

Reweighting CPI



27 January 2017



The weights and basket

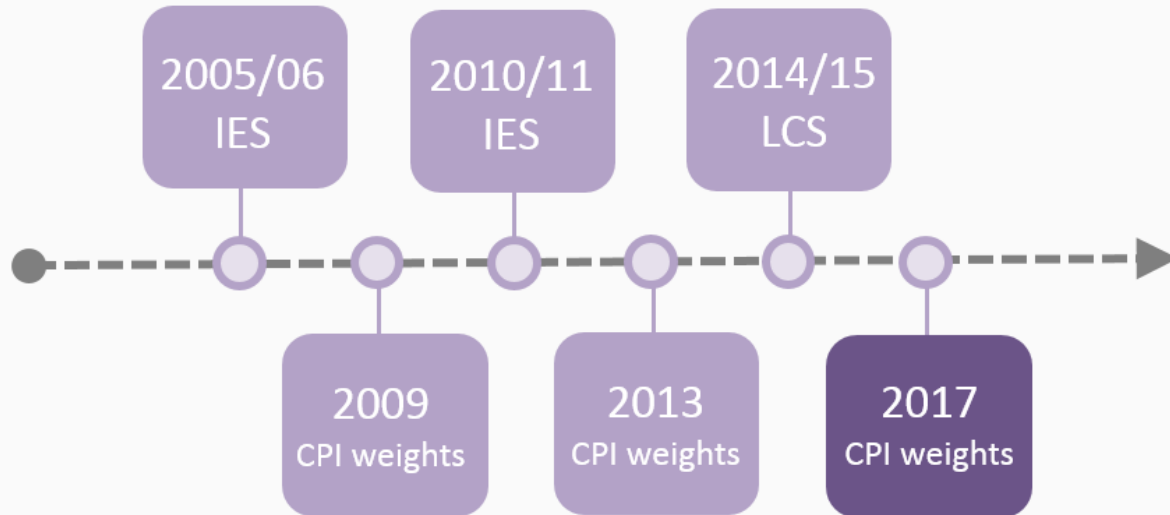
The weights and basket

- Each product in CPI has a weight to reflect relative importance
- Weights reflect total spending patterns of households
- International practice: Reweight at least every 5 years for relevance to changing consumption or production trends
- Last CPI reweighting: January 2013



The weights and basket

Weights and basket based on household expenditure survey (Income and Expenditure or Living Conditions)



The weights and basket

Adjustments needed to expenditure data:



Frequent purchases and by different household members

Food; personal care; restaurants etc



'Sin' purchases

Alcoholic beverages & tobacco; gambling



Methodology

Net weight (insurance, gambling)
Owner occupied housing



Response

Low response rate especially in affluent areas

The weights and basket

Data sources for adjustments



Stats SA sources

National Accounts – household expenditure account

Retail sector Large sample survey – product level covering formal sector

Monthly Retail sales survey – per type of retailer



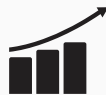
External sources

Retailer sales data – detailed summaries per product type

Excise tax data – from SARS

Industry bodies – turnover and quantity data

Regulatory agencies – SARB, FSB, CMS




Price Updating

Use inflation rates from May 2015 to December 2016

The weights and basket

Method to calculate weights and determine basket

- Calculate expenditure value for each product
- Select cumulative 80% value in each product category
- Minimum 0,01% of total expenditure
- Value for non-selected redistributed to those selected
- Final expenditure values are price updated
- All values then converted to percentage



Products: what's in and what's out

Products: what's in and what's out

COICOP categories



2016: 412

2012: 396

goods & services

- Food and non-alcoholic beverages
- Alcoholic beverages and tobacco
- Clothing and footwear
- Housing and utilities
- Household contents and services
- Health
- Transport
- Communication
- Recreation and culture
- Education
- Restaurants and hotels
- Miscellaneous

Products: what's in and what's out



Products: what's in and what's out

What's new?

FOOD

SAVOURY
BISCUITS,
RUSKS



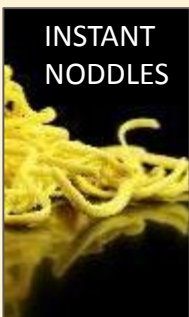
CHICKEN GIBLETS



MUTTON OFFAL



INSTANT
NOODLES



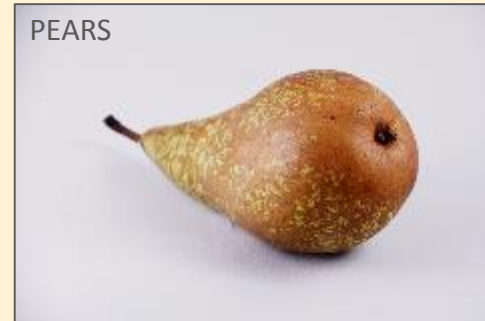
FROZEN PASTRY



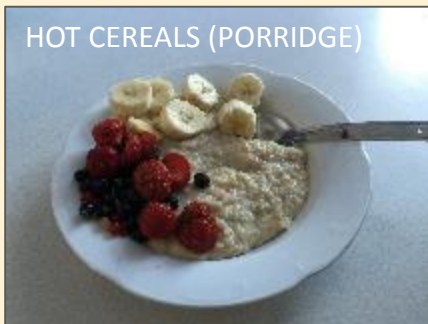
READY-MIX FLOUR



PEARS



HOT CEREALS (PORRIDGE)



BEEF OFFAL
CORNER BEEF



CHEWING GUM



PEANUTS



Products: what's in and what's out

What's new?

HOUSEHOLD



Products: what's in and what's out

What's new?

