

# 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.

# ATUS Training and Development

## 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 SPSS
- 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

## SPSS Code to Review

Code	Purpose
compute	Creates a new variable
freq	Displays a simple tabulation and frequency of one variable
crosstabs	Displays a cross-tabulation for up to 2 variables and a control
by	Divides an analysis by a categorical variable

## Review Answer Key (page 7)

### Common Mistakes to Avoid

1 Excluding cases you don't mean to. Avoid this by turning off weights and select cases after use, otherwise they will apply to all subsequent analyses

2 Terminating commands prematurely or forgetting to end commands with a period (.). Avoid this by carefully noting the use of periods in this exercise

## 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

...

### Step 2

#### Request the Data

- 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\_HACT, 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.
- 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*

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## Step 2

### *Read in the Data*

#### *Getting the data into your statistics software*

The following instructions are for SPSS.

- 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 SPSS link next to the extract

- Double click on the ".sps" file, which should automatically have been named "atus\_000##.sps"

- The first two lines should read:

```
cd "."
data list file = 'atus_000##.dat'/
```

- Change the first line to read: cd (location where you've been saving your files). For example:

```
cd "C:\Documents".
```

- Change the second line to read:

```
data list file = "C:\Documents\atus_000##.dat"/
```

Under the "Run" menu, select "All" and an output viewer window will open

## 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

```
compute purchase = 0.  
if (act_purch > 0) purchase = 1.
```

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

```
crosstabs  
/tables = purchase by year  
/cells = count column.
```

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

```
crosstabs  
/tables = purchase by year by sex  
/cells = count column.
```

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 the recession had any effect? \_\_\_\_\_

```
means tables = act_purch by year  
/cells mean count.
```

## Analyze the Sample - Part I - Using weights (WT06)

### Note on Weights

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 average time spent on purchases?

```
weight by wt06.  
means tables = act_purch by year  
/cells mean count.
```

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

### Section 1

#### Analyze the Data

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?

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

weight by wt06.

means tables = foodprep by famincome  
/cells mean count.

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

---

weight by wt06.

means tables = foodprep by famincome by year  
/cells mean count.

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

---

E) Graph the results from C.

graph

/bar (grouped) = mean(foodprep) by famincome by year.

## 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? \_\_\_\_\_

B) What are the codes for REGION? Find it under Demographic Variables. \_\_\_\_\_

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

means tables = childcare by year  
/cells mean count.

*Note: To identify only adults, under the Data menu, click "Select Cases", choose "If condition is satisfied", and click "If". In the top box type "age >= 18" and select Continue and then Ok.*

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

means tables = childcare by year by region  
/cells mean count.

means tables = childcare by year by sex  
/cells mean count.

• • •

Complete!  
Check  
your  
Answers!

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

### Section 1

#### Create a New Variable

...

#### Note on Weights

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

```
compute purchase = 0.  
if (act_purch > 0) purchase = 1.
```

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

```
crosstabs  
/tables = purchase by year  
/cells = count column.
```

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

```
crosstabs  
/tables = purchase by year by sex  
/cells = count column.
```

- 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? 2009: 25 minutes; 2011: 24.7 minutes; there appears to be no significant difference between the two years.

## ANSWERS: Analyze the Sample - Using weights (WT06)

### Note on Weights

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 average time spent on purchases?

**2009: 22.7 minutes; 2011: 22.2 minutes.**

weight by wt06.

means tables = act\_purch by year

/cells mean count.

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

### Section 1

#### Analyze the Data

- 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.

weight by wt06.

means tables = foodprep by famincome

/cells mean count.

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

weight by wt06.

means tables = foodprep by famincome by year

/cells mean count.

- 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.

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

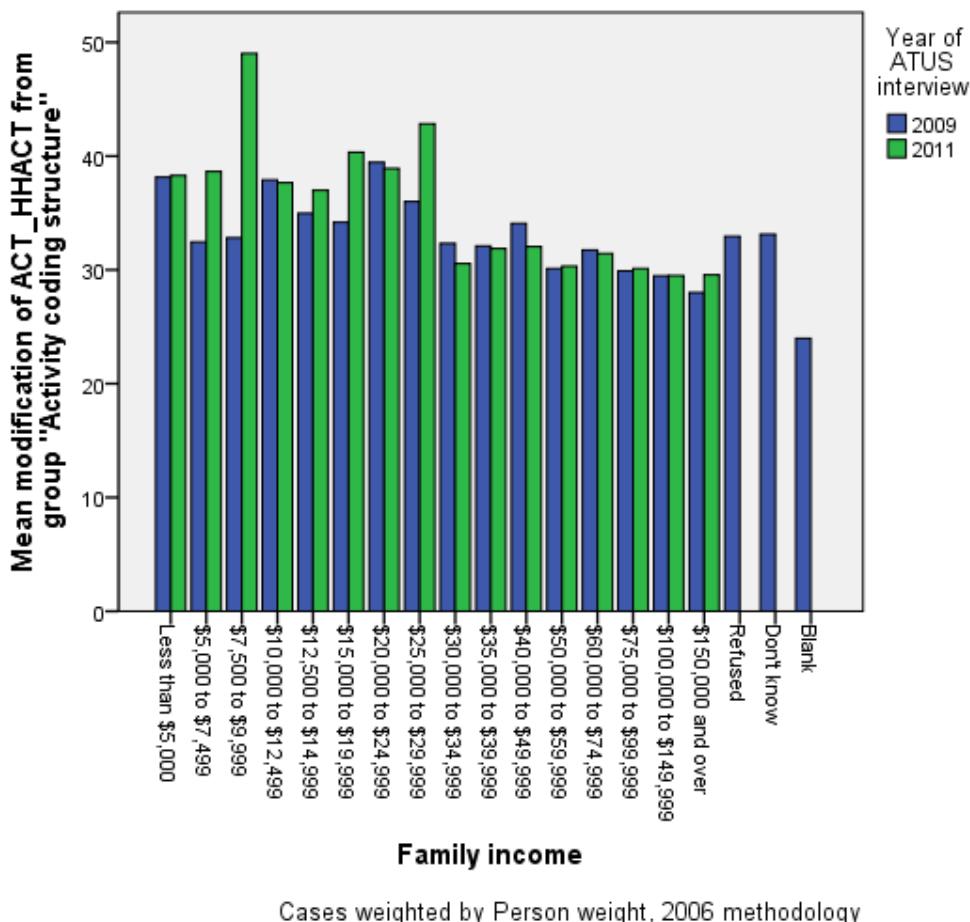
E) Graph the results from C.

### Section 2

#### Graph the Data

graph

/bar (grouped) = mean(foodprep) by famincome by year



Cases weighted by Person weight, 2006 methodology

## 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

```
means tables = childcare  
/cells mean count.
```

*Note: To identify only adults, under the Data menu, click "Select Cases", choose "If condition is satisfied", and click "If". In the top box type "age > = 18" and select Continue and then Ok.*

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)

```
means tables = childcare by year by region  
/cells mean count.  
means tables = childcare by year by sex  
/cells mean count.
```