How to Create and Customize Scatterplots in Stata

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Creating and modifying scatterplots in Stata is a simple process that allows users to visualize the relationship between two variables in a dataset. To create a scatterplot, users can use the "scatter" command followed by the names of the two variables they want to plot. Stata also offers various options to customize the scatterplot, such as adding a title, changing the color and size of the points, and adding regression lines. To modify an existing scatterplot, users can use the "graph edit" command, which opens a graphical interface that allows for easy customization and editing. With the ability to add labels, legends, and other elements, Stata makes it easy to create informative and visually appealing scatterplots for data analysis.

Create and Modify Scatterplots in Stata

A is a type of plot that we can use to display the relationship between two variables. It helps us visualize both the direction (positive or negative) and the strength (weak, moderate, strong) of the relationship between the two variables.

This tutorial explains how to create and modify scatterplots in Stata.

How to Create Scatterplots in Stata

We'll use a dataset called *auto* to illustrate how to create and modify scatterplots in Stata.

First, load the data by typing the following into the Command box:

use http://www.stata-press.com/data/r13/auto

We can get a quick look at the dataset by typing the following into the Command box:

summarize

```
. use http://www.stata-press.com/data/r13/auto
(1978 Automobile Data)

. summarize
```

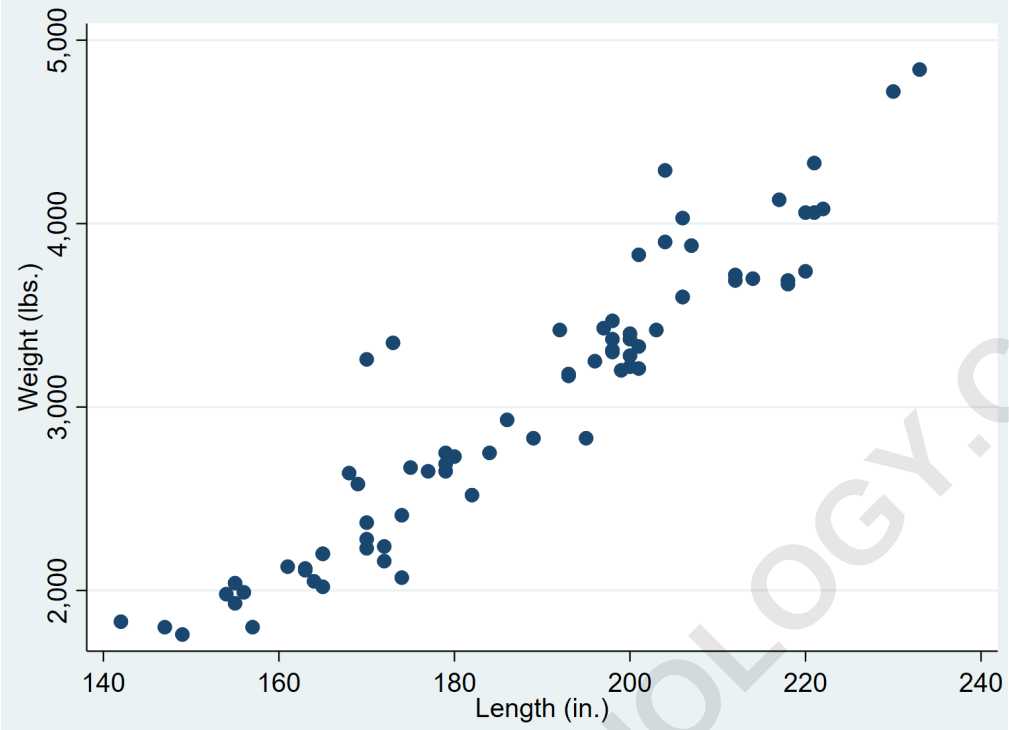
Variable	Obs	Mean	Std. Dev.	Min	Max
make	0				
price	74	6165.257	2949.496	3291	15906
mpg	74	21.2973	5.785503	12	41
rep78	69	3.405797	.9899323	1	5
headroom	74	2.993243	.8459948	1.5	5
trunk	74	13.75676	4.277404	5	23
weight	74	3019.459	777.1936	1760	4840
length	74	187.9324	22.26634	142	233
turn	74	39.64865	4.399354	31	51
displacement	74	197.2973	91.83722	79	425
gear_ratio	74	3.014865	.4562871	2.19	3.89
foreign	74	.2972973	.4601885	0	1

We can see that there are 12 total variables in the dataset.

Basic Scatterplot

We can create a scatterplot for the variables *weight* and *length* by using the scatter command. The first variable you type will go along the y-axis and the second variable will go along the x-axis:

scatter weight length



We can see that there is a strong positive correlation between weight and length. That is, cars that weigh more also tend to be longer.

