Providing Time to Find Income Records--Does it Help? Some Evidence from the National Household Food Acquisition and Purchase Survey (FoodAPS)

Consumer Expenditure Survey
Survey Methods Symposium
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Disclaimer

• The analyses and opinions expressed today are the author’s own and do not represent those of the ERS or the USDA.
Plan for Presentation

• Describe FoodAPS, its Income Worksheet, and purpose of worksheet

• Present results on who did and did not use the worksheet

• Present results on relationship between using the worksheet and data quality
Key Characteristics of FoodAPS

• National Household Food Acquisition and Purchase Survey - USDA

• Oversampled households participating in the Supplemental Nutrition Assistance Program (SNAP) and other low-income households

• Nationally representative, N ≈ 5,000

• Fielded from April 2012 to January 2013
Key Characteristics (cont)

• Measured all purchases and other food acquisitions reported by all household members for 7 days

• Primary respondent (PR) identified as the person “who does most of the grocery shopping or who is the main meal planner”
Overview of planned data collection week

<table>
<thead>
<tr>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

Members track food acquisitions in booklets and with scanner

PR calls to report

Screener

Initial Interview and training

Final Interview

Feedback Survey
Collecting Income Data

• Household screener asked about total household income

• Final Interview collected detailed information on monthly income for each household member aged 16 and over
Income Worksheet

• At Initial Interview, interviewer left an Income Worksheet for PR to fill out before Final Interview.

• PR could assemble income records for all members at his or her convenience.

• Purpose was to improve accuracy of income data to be collected and to reduce respondent burden.
The National Food Study
Income Worksheet

This worksheet will help you to prepare for the final interview at the end of the survey week. To better understand your household’s food purchases, we will ask you about your household income. This information helps us understand how much money your household has available to spend on food. Complete this worksheet during the study week and refer to it during the final interview to make the interview go faster! We will not collect this worksheet, so feel free to put notes on it.

Remember, your information will be kept private and will not be released in a form that might identify you. We are required by law to use your information for statistical research only and to keep it confidential. The law prohibits us from giving anyone any information that may identify you or your family. The information you provide will not affect any benefits or services received by anyone in your household. Participation is voluntary.

1. REVIEW this worksheet with your interviewer during their first visit.

2. COMPLETE the forms in this worksheet during the study week. If you need to, check your recent paystubs or statements and ask other household members for their information.

3. REPORT this information during the final interview when the interviewer returns at the end of the study week.

Questions? Call our toll free number: 1-866-275-8659

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0570-0002. The time required to complete the information collection is estimated to average 8 minutes, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Total Household Gross Income (last month)

**INSTRUCTIONS**

Use the table below to list the name of each person living in your household who receives income from any source. Next to each person’s name, list each type of income received last month and how often it was received. List the gross income from work. This is not the same as take-home pay. See the definitions at the bottom of the form to include in each category.

<table>
<thead>
<tr>
<th>First Name</th>
<th>Gross income and how often it was received</th>
<th>Earnings from Work (before deductions)</th>
<th>Unemployment Compensation</th>
<th>Welfare, Child Support and Allotments</th>
<th>Retirement and Disability Income</th>
<th>Investment Income</th>
<th>All Other Income</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td></td>
<td>$200 / week</td>
<td>$0 / week</td>
<td>$150 / month</td>
<td>$0 / month</td>
<td>$0 / month</td>
<td>$0 / month</td>
<td>$0 / month</td>
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<td>$0 / month</td>
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</tbody>
</table>

Earnings from Work (before deductions)

Enter the total amount each household member earns from work before taxes and other deductions (such as union dues, insurance premiums, and contributions to retirement plans). This amount should be listed on your pay stub if a household member is paid in cash, enter that amount. If your income is not always the same, list the amount that you normally get. For example, if you normally get $1000 each month, but you received some work last month and only got $500, list $1000 per month. If you normally get overtime, include it, but not if you get it only sometimes.

Welfare, Child Support and Allotments

Most welfare comes from the Temporary Assistance for Needy Families (TANF) program (which may have a different name in your state) or from General Assistance, General Relief, or the GA program. These programs provide financial assistance to people with little or no income. In this column also include child support payments that are paid by a former husband, wife, or parent of a child living in your household. Include child support payments paid through a welfare agency or court, and include only payments received by a member of your household. Any work earned support paid by one spouse to another after they are separated.