TRANSPORT



Products: what's in and what's out

What's new?

RECREATION



CRAYONS



VIDEO GAME



TOY CAR



SOCCER BALL

Products: what's in and what's out



Products: what's in and what's out

What's out?



TENNIS BALL



STAMPS



PRE-RECORDED DVD, BLANK CD & DVD



TEAPOT



FAN



SWEET CORN (CREAM STYLE)



PUBLIC THEATRE & WARD FEES



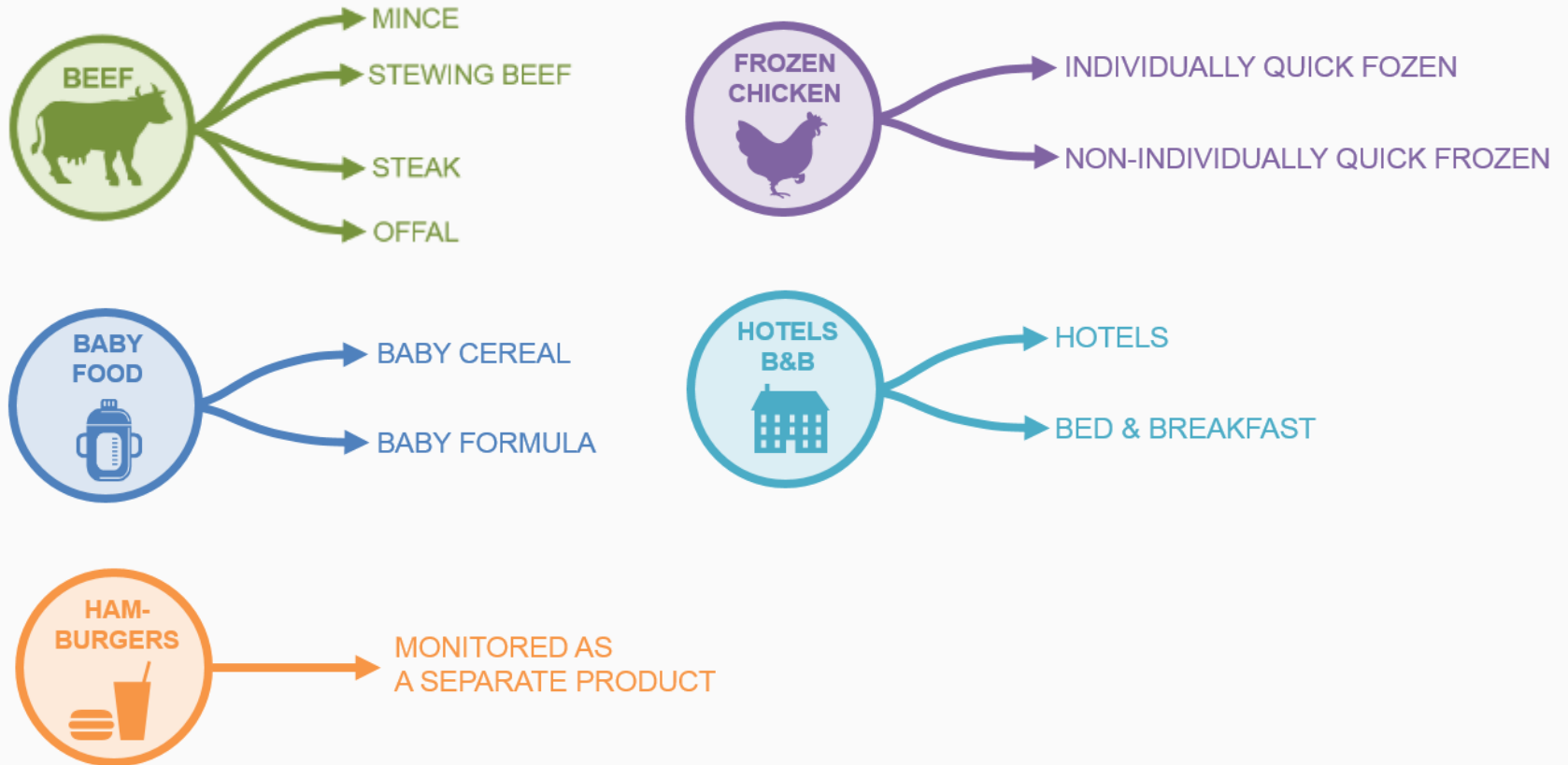
BOARD GAME



POOL CLEANER

Products: what's in and what's out

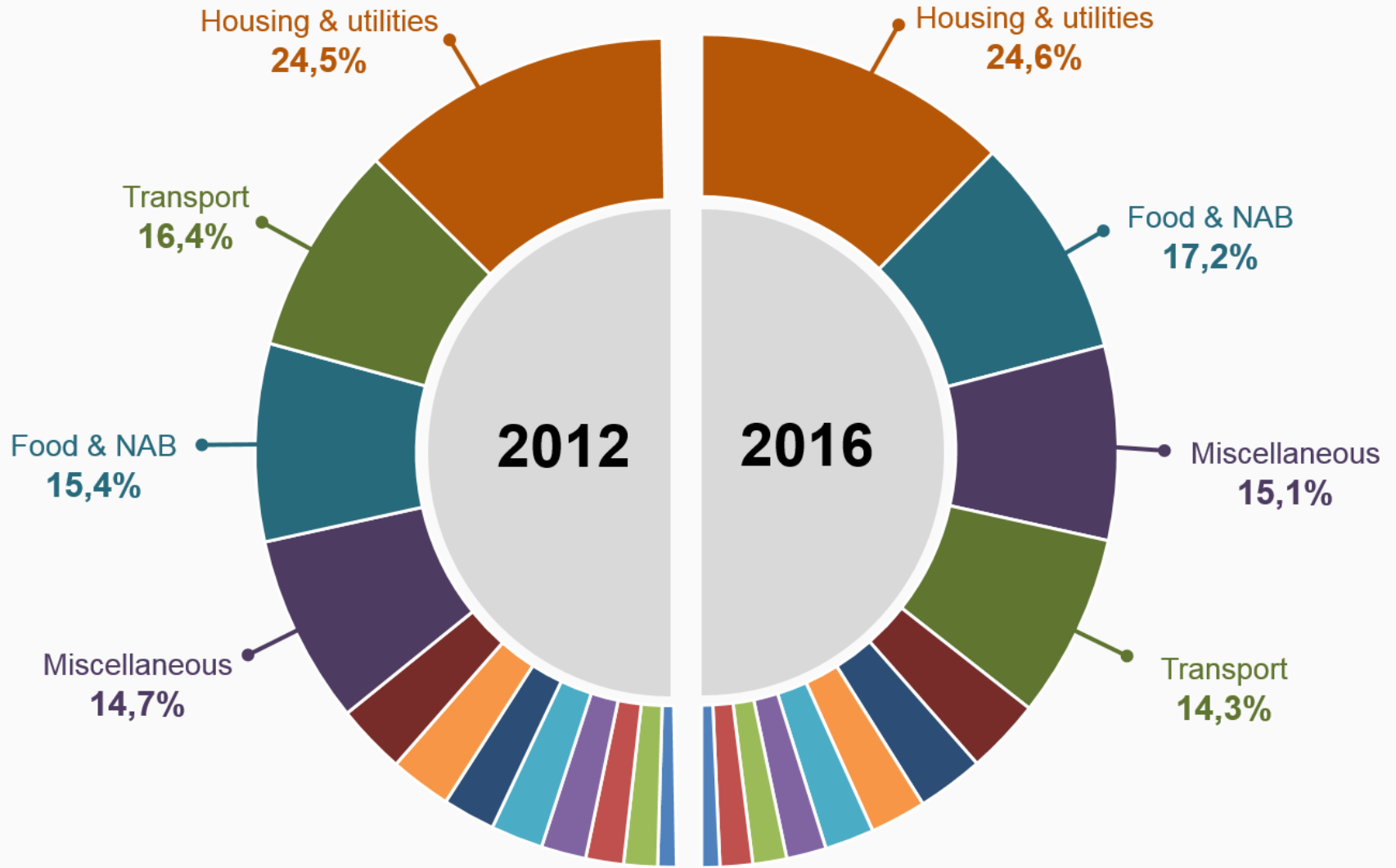
