

# ATUS Extraction and Analysis

## Exercise 2

**OBJECTIVE:** Gain an understanding of how the ATUS dataset is structured and how it can be leveraged to explore your research interests. This exercise will use the ATUS dataset to explore patterns in time use of Americans in 2009 and 2011.

## Research Questions

What are the trends in time spent on consumer purchases in American households? Does time allocated to food preparation differ across income groups? What characteristics affect the amount of time spent caring for own children?

## Objectives

- Create and download a ATUS data extract
- Decompress data file and read data into Stata
- Analyze the data using sample code
- Validate data analysis work using answer key

## ATUS Variables

- ACT\_PURCH: Consumer purchases
- REGION: Major region of the United States
- FAMINCOME: Yearly family income
- AGE: Age
- SEX: Sex
- FOODPREP: Created variable for time spent preparing food
- CHILDCARE: Created variable for time with childcare as a secondary activity

## Stata Code to Review

Code	Purpose
<code>generate</code>	Creates a new variable, "replace" specifies a value according to cases
<code>mean</code>	Displays a simple tabulation and frequency of one variable
<code>tabulate</code>	Displays a cross-tabulation for up to 2 variables
<code>bys or over</code>	Divides an analysis by a categorical variable

## Review Answer Key (page 7)

### Common Mistakes to Avoid

- 1 Not changing the working directory to the folder where your data is stored
- 2 Mixing up = and == ; To assign a value in generating a variable, use "=". Use "==" to specify a case when a variable is a desired value using an *if* statement
- 3 Forgetting to put [weight=*weightvar*] into square brackets

## Registering with ATUS

Go to <http://www.ATUSdata.org/>, click on Login at the top, and apply for access. On login screen, enter email address and password and submit it.

### Step 1

#### Make an Extract

- On the homepage, go to Build an Extract (on the left column)
- Click on the "Change Samples" box, and select years 2009 and 2011. Keep the defaults "ATUS respondents" and select "Submit sample selections".
- Under the "Time Use" dropdown menu, select "Activity coding structure". Click on the plus sign next to the variable ACT\_PURCH to select the variable and add it to our data cart.
- Click on the "Create time use variable" box at the top. Select "Load" next to ACT\_HHACT, then the diamond sign next to Household Activities to expand the category.
- Unselect all subcategories except for "Food and Drink Preparation, Presentation, and Clean-up", and click "Save time use variable" at the bottom.
- Name your new variable "foodprep" and select "Save time use variable". This selects the time use variable we just created, and adds it to our data cart.

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### Step 2

#### Request the Data

- Click on the "Create time use variable" box again, and this time select the box at the top "Create variable from scratch".
- Select the box next to All, then click on the "Secondary Activity" box at the top.
- Under Secondary Activity, select "Duration of time spent during activity on secondary child care of all children" and then "Save time use variable".
- Name this new variable "childcare" and label it "Secondary childcare". Then select "Save time use variable" again to select it and add it to the cart.
- Under the Household dropdown menu, click on Geographic and then select the variable REGION.
- Similarly, select the variables FAMINCOME (Household → Economic), AGE and SEX (both under Person → Core demographic),
- Choose the green "View Cart" at the top.
- Click on the green "Create data extract".

- You will get an email when the data is available to download
- To get to the page to download the data, follow the link in the email, or follow the Download/Revise Extracts link on the homepage

## Step 1

### *Download the Data*



## Step 2

### *Read in the Data*

## *Getting the data into your statistics software*

The following instructions are for Stata.

- Go to <http://www.ATUSdata.org/> and click on Download/Revise Extracts
- Right-click on the "data" link next to extract you created, under "files"
- Choose "Save Target As..." (or "Save Link As...")
- Save into "Documents" (that should pop up as the default location)
- Do the same thing for the Stata link next to the extract
  
- Open Stata from the Start menu
- In "File" menu, choose "Change working directory..."  
Select "Documents", click "OK"
- In "File" menu, choose "Do..."  
Select the \*.do file
- You will see "end of do-file" when Stata has finished reading in the data

## Analyze the Sample – Part I Relationships in the Data

### Section 1

#### Create a New Variable

...

A) Create a variable that distinguishes individuals who reported consumer purchases on the day of their interview.

```
gen purchase = 0  
replace purchase = 1 if act_purch > 0
```

B) Find a frequency for reported consumer purchases *for the sample* for each year. \_\_\_\_\_

```
tab purchase year, col
```

C) Is there a difference in incidence of consumer purchasing between men and women in 2009? \_\_\_\_\_

```
bys sex: tab purchase year, col
```

D) In the sample, when consumer purchases are greater than zero, what is the average amount of time spent on purchases each year? Does it appear that the recession had any effect?