Retirement and Disability Income

Enter the total income from pension payments, retirement account withdrawals, and Social Security Retirement Benefits (SSA) payments. SSA is received by persons who have worked long enough and had enough Social Security deductions taken from their salary to be entitled to payments. These payments may be made to the spouse or dependent children of a deceased worker. Enter disability income from Social Security Disability Benefits (SSDI) payments which are received by persons who cannot work because of a medical condition. Also include: (1) block long benefits, (2) workers compensation, and (3) Supplemental Security Income (SSI).

Investment Income

Include: (1) income from rental properties; (2) interest, dividends and capital gains; and (3) trust fund payments.

All Other Income

Include any other income, such as: (1) strike benefits; (2) fuel assistance; (3) income, legers or tenancy; (4) educational grants, loans or fellowships; (5) unemployment compensation payments; (6) Veterans Affairs benefits; (7) lottery winnings; and (8) employment bonuses.

Questions? Call our toll free number: 1-866-275-8659
COMPLETE the forms in this worksheet during the study week. If you need to, check your recent paystubs or statements and ask other household members for their information.
Income Worksheet Instructions

Use the table below to list the name of each person living in your household who receives income from any source. **Next to each person’s name, list each type of income received last month and how often it was received.** **List the gross income from work. This is not the same as take-home pay.** See the definitions at the bottom of the page for the items to include in each category.
## Income Grid

<table>
<thead>
<tr>
<th>First Name</th>
<th>Earnings from Work (before deductions)</th>
<th>Unemployment Compensation</th>
<th>Welfare, Child Support, Alimony</th>
<th>Retirement and Disability Income</th>
<th>Investment Income</th>
<th>All Other Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane</td>
<td>$200 / week</td>
<td>$0 /</td>
<td>$150 / month</td>
<td>$0 /</td>
<td>$0 /</td>
<td>$0 /</td>
</tr>
<tr>
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<td>$____ /</td>
</tr>
</tbody>
</table>
Six income types

- Earnings (gross) from work
- Unemployment compensation
- Welfare, child support, alimony
- Retirement and disability income
- Investment income
- All other income
Use of Worksheet

• 60% of households completed the worksheet, in whole or in part.
• Worksheet was not collected, but respondent could refer to it during the interview.
  • We cannot differentiate between “in whole or in part”
Who used the worksheet?
Logit model covariates

- Age (PR)
- Sex (PR)
- Married (PR)
- Race (PR)
- Ethnicity (PR)
- College education (PR)
- Metropolitan area
- Rural area
- Assets > $3,000
- Gave consent for data matching
- Own home
- Household size
Percent completing worksheet

Differences are statistically significant

* = p < 0.10  
** = p < 0.05  
*** = p < 0.01

<table>
<thead>
<tr>
<th>Group</th>
<th>As indicated</th>
<th>Opposite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro **</td>
<td>58%</td>
<td>74%</td>
</tr>
<tr>
<td>Black ***</td>
<td>46%</td>
<td>62%</td>
</tr>
<tr>
<td>Married ***</td>
<td>65%</td>
<td>56%</td>
</tr>
<tr>
<td>Female ***</td>
<td>63%</td>
<td>55%</td>
</tr>
</tbody>
</table>
Percent completing worksheet

Differences not statistically significant

<table>
<thead>
<tr>
<th></th>
<th>Ownhouse</th>
<th>Rural</th>
<th>Assets&gt;3K</th>
</tr>
</thead>
<tbody>
<tr>
<td>As indicated</td>
<td>63%</td>
<td>65%</td>
<td>64%</td>
</tr>
<tr>
<td>Opposite</td>
<td>56%</td>
<td>58%</td>
<td>57%</td>
</tr>
</tbody>
</table>

As indicated

Opposite
Percent completing worksheet

Differences not statistically significant

Consent: 60% (As indicated), 53% (Opposite)
Hispanic: 57% (As indicated), 61% (Opposite)
Asian: 63% (As indicated), 60% (Opposite)
College: 61% (As indicated), 59% (Opposite)
Percent completing worksheet

Differences statistically significant as shown

<table>
<thead>
<tr>
<th>Household Size</th>
<th>1 (Ref)</th>
<th>2-3</th>
<th>4-6 *</th>
<th>7 plus **</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57.4%</td>
<td>64.4%</td>
<td>56.5%</td>
<td>41.4%</td>
</tr>
</tbody>
</table>
Hypothesized outcomes

• Households that fill out the Income Worksheet will:
  • Have fewer missing data (needing imputation)
  • Be less likely to “correct” reported income data
  • Provide more accurate data (gross vs. net earnings, fewer “outliers”)
Measured Outcomes

• Any missing income data at individual level, by income type?
• Any missing income data at household level?
• Any need to “correct” reported income?
• Any presence of “outliers”? 
Income “corrections”

• After all income questions asked, interviewer showed complete grid to PR on laptop screen and asked if there were any errors or omissions

• If yes, then errors corrected and new income amounts added

• Mostly new income amounts
Income “outliers”

- Generally, in top 1% of distribution
- For income types with few positive values, outliers identified subjectively
Hypothesized outcomes - caveat

• Relation between use of worksheet and measured outcomes is probably endogenous.
  • Those more likely to fill out worksheet may be more likely to give accurate and complete information anyway.