Changes to groupings





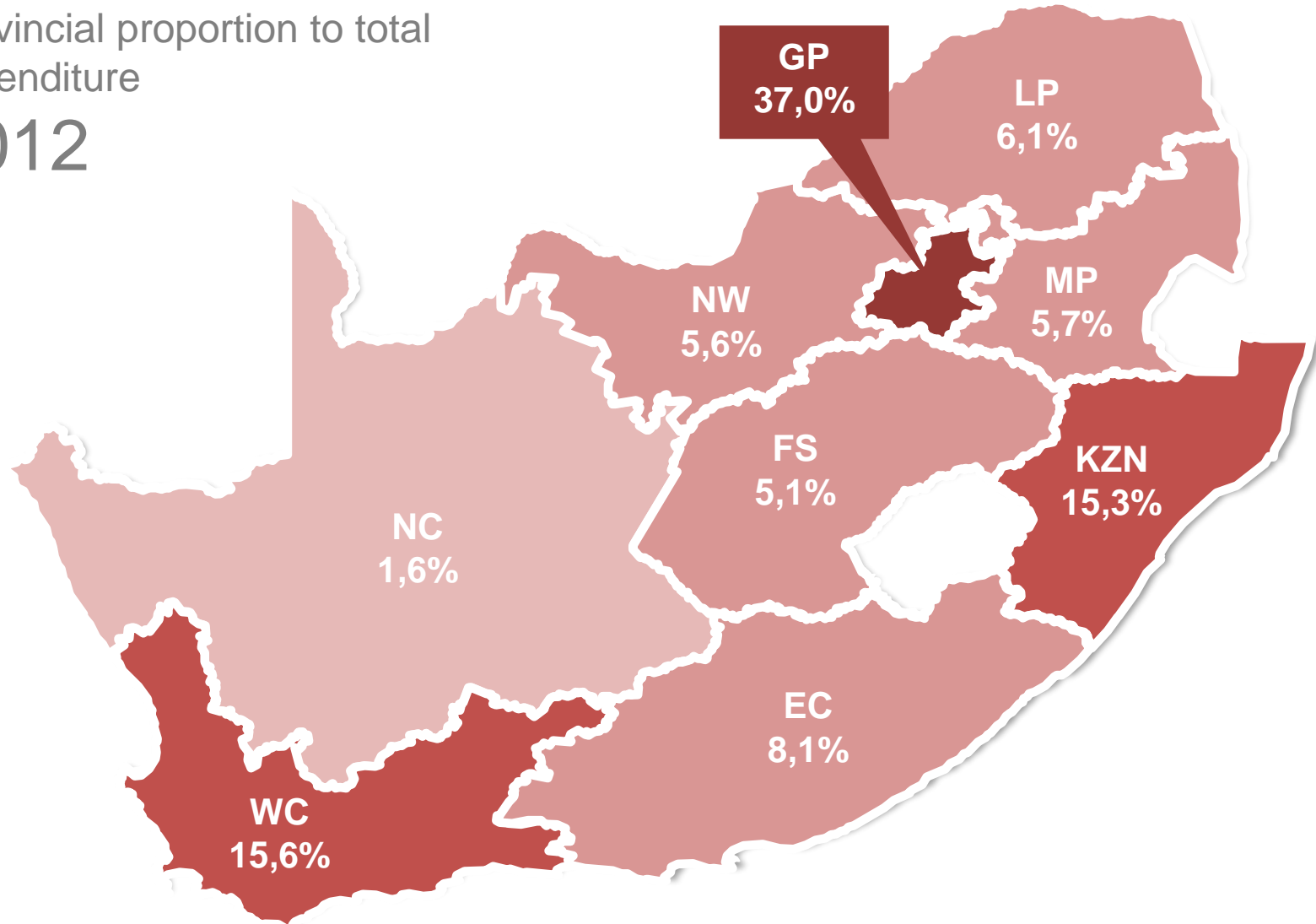
Weights

Weights



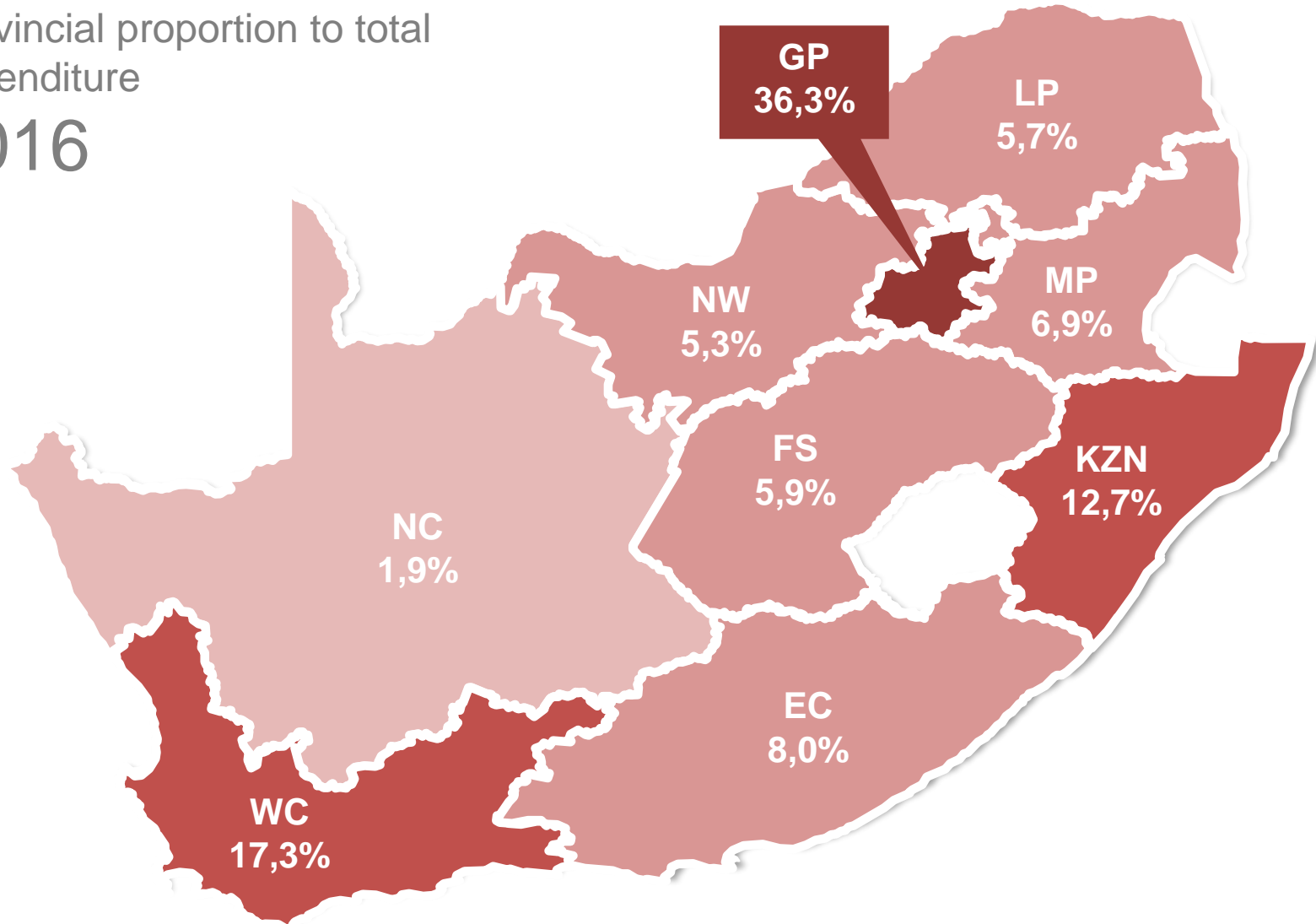
Weights

Provincial proportion to total expenditure
2012



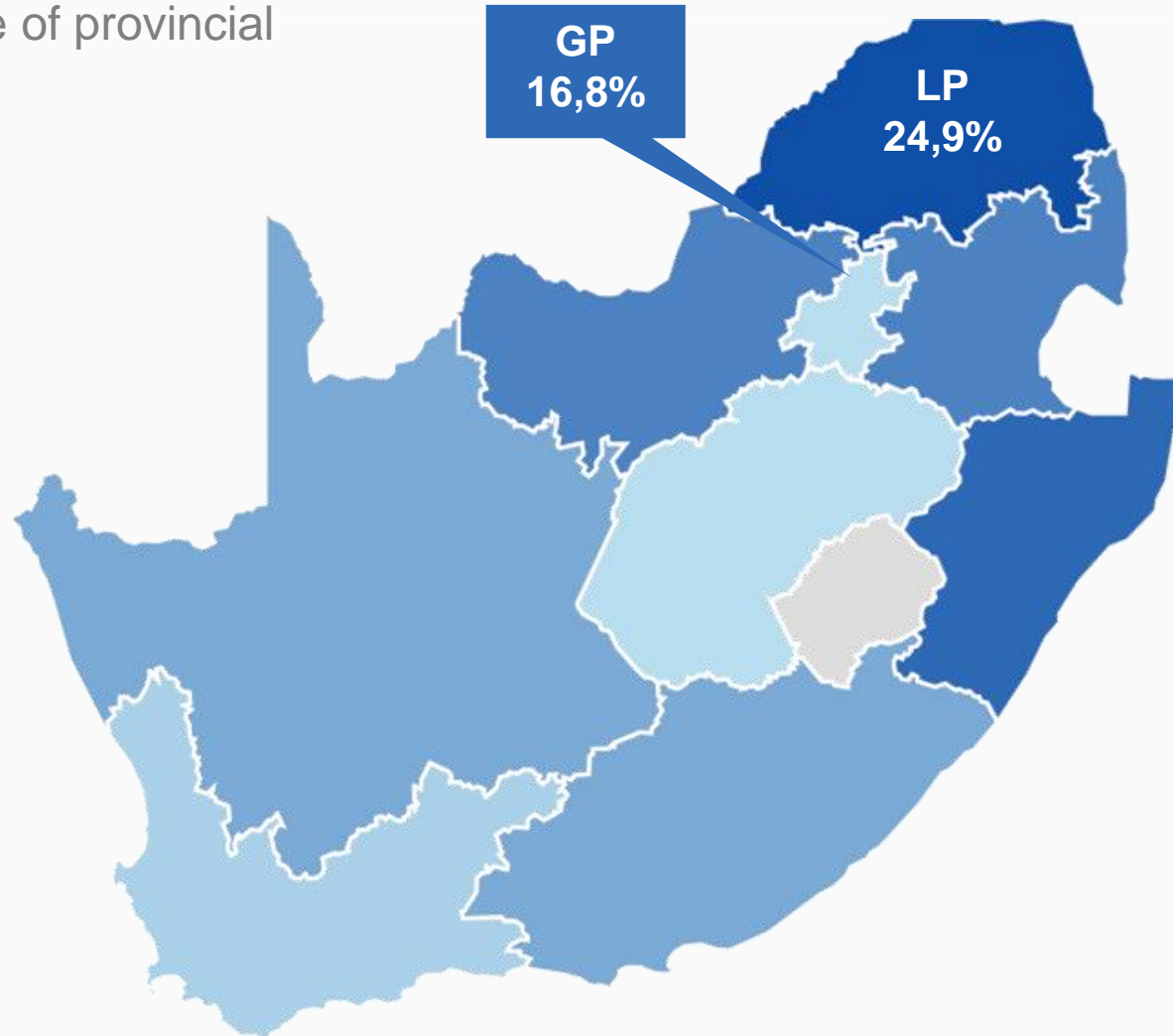
Weights

