

## Title

(KIT) Living Income Tools — Density (kernel smoothened) plots, optionally by groups.

## Syntax

<code>KITLI_densityplots</code> <i>varlist</i> [ <i>if</i> ] [ <i>in</i> ], options	
<i>optional</i>	Description
Grouping	
<code>grouping_var(<i>varname</i>)</code>	grouping variable
Graph hard edges	
<code>hard_min(<i>text</i>)</code>	string indicating the hard lower edges (per group)
<code>hard_max(<i>text</i>)</code>	string indicating the hard upper edges (per group)
Graph labels	
<code>ytitle(<i>text</i>)</code>	Text for y axis. Default "Proportion of households (%)"
Graph colors	
<code>colors(<i>text</i>)</code>	String with colors for the graph. Default "ebblue%30   blue%30   green%30   orange%30"
Graph exporting	
<code>nosave</code>	does not save the generated graph (default behavior is to save)
<code>subfolder(<i>text</i>)</code>	(relative) subfolder to save the graph. Default is the current folder

## Description

**KITLI\_densityplots** produces density (kernel smoothened) plots as fractions about the distribution of underlying variables for the indication of the household income, optionally by groups.

It allows to force hard edges to the smoothened distribution.

It produces graphs similar to what can be seen at:  
<https://www.kit.nl/wp-content/uploads/2019/01/Analysis-of-the-income.pdf>  
[https://docs.wixstatic.com/ugd/0c5ab3\\_93560a9b816d40c3a28daaa686e972a5.pdf](https://docs.wixstatic.com/ugd/0c5ab3_93560a9b816d40c3a28daaa686e972a5.pdf)

## Options

Grouping	<code>grouping_var(<i>varname</i>)</code> grouping variable. If specified, density charts will have one curve per group.
Graph hard edges	<code>hard_min(<i>text</i>)</code> string indicating the hard lower edges (per group). It follows the format "number   number   number"  <code>hard_max(<i>text</i>)</code> string indicating the hard upper edges (per group). It follows the format "number   number   number".
Graph labels	<code>ytitle(<i>text</i>)</code> Text for y axis. If not specified, <i>Proportion of households(%)</i> is shown.

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### Graph colors

For more information see [colorstyle](#)

**colors**(*text*) Colors for the curves. Multiple colors need to be separated by a "|". Default "ebbblue%30 | blue%30 | green%30 | orange%30".

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### Graph exporting

**nosave** does not save the generated graph (default behavior is to save). Graph name will start with the variable name followed by "\_density\_plot".

**subfolder**(*text*) (relative) subfolder to save the graph. Default is the current folder. Please make sure name is correct includes "/" as separator if needed. Folder will be created if necessary.

### Examples

Setup

```
. use LI_example_data.dta, replace
```

Density plots, by group

```
. KITLI_densityplots prod_total_last_kg_ha revenue_usdha_2018 li_inputs_usdha_2018  
  li_hired_usdha_2018 total_income_2018 total_hh_income_2018, grouping_var(grouping)
```

Density plots with hard edges for groups 1 and 2

```
. KITLI_densityplots cocoa_land_used_morethan5_ha, grouping_var(grouping) nosave hard_min( "0  
  | 4 | ") hard_max(" 4 | 1000 | ")
```

### Citation

**KITLI\_densityplots** is not an official Stata command. It is a free contribution to the research community, like a paper. Please cite it as such:

Tyszler, et al. (2019). Living Income Calculations Toolbox. KIT ROYAL TROPICAL INSTITUTE and COSA. Available at: [m.tyszler@kit.nl](mailto:m.tyszler@kit.nl)

If you have requests or suggestions, please do so at our repository:  
<https://bitbucket.org/kitimpactteam/living-income-calculations/>

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### References

Bitbucket repository: <https://bitbucket.org/kitimpactteam/living-income-calculations/>