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```
mean act_purch, over(year)
```

## Note on Weights

### Using weights – Part I Relationships in the Data

The ATUS sample design requires use of weights to provide an accurate representation at the national level. Half of the interview days in the sample are weekdays, while the other half are weekends. The weight WT06 adjusts for the disproportional number of weekend days, and should be used to weight time use variables. More specifically, WT06 gives the number of person-days in the calendar quarter represented by each survey response. Also keep in mind that the "Eating and Health", "Well-Being", and "Employee Leave" Modules have weights unique to them.

E) Using weights, what is the mean value of time spent on purchases? \_\_\_\_\_

```
mean act_purch [pw=wt06], over(year)
```

A) Go to the ATUS homepage and choose Demographic Variables. What is the range of values for this variable? What values indicate family incomes of \$35,000 and higher?  
\_\_\_\_\_

B) What is the average time spent in food preparation across income groups? Is there a trend? \_\_\_\_\_

```
mean foodprep [pw=wt06], over(famincome)
```

C) Does the pattern change when you separate the analysis by year?  
\_\_\_\_\_

```
mean foodprep if year == 2009 [pw=wt06], over(famincome)  
mean foodprep if year == 2011 [pw=wt06], over(famincome)
```

D) What could be an explanation for the result in parts B and C?  
\_\_\_\_\_

## Analyze the Data



E) Graph the results from C.

## Section 1

### Analyze the Data

```
gen wt062 = round(wt06)
graph bar (mean) foodprep [pw=wt062], over(famincome)
over(year)
```

### *Analyze the Sample – Part III Frequencies in the Data*

A) The way the variable CHILDCARE is constructed, what activities will it include? \_\_\_\_\_

B) What are the codes for "Unknown" and "Not in Universe"? To whom does "Not in Universe" apply?  
\_\_\_\_\_

C) What is the average amount of time for adults to be taking care of children as a secondary activity? \_\_\_\_\_

```
mean childcare if age > = 18 [pw=wt06], over(year)
```

...

Complete!  
Check  
your  
Answers!

D) Are there differences in means across regions in 2011 in time spent in secondary child care? What about between metropolitan status? Or between men and women?  
\_\_\_\_\_

```
mean childcare if year ==2011 & age > = 18 [pw=wt06], over(region)
mean childcare if year ==2011 & age > = 18 [pw=wt06], over(metro)
mean childcare if year ==2011 & age > = 18 [pw=wt06], over(sex)
```

## ANSWERS: Analyze the Sample – Part I Relationships in the Data

### Section 1

#### Create a New Variable

A) Create a variable that distinguishes individuals who reported consumer purchases on the day of their interview

```
gen purchase = 0  
replace purchase = 1 if act_purch > 0
```

B) Find a frequency for reported consumer purchases for each year's sample. **2009: 41.58%; 2011: 40.82**

```
tab purchase year, col
```

C) Is there a difference in incidence of consumer purchasing between men and women in 2009? **Women: 44.97; Men: 37.08**

```
bys sex: tab purchase year, col
```

D) In each sample, what is the average amount of time spent on purchases for an interview day? Does it appear that the recession had any effect? **2009: 25 minutes; 2011: 24.7 minutes; There appears to be no significant difference between the two years.**

```
mean act_purch, over(year)
```



## ANSWERS: Using Weights – Part II Relationships in the Data

...

### Note on Weights

The ATUS sample design requires use of weights to provide and accurate representation at the national level. Half of the interview days in the sample are weekdays, while the other half are weekends. The weight WT06 adjusts for the disproportional number of weekend days, and should be used to weight time use variables. More specifically, WT06 gives the number of person-days in the calendar quarter represented by each survey response. Also keep in mind that the "Eating and Health", "Well-Being", and "Employee Leave" Modules have weights unique to them.

E) Using weights, what is the average time spent on purchases? **2009: 22.7 minutes; 2011: 22.2 minutes.**

```
mean act_purch [pw=wt06], over(year)
```

A) Go to the ATUS homepage and choose Demographic Variables. What is the range of values for this variable? What values indicate family incomes of \$35,000 and higher? **Codes 10 through 16.**

B) What is the average time spent in food preparation across income groups? Is there a trend? **There appears to be a small peak in income groups 5 through 7, then a slight decline.**

```
mean foodprep [pw=wt06], over(famincome)
```

C) Does the pattern change when you separate the analysis by year? **Not significantly.**