Provincial proportion to total expenditure
2016



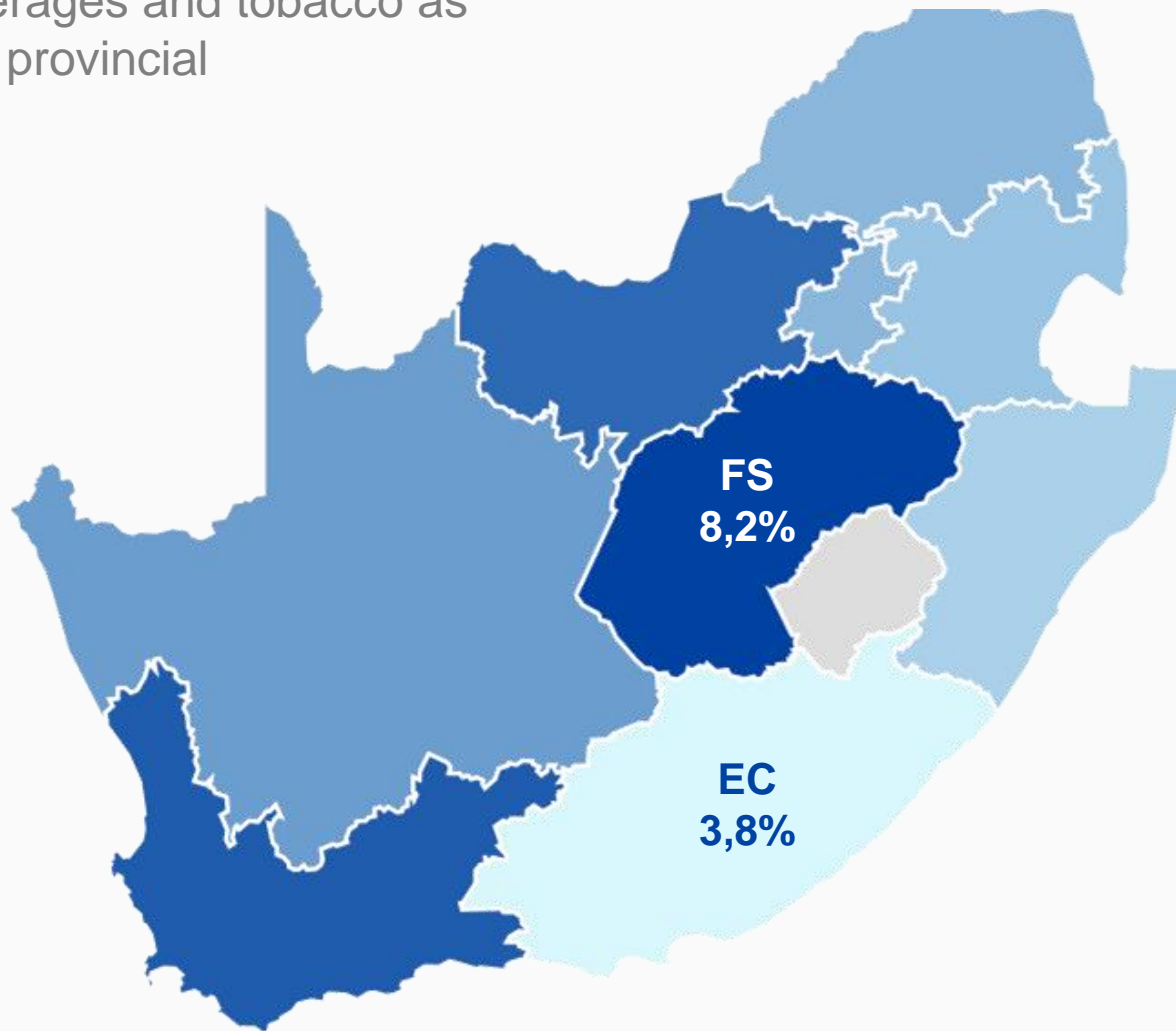
Weights

Food and non-alcoholic beverages
as percentage of provincial
expenditure



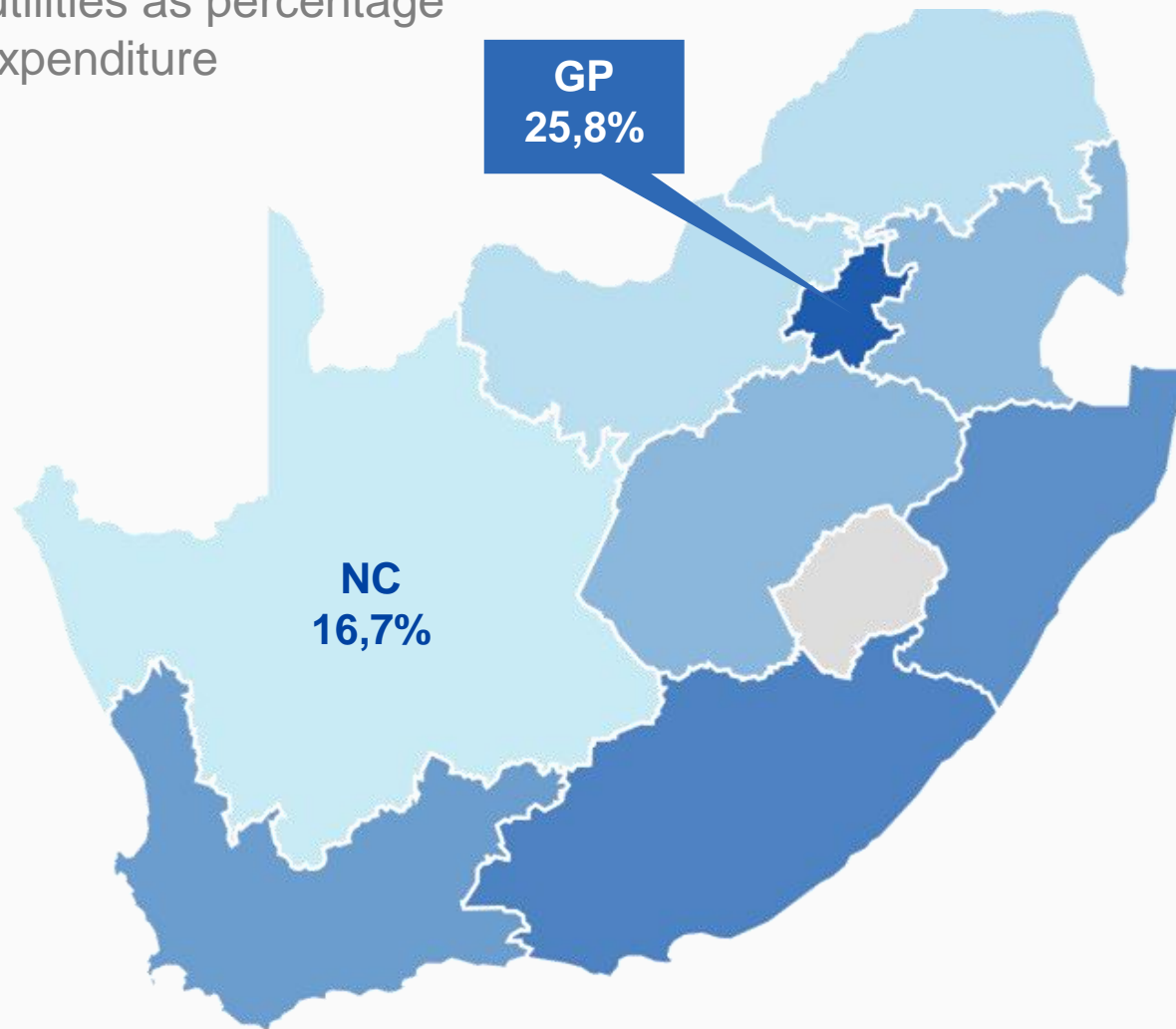
Weights

Alcoholic beverages and tobacco as percentage of provincial expenditure



