "husband got her an application somewhere"; etc.

Entry too vague:
 "everything, whatever he could"; "used the phone"; "don't know" (n=7).

CATI results may overstate the number of invalid "other" entries, because CATI interviewers are less experienced than field interviewers. In addition, the number of "other" responses is so small that any effect on unemployment rates is slight. (In regular CPS interviews conducted during June 1986, 3 percent of the 8,499 entries in this item were classified as "other.")

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