

Title

(KIT) Living Income Tools — Farm level profit model for a single main crop in relation to the living Income Benchmark.

Syntax

KITLI_farmlevelmodel <i>li_benchmark</i> [<i>if</i>] [<i>in</i>], arguments	
(mandatory) model elements	Description
total_main_income (<i>varname</i>)	<i>varname</i> of total income from main source
total_hh_income (<i>varname</i>)	<i>varname</i> of total household income
total_production (<i>varname</i>)	<i>varname</i> of total household production in one year
productive_farm (<i>varname</i>)	<i>varname</i> of total area of household productive farm
price (<i>varname</i>)	<i>varname</i> of price per unit of weight of the production
revenue_total (<i>varname</i>)	<i>varname</i> of total value of production
input_costs (<i>varname</i>)	<i>varname</i> of total input costs per household per year
hiredlabour_cost (<i>varname</i>)	<i>varname</i> of total hired labour costs per household per year
all_costs (<i>varname</i>)	<i>varname</i> of all costs per household per year
hh_size (<i>varname</i>)	<i>varname</i> of household size
(mandatory) file exporting	
filename (<i>text</i>)	(full) name of the excel file to be exported
wsheet (<i>text</i>)	worksheet name within the excel file to receive the exports
optional arguments	
Description	
Grouping	
grouping_var (<i>varname</i>)	grouping variable
Calculation	
statistic (<i>text</i>)	statistic to be calculated. Default "mean"
Model labels	
label_currency (<i>text</i>)	Text for currency name. Default "USD"
label_weight (<i>text</i>)	Text for weight unit. Default "kg"
label_land (<i>text</i>)	Text for land unit. Default "ha"

Description

KITLI_farmlevelmodel produces a farm level profit model for a single main source of income in relation to the living Income Benchmark.

It produces tables 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

The model takes as input the living income benchmark value and elements for profit calculation.

It exports a formatted excel table with the inputs and additional calculations (yield, share of main income and gap to the living income benchmark). Optionally, it includes the breakdown per group.

The default behavior is to report averages, but other percentiles are also possible.

KITLI_farmlevelmodel uses summarize and putexcel.

Please be aware the excel file will have its contents overwritten. Therefore the file needs to be closed. If the file does not exist it will be created. If it does exist, the contents will be overwritten, but not cleared.

It is therefore advised to clear the contents of the target worksheet to avoid confusion.

Arguments

Main

li_benchmark varname which contains the living income benchmark value per observation.

Mandatory model elements

total_main_income(varname) varname of total income from main source, for example main crop sales. The table assumes there is one main income source.

total_hh_income(varname) varname of total household income, including the main income source.

total_production(varname) varname of total household production in one year.

productive_farm(varname) varname of total area of household productive farm.

price(varname) varname of price per unit of weight of the production.

revenue_total(varname) varname of total value of production.

input_costs(varname) varname of total input costs per household per year.

hiredlabour_cost(varname) varname of total hired labour costs per household per year.

all_costs(varname) varname of all production costs per household per year, including inputs and hired labour.

hh_size(varname) varname of household size. This is not actually used by any calculation but it is a very important reference value and therefore is required to be included.

Currency of **li_benchmark** and other monetary valued variables need to be the same (e.g., USD).

Weight unit of **total_production** and other related valued variables need to be the same (e.g., kg).

Land unit of **productive_farm** and other related valued variables need to be the same (e.g., ha).

File exporting

filename(text) (full) name of the excel file to be exported, including existing subfolders if desired. If you use subfolder, please use "/" as separator. **Please be aware the excel file will have its contents overwritten.**

wsheet(text) worksheet name within the excel file to receive the exports. It will be created if not existent. If it exists, content will be overwritten, but not cleared elsewhere.

Grouping

grouping_var(varname) grouping variable. If specified, the table will have one column per group.

Calculation

statistic(text) statistic to be calculated. One of the return values of summarize, such as p50, i.e., median. Default is "mean"

Model labels

label_currency(*text*) Text for currency name. If not specified, *USD* is shown.

label_weight(*text*) Text for weight unit. If not specified, *kg* is shown.

label_land(*text*) Text for land unit. If not specified, *ha* is shown.

Examples

Setup

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

Farm level model, by group:

```
KITLI_farmlevelmodel benchmark_cluster, total_main_income(total_income_2018)
    total_hh_income(total_hh_income_2018) total_production(prod_total_last_kg)
    productive_farm(cocoa_land_used_morethan5_ha) price(price_usdkg_2018) revenue_total(rev
al_2018) input_costs(li_inputs_usdhh_2018) hiredlabour_cost(li_hired_usdhh_2018)
    all_costs(li_costs_usdhh_2018) hh_size(hhmem_number) filename("Farm Level model.xlsx")
    wsheet("Compare avg farms") grouping_var(grouping)
```

Farm level model, by group, with medians

```
KITLI_farmlevelmodel benchmark_cluster, total_main_income(total_income_2018)
    total_hh_income(total_hh_income_2018) total_production(prod_total_last_kg)
    productive_farm(cocoa_land_used_morethan5_ha) price(price_usdkg_2018) revenue_total(rev
al_2018) input_costs(li_inputs_usdhh_2018) hiredlabour_cost(li_hired_usdhh_2018)
    all_costs(li_costs_usdhh_2018) hh_size(hhmem_number) filename("Farm Level model.xlsx")
    wsheet("Compare avg farms") grouping_var(grouping) statistic(p50)
```

Citation

KITLI_farmlevelmodel 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

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

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References

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