Scatterplot with a Regression Line

You can add a simple linear regression line to the scatterplot by using two "pipe" symbols || along with the lfit command:

scatter weight length || lfit weight length

Scatterplot with Multiple Variables

You can create a scatterplot with more than two variables by simply typing more variables after the scatter command. Note that the last variable you type will be used for the x-axis.

For example, the following command tells Stata to create a scatterplot using *length* as the x-axis variable and *weight* and *displacement* as the y-axis variables:

scatter weight displacement length

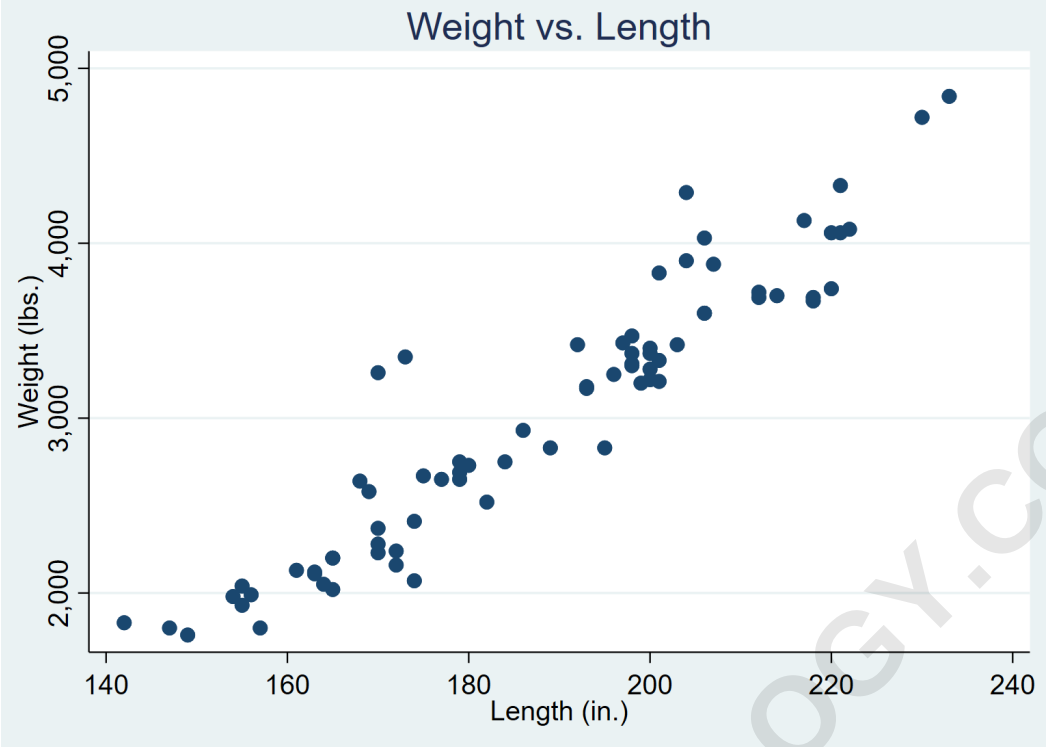
How to Modify Scatterplots in Stata

We can use several different commands to modify the appearance of the scatterplots.

Adding a Title

We can add a title to the plot using the title() command:

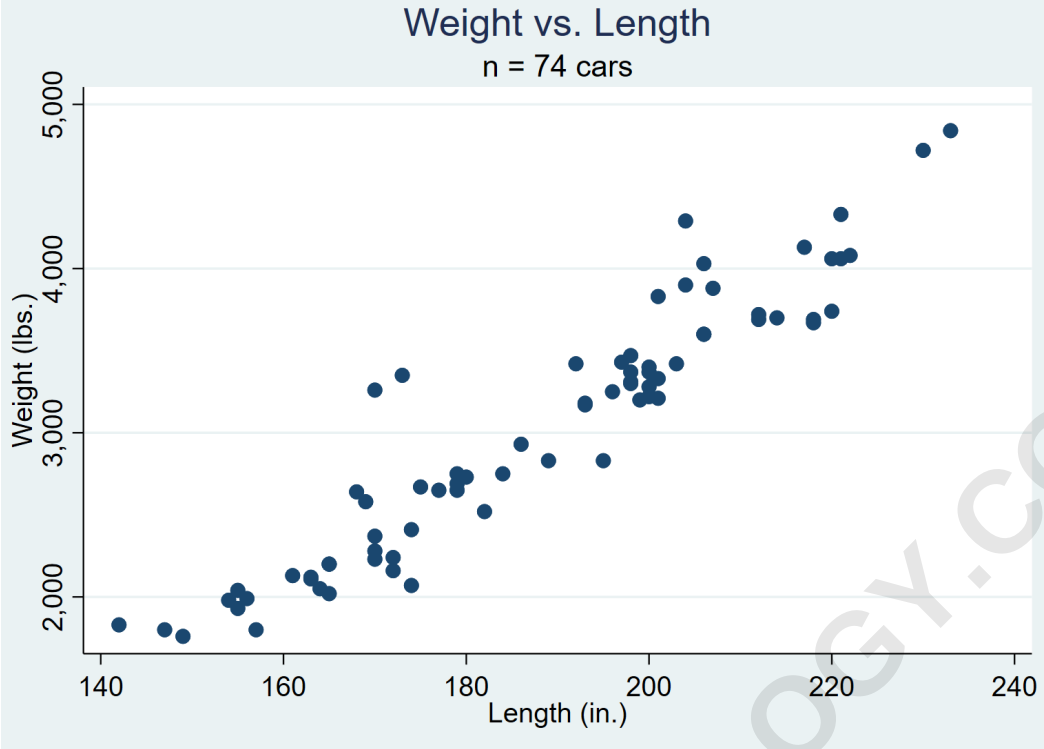
scatter weight length, title(Weight vs. Length")



