

How can I visualize longitudinal data in Stata?

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Stata is a statistical software program that allows users to efficiently analyze and visualize longitudinal data. Longitudinal data refers to data collected over time from the same individuals or groups. To visualize longitudinal data in Stata, users can utilize various graphical tools such as line graphs, scatter plots, and bar charts. These graphs can be customized to show changes over time, compare different groups, and display statistical trends. Additionally, Stata offers advanced features such as interactive graphics and animated graphs to enhance the visual representation of longitudinal data. With its powerful data visualization capabilities, Stata allows users to easily interpret and communicate their findings from longitudinal data analyses.

How can I visualize longitudinal data in Stata? | Stata FAQ

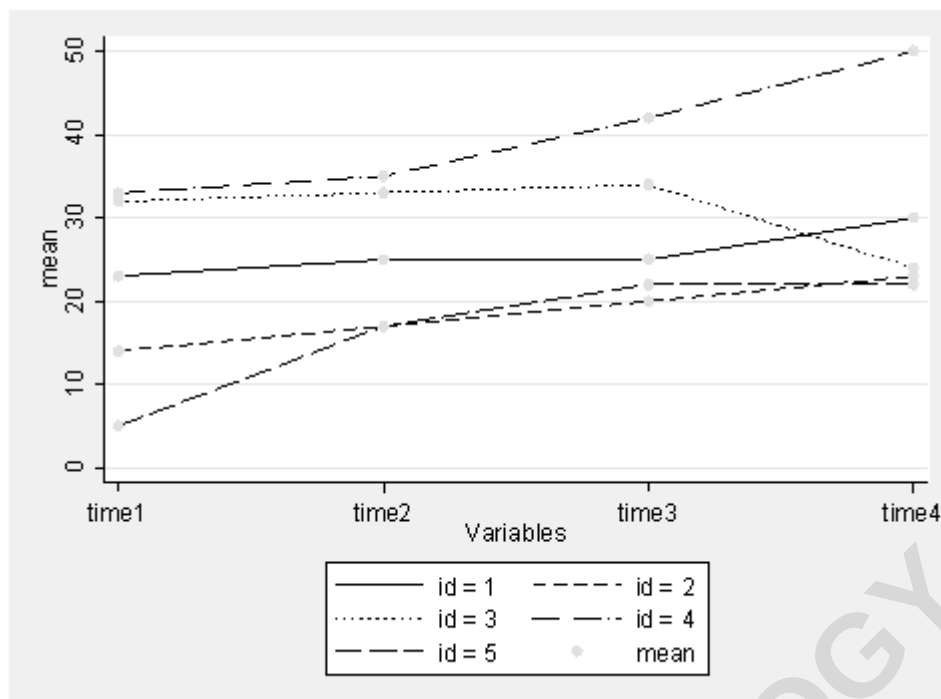
Longitudinal data are data containing measurements on subjects at multiple times. Visualizing longitudinal data without loss of data can be difficult, but there are several ways to do so in Stata. Both Stata command `xtline` and Stata user-written command `profileplot` (see [How can I use the search command to search for programs and get additional help?](#) for more information about using search) allow you to generate plots with time on the horizontal axis and levels of an outcome on the vertical axis, connecting the related points (points from a single subject or from a specified group) with a line. This type of plot allows you to trace the levels of the outcome variable over time for a given subject and can often reveal larger patterns that may be of interest. Which

command is appropriate for your dataset depends on the shape of your dataset.

If your dataset is "wide" (each time point is represented as its own variable and the measured responses are the values found in the multiple time variables), then `profileplot` will allow you to visualize your data without reconfiguring it. The dataset below contains four measurements on five subjects. These data are in wide form, and we can see the plot generated by `profileplot`.

```
+-----+
| id time1 time2 time3 time4 |
+-----+
1. | 1 23 25 25 30 |
2. | 2 14 17 20 23 |
3. | 3 32 33 34 24 |
4. | 4 33 35 42 50 |
5. | 5 5 17 22 22 |
+-----+
```

`profileplot time1 time2 time3 time4, by(id)`



For details on how to obtain and use `profileplot`, see [Stata FAQ: How can I do a profile plot in Stata?](#).

If your dataset is "long" (there is one variable indicating time and another variable with the measured response from given time value), then `xtline` will allow you to visualize your data without reconfiguring it. The dataset below contains the same four measurements on five subjects as the dataset set seen above, but here the data are in long form. We can see the plot generated by `xtline`.

+-----+

| id time y |

|-----|

1. | 1 1 23 |

2. | 1 2 25 |

3. | 1 3 25 |

4. | 1 4 30 |

5. | 2 1 14 |

|-----|

6. | 2 2 17 |

7. | 2 3 20 |

8. | 2 4 23 |

9. | 3 1 32 |

10. | 3 2 33 |

|-----|

11. | 3 3 34 |

12. | 3 4 24 |

13. | 4 1 33 |

14. | 4 2 35 |

15. | 4 3 42 |

|-----|

16. | 4 4 50 |

17. | 5 1 5 |

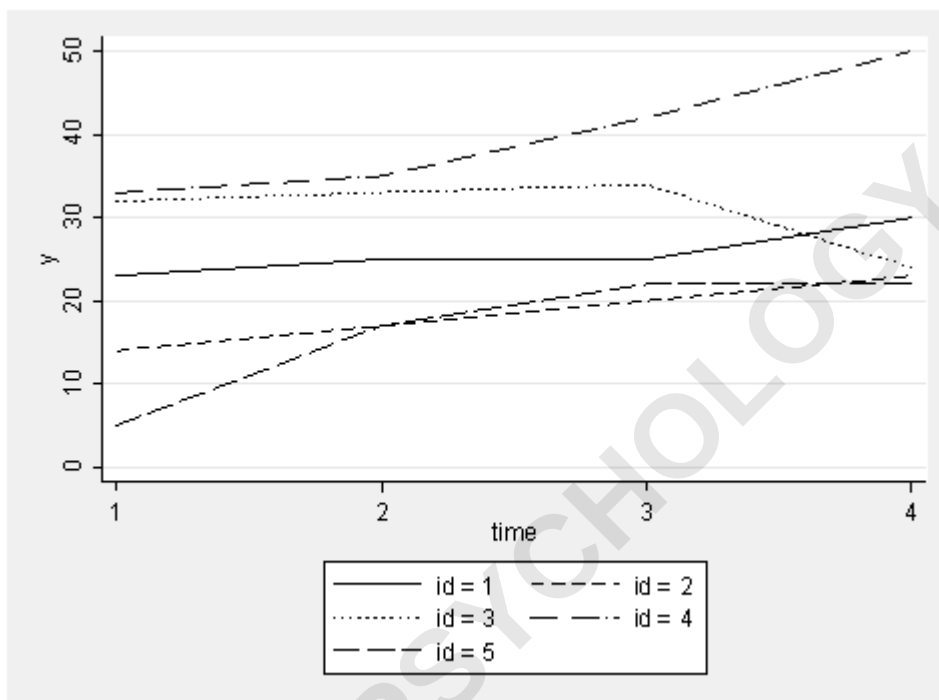
18. | 5 2 17 |

19. | 5 3 22 |

20. | 5 4 22 |

+-----+

xtline y, t(time) i(id) overlay



For details on how to use xtline, see [Stata FAQ: How do I use xtline in Stata?](#).