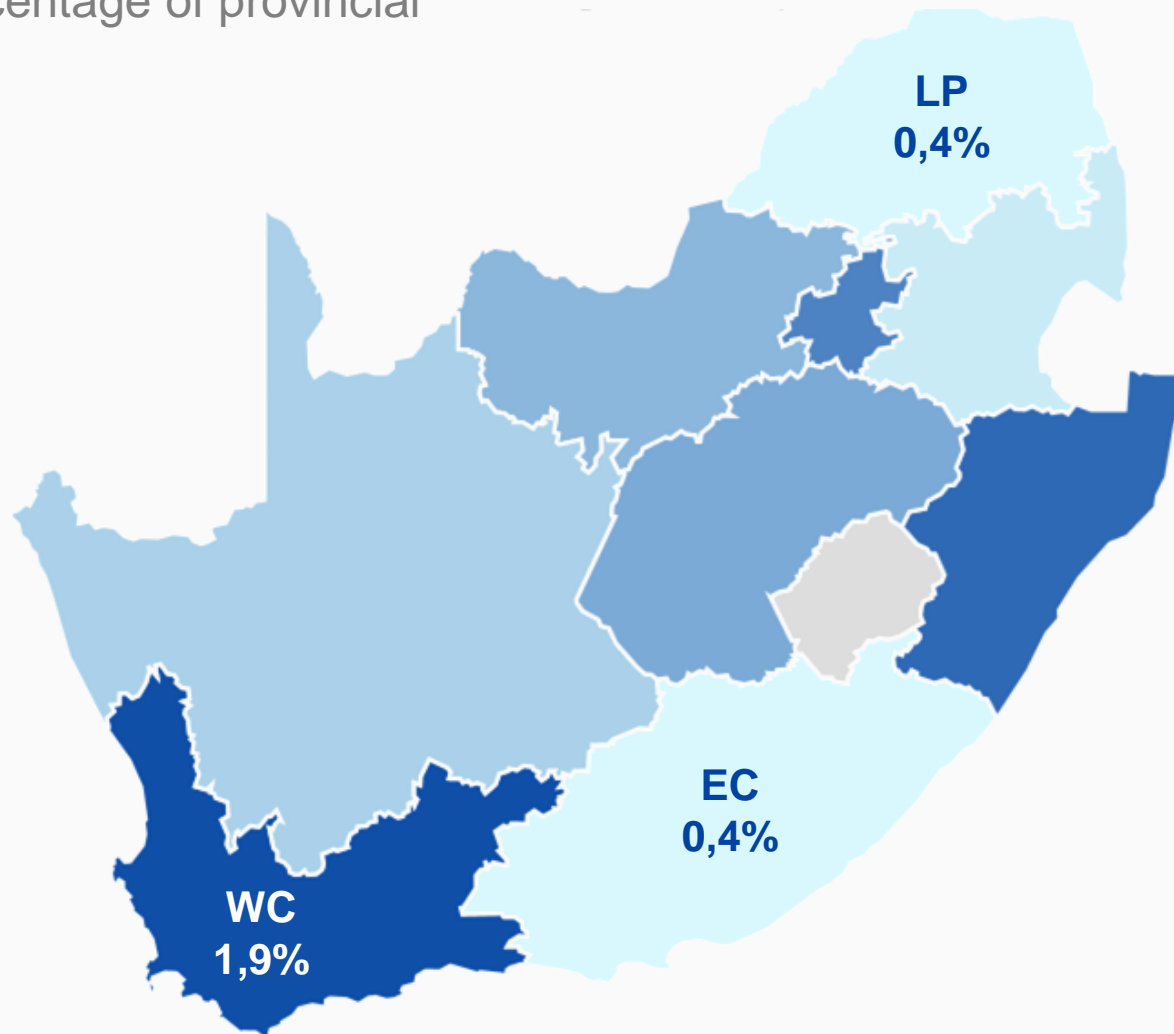
Weights

Housing and utilities as percentage of provincial expenditure



Weights

Health as percentage of provincial expenditure



Weights

Decile 1: poorest 10%