```
mean foodprep if year == 2009 [pw=wt06], over(famincome)  
mean foodprep if year == 2011 [pw=wt06], over(famincome)
```

D) What could be an explanation for the result in parts B and C? **The lowest income group may have slightly lower food prep time because they may work multiple jobs or be single parents with not enough time to dedicate to food preparation, while on the other hand, high paying jobs such as lawyers may have a high opportunity cost of time and also work long hours.**

### Section 1

### Analyze the Data

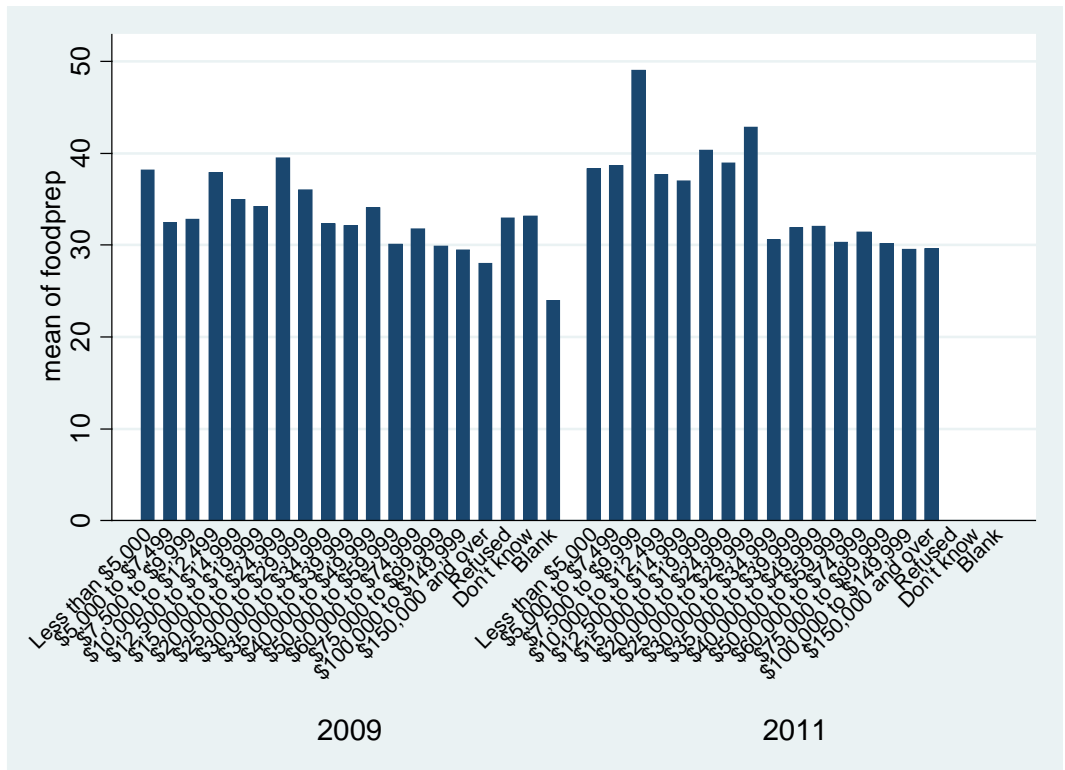
# ANSWERS: Analyze the Sample – Part II Relationships in the Data

E) Graph the results from C.

## Section 2

### Graph the Data

```
gen wt062 = round(wt06)  
graph bar (mean) foodprep [pw=wt062], over(famincome)  
over(year)
```



## ANSWERS: Analyze the Sample – Part III Frequencies in the Data

### Section 1

### Analyze the Data

A) The way the variable CHILDCARE is constructed, what activities will it include? **CHILDCARE should include time in any activity in which the respondent also reported child care at the same time.**

B) What are the codes for REGION? Find it under Demographic Variables. **1: Northeast; 2: Midwest; 3: South; 4: West**

C) What is the average amount of time for adults to be taking care of children as a secondary activity? **101.24 minutes a day**

```
mean childcare if age > = 18 [pw=wt06]
```

D) Are there differences in means across regions in 2011 in time spent in secondary child care? What about between men and women? **The Northeast has the lowest average, while the South has the highest average. Women are much more likely to be incorporating childcare into other activities (74.9 minutes for men, 125.5 for women).**

```
mean childcare if year ==2011 & age > = 18 [pw=wt06], over(region)
mean childcare if year ==2011 & age > = 18 [pw=wt06], over(metro)
mean childcare if year ==2011 & age > = 18 [pw=wt06], over(sex)
```