• Cannot infer causality
## Outcome variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Percent (weighted)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households with missing income data</td>
<td>853</td>
<td>16.0</td>
</tr>
<tr>
<td>Individuals with:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing/imputed earnings</td>
<td>339</td>
<td>7.0</td>
</tr>
<tr>
<td>Missing/imputed UI income</td>
<td>338</td>
<td>6.8</td>
</tr>
<tr>
<td>Missing/imputed transfer income</td>
<td>344</td>
<td>7.0</td>
</tr>
<tr>
<td>Missing/imputed retirement/disability income</td>
<td>549</td>
<td>10.0</td>
</tr>
<tr>
<td>Missing/imputed investment income</td>
<td>361</td>
<td>7.8</td>
</tr>
<tr>
<td>Missing/imputed other income</td>
<td>329</td>
<td>7.0</td>
</tr>
<tr>
<td>Corrected income data</td>
<td>94</td>
<td>2.1</td>
</tr>
<tr>
<td>Income outliers</td>
<td>51</td>
<td>2.2</td>
</tr>
<tr>
<td>Gross income reported</td>
<td>1,048</td>
<td>51.8</td>
</tr>
</tbody>
</table>
Percent of household records with any missing income

- 10% used worksheet
- 25% did not use worksheet

[Bar chart showing the percentages]
Percent of individual records with missing income, by type

<table>
<thead>
<tr>
<th>Type</th>
<th>Used worksheet</th>
<th>Did not use worksheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings</td>
<td>4%</td>
<td>12%</td>
</tr>
<tr>
<td>Unemp ins</td>
<td>4%</td>
<td>12%</td>
</tr>
<tr>
<td>Transfers</td>
<td>4%</td>
<td>12%</td>
</tr>
<tr>
<td>Ret-Disposition</td>
<td>4%</td>
<td>16%</td>
</tr>
<tr>
<td>Investment</td>
<td>4%</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
<td>12%</td>
</tr>
</tbody>
</table>

All differences significant at 1% level
Percent of individual records with any income corrections

Difference is significant at 1% level

- 1.4% Used worksheet
- 3.2% Did not use worksheet

Difference is significant at 1% level.
Percent of individual records with any income outliers

Difference not significant

- Used worksheet: 2.4%
- Did not use worksheet: 2.0%

Difference not significant
Percent of individual records with earnings reported as gross income

Difference is significant

- 60% Used worksheet
- 37% Did not use worksheet
Recap – who used the worksheet?

• Primary respondents who were:
  • Female
  • Married
  • Not African-American
  • Living in a non-metropolitan county
  • Living in 1-3 person households
Recap – how well did it work?

• Primary respondents who used it:
  • Had fewer missing income values
  • Were less likely to find reporting errors during review
  • Were more likely to follow directions and report gross rather than net earnings

• But, cannot imply causality because of endogeneity
Thank you!

John A. Kirlin

jkirlin@ers.usda.gov

Extra slides, if needed
Definition for Earnings

Earning from Work (before deductions)
Enter the total amount each household member earns from work before taxes and other deductions (such as union dues, insurance premiums, and contributions to retirement plans). This amount should be listed on your pay stub. If a household member is paid in cash, enter that amount. If your income is not always the same, list the amount that you normally get. For example, if you normally get $1000 each month, but you missed some work last month and only got $900, list $1000 per month. If you normally get overtime, include it, but not if you get it only sometimes.
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Definitions for Investment and All Other Income

**Investment Income**
Include: (1) income from rental properties; (2) interest, dividends and capital gains; and (3) trust fund payments.

**All Other Income**
Include any other income, such as: (1) strike benefits; (2) fuel assistance; (3) roomers, lodgers or tenants; (4) educational grants, loans or stipends; (5) insurance settlement payments; (6) Veterans Affairs benefits; (7) lottery winnings; and (8) employment bonuses.