Adding a Subtitle

We can also add a subtitle underneath the title using the subtitle() command:

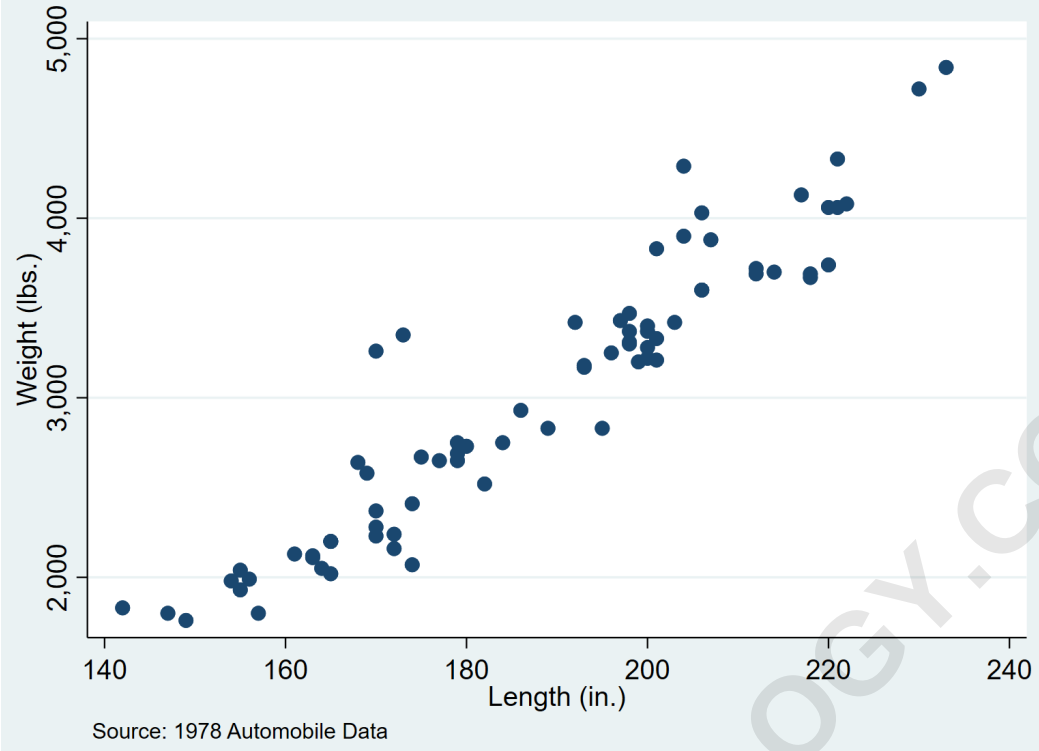
scatter weight length, title(Weight vs. Length") subtitle("n = 74 cars")



Adding a Comment

We can also add a note or comment at the bottom of the graph by using the note() command:

