



# MTUS: Time Use Variables and Using Weights

## Learning goals

- Become familiar with using the MTUS-X system
- Browse system-created time use variables for inclusion in your data file
- Understand the importance of weights by comparing unweighted and weighted estimates

## Summary

In this exercise, you will create a data file using MTUS-X that includes data from the 2005 and 2014 UK samples. You will use these data to compare understand the importance of weights for time diary data and will generate weighted estimates of paid work on weekends and weekdays.

### Part 1: Understand ACT\_WORK

1. Find ACT\_WORK on the “TIME USE” drop down menu under “Activity Coding Structure”
2. What are the activities included in ACT\_WORK? *Hint: Click on the variable name.*

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### Part 2: Create an extract

- Add the IPUMS-created time use variable ACT\_WORK to your extract
- Select the 2005 and 2014 United Kingdom data files
- Add the variables SAMPLE, COUNTRY, DAY, and PROPWT to your extract

### Part 3: Analyze data

3. How many individuals are in the 2005 UK data? \_\_\_\_\_ How many individuals are in the 2014 UK data? \_\_\_\_\_

*Note: the 2014 UK sample straddles two years, 2014 and 2015. This exercise references the entire 2014 UK sample (both years).*

4. How many people have diaries on weekends and weekdays in the 2005 UK data?  
Weekends: \_\_\_\_\_ Weekdays: \_\_\_\_\_

*Hint: recode DAY to easily distinguish between weekends and weekdays.*

5. How many people have diaries on weekends and weekdays in the 2014 UK data?  
Weekends: \_\_\_\_\_ Weekdays: \_\_\_\_\_

### Part 4: Understand the importance of weights

6. If every day were equally represented, what fraction of weekend days would you expect to see in the data? \_\_\_\_\_
7. What is the unweighted percentage of individuals completed the survey on a weekend during each sample year? 2005 \_\_\_\_\_ 2014 \_\_\_\_\_
8. What is the weighted percentage of individuals completed the survey on a weekend during each sample year? 2005 \_\_\_\_\_ 2014 \_\_\_\_\_



9. Compare the weighted and unweighted share of weekend days in the 2014 data. What are the weights doing to the distribution of weekends and weekdays?

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### Part 5: Compare time spent working for pay on weekdays versus weekends

10. What is the weighted average number of minutes spent working on weekends and weekdays in the two samples?

2005:            weekday \_\_\_\_\_ weekend \_\_\_\_\_  
2014/2015:    weekday \_\_\_\_\_ weekend \_\_\_\_\_

11. What is the weighted average number of minutes spent working on weekends and weekdays in 2005 and 2014 restricting your analysis to people who worked on that day?

2005: weekday \_\_\_\_\_ weekend \_\_\_\_\_  
2014: weekday \_\_\_\_\_ weekend \_\_\_\_\_



### Part 1 Answers: Understand ACT\_WORK

2. What are the activities included in ACT\_WORK? *Hint: Click on the variable name.*  
Paid work-main job (not at home); Paid work at home; Second or other job not at home; Unpaid work to generate household income; Travel as a part of work; Work breaks; Other time at workplace; Look for work
3. How many individuals are in the UK2005 sample? 4,941 How many individuals are in the UK2014 sample? 16,533

### Part 3 Answers: Create Extract

4. How many people have diaries on weekends and weekdays in the 2005 UK data?  
Weekends: 3,555                      Weekdays: 1,386
5. How many people have diaries on weekends and weekdays in the 2014 UK data?  
Weekends: 8,245                      Weekdays: 8,288

### Part 4 Answers: Understand the Importance of Weights

6. If every day were equally represented, what fraction of weekend days would you expect to see in the data? 2/7
7. What is the unweighted percentage of individuals completed the survey on a weekend during each sample year?  
2005: 28.05%                      2014: 49.87%
8. What is the weighted percentage of individuals completed the survey on a weekend during each sample year?  
2005: 28.57 %                      2014: 29.19%
9. Compare the weighted and unweighted share of weekend days in the 2014 data. What are the weights doing to the distribution of weekends and weekdays?

In the UK 2014 data, weekend days were oversampled. Using weights, weekend days in this sample are brought closer to the true proportion of weekend days in a week.

### Part 5 Answers: Compare time spent working for pay on weekdays versus weekends

10. What is the weighted average number of minutes spent working on weekends and



weekdays in the two samples?

2005: weekday: 215.1      weekend: 62.3  
2014: weekday: 179.3      weekend 56.6

11. What is the weighted average number of minutes spent working on weekends and weekdays in 2005 and 2014 restricting your analysis to people who worked on that day?

2005: weekday: 443.7      weekend: 372.4  
2014: weekday: 431.0      weekend: 348.1

