

EViews: Introductory User Guide

Dummy Variables

Using *smpl* | Using *@recode* | Using *@date* | Using *@expand*

Learning support material for the courses:

- ✓ NMST537 Time Series Analysis
- ✓ NEKN432 Econometrics

Based on official [EViews Tutorials](#) & [EViews Illustrated](#).

Dummy Variables in EViews

- It is easy to create dummy variables in EViews by using **sample commands** or a number of EViews **functions**:

- ✓ ***smpl***

- ✓ ***@recode***

- ✓ ***@date***

- ✓ ***@expand***

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CREATING DUMMY VARIABLES USING SAMPLES

Creating Dummy Variables Using *smpl* (Part I)

- The easiest way to create dummy variables in EViews is by *smpl* command.

Dummy variables with *smpl* (Example 1):

1. Open a workfile page.
2. Type in the command window:
smpl if x>0.2
series dummy1=1
smpl if x<=0.2
series dummy1=0
3. Press **Enter** after each command line entry.
4. This instructs Eviews to create a dummy variable *dummy1* equal to 1, if $x > 0.2$, and 0 otherwise.

Creating Dummy Variables Using *smpl* (Part II)

Dummy variables with *smpl* (Example 2):

1. Open a workfile page.
2. Type in the command window:

```
smpl if x>0.2 or x<=-0.2  
series dummy1=1  
smpl if x<=0.2 and x>-0.2  
series dummy1=0
```
3. Press **Enter** after each command line entry.
4. This instructs Eviews to create a dummy variable ***dummy2*** equal to 1, if $x > 0.2$ or $x \leq -0.2$, and 0 otherwise.

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CREATING DUMMY VARIABLES USING *@RECODE*

Creating Dummy Variables Using **@recode**

- Another way to create (dummy) variables in EViews is by using **@recode**.

Function	Description
@recode(s,x,y)	Returns x if condition s is true; otherwise it returns y.

Dummy variables with **@recode** (Example):

1. Click on a workfile page.
2. Let us first set the sample equal to the entire range by typing the command **smpl @all**.
3. Type in the command window: **series dummy3=@recode(x<=0.2,1,0)**.
4. Press **Enter**. It creates a dummy variable **dummy3** equal to 1, if $x \leq 0.2$, and 0 otherwise.

Alternatively:

1. Click on the top menu bar of and select **Quick** → **Generate Series**.
2. The **Generate Series by Equation** dialog box opens up. Specify here your dummy expression (as above). Click **OK**.

Notes on Simple Dummy Variables

- For simple dummies, you don't need to use ***smpl*** or ***@recode***.
- You can create them simply by defining the logical expression directly in the command window. However, you may have to use ***smpl*** or ***@recode*** for more complex cases.
- Several examples of commands:
 - The command ***series dummy4=x<=0.2*** creates a dummy variable ***dummy4*** equal to 1, if $x \leq 0.2$, and 0 otherwise.
 - The command ***series dummy5=x>0.2 or x<-0.2*** creates a dummy variable ***dummy5*** equal to 1, if $|x| > 0.2$, and 0 otherwise.

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DATE DUMMY VARIABLES

Creating Date Dummy Variables

- Dated dummies can be created by using **@recode** and **@date** or **@dateval**.
- For more details, see the list of the date functions.

Function	Description
@date	Returns the date associated with each observation.
@dateval	Returns the date associated with a text representation of a date.
@year	Returns the year in which each observation begins.
@quarter	Returns the quarter of the year in which each observation begins.
@month	Returns the month of the year in which each observation begins.
@day	Returns the day of the month in which each observations begins.
@weekday	Returns the day of the week.

Creating Date Dummy Variables: Example

Date dummy variables (Example):

1. Click on a ***dated*** workfile page.
2. Type in the command: ***series dumdate1=@recode(@date>@dateval("1995/3/15"),1,0)*** or simply ***series dumdate1=@date>@dateval("1995/3/15")***.
3. Press **Enter**.
4. It creates a dummy variable ***dumdate1*** equal to 1, if the observation is dated after ***15th March 1995***, and 0 otherwise.

Note: Other date functions or their combinations can be employed in order to define a dummy variable.

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DUMMY VARIABLES IN NON-DATED WORKFILES

Dummy Variables in Non-Dated Workfiles

- You can follow the methodology used in the previous sections to create dummies in non-dated workfiles: simply use **@obsnum** instead of **@date**.
- For instance, the command **series dumnd1=@recode(@obsnum>5,1,0)** (or equivalently **series dumnd1=@obsnum>5**) creates a dummy variable **dumnd1** equal to 1 after the 5th observation, and 0 otherwise.

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CREATING DUMMY VARIABLES USING *@EXPAND*

Creating Categorical Dummy Variables

- Categorical dummies can be easily created by using **@expand**.

Function	Description
@expand	Allows you to create a group of dummy variables by expanding out one or more series into individual categories.

Dummy variables with @expand (Example):

1. Click on a workfile page.
2. Let us first set the sample equal to the entire range by typing the command **smpl @all**.
3. Type in the command window: **group g1 @expand(female)**
4. Press **Enter**.
5. It creates a group **g1** of two series as follows: **(i)** one series with 1 if female and 0 if male, **(ii)** one series with 1 if male and 0 if female.

Note: Other combinations can be used, e.g., **@expand(female, married)** or **income*@expand(female)** with the obvious interpretations.

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DUMMY VARIABLES IN MODELS

Dummy Variables in Models: Examples

- In EViews you can use dummy variable expressions in models without having to first create and save the dummies.
- For instance, one directly uses the following expressions when defining a model:
 - `@date>@dateval("1994/12/2")`
 - `(@date>@dateval("1994/12/2") and @month=1)`
 - `@expand(female, married)`
 - `@expand(female, married, @dropfirst)`, where `@dropfirst` drops the first dummy variable (analogously `@droplast` drops the last dummy) in order to avoid ***the dummy variable trap***

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