Decile 5: midpoint



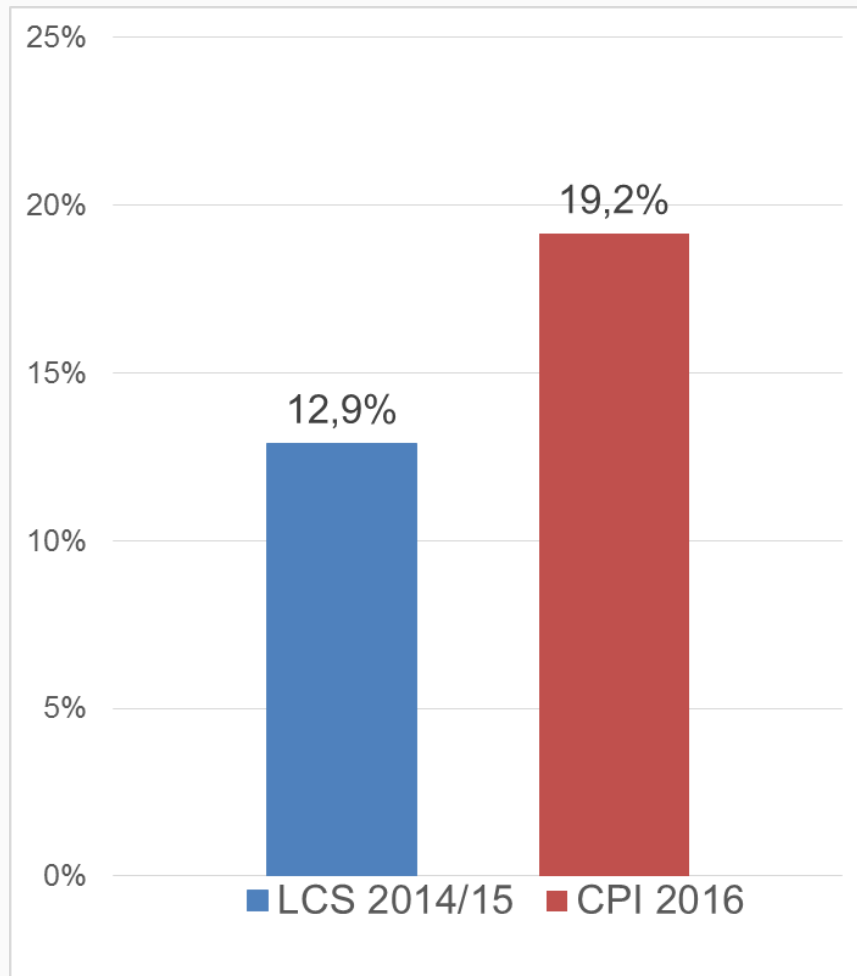
Decile 10: Richest 10%



Powered by ZingChart

Weights

Food and non-alcoholic beverages – total country

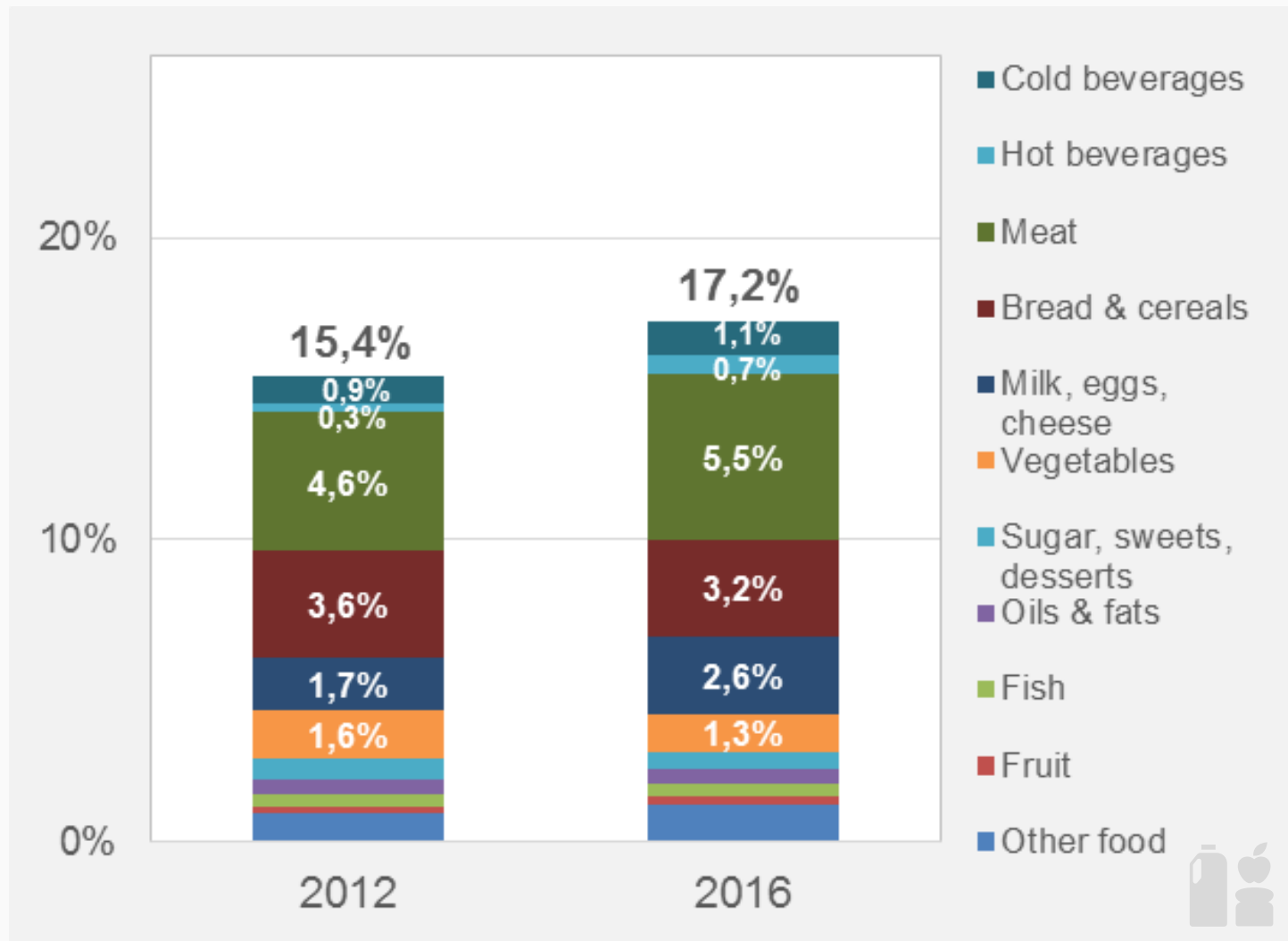


Adjustments:

- Whole category:
Retail LSS and monthly retail sales; informal and micro from National Accounts.
- Second and third level (Food - Bread and cereals):
Retail LSS
- Fourth level (Bread, biscuits):
LCS or Retail LSS
- Fifth level (Brown/white bread): LCS or Retailer sales data