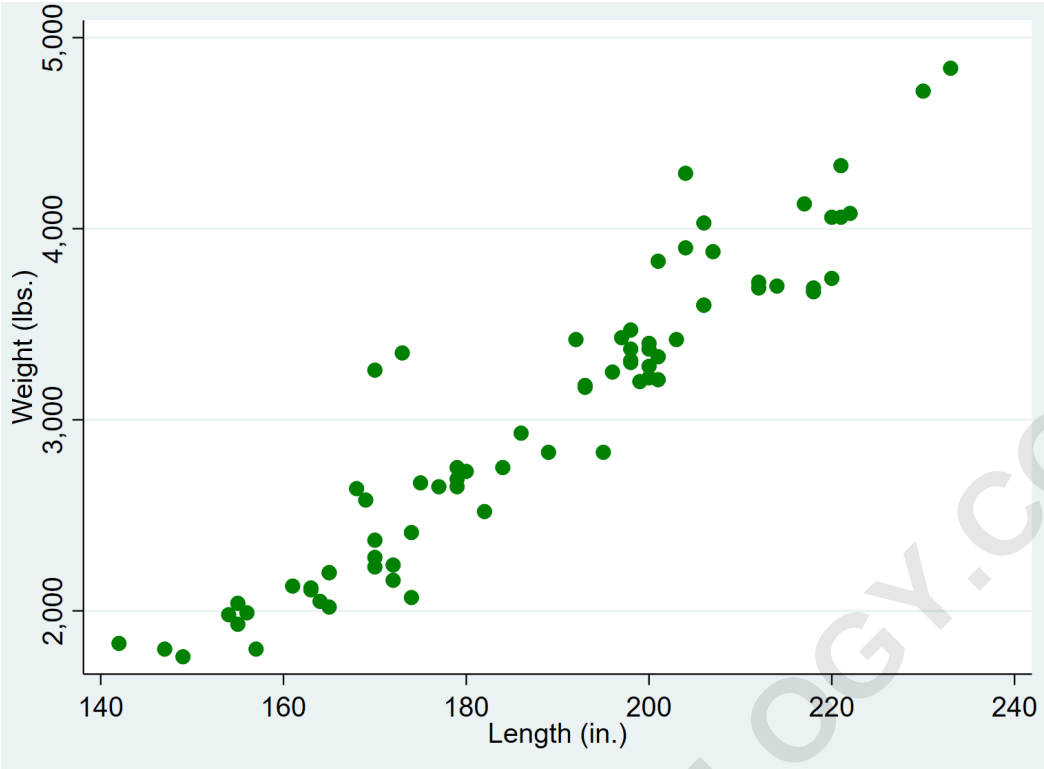
scatter weight length, note("Source: 1978 Automobile Data")



Changing Colors

We can change the color of the points in the scatterplot by using the mcolor() command:

scatter weight length, mcolor(green)

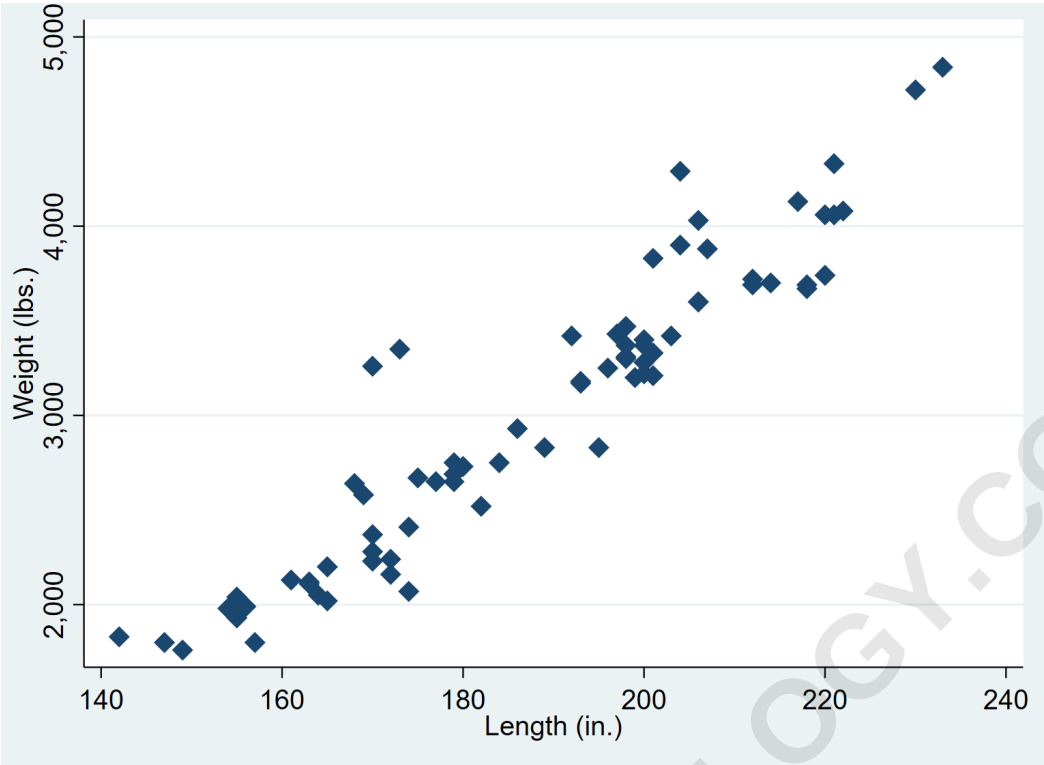


A full list of available colors can be found in the .

Changing Shapes

We can also change the shape of the points in the scatterplot by using the msymbol() command. For example the symbol "D" corresponds to diamonds:

scatter weight length, msymbol(D)



A full list of available shapes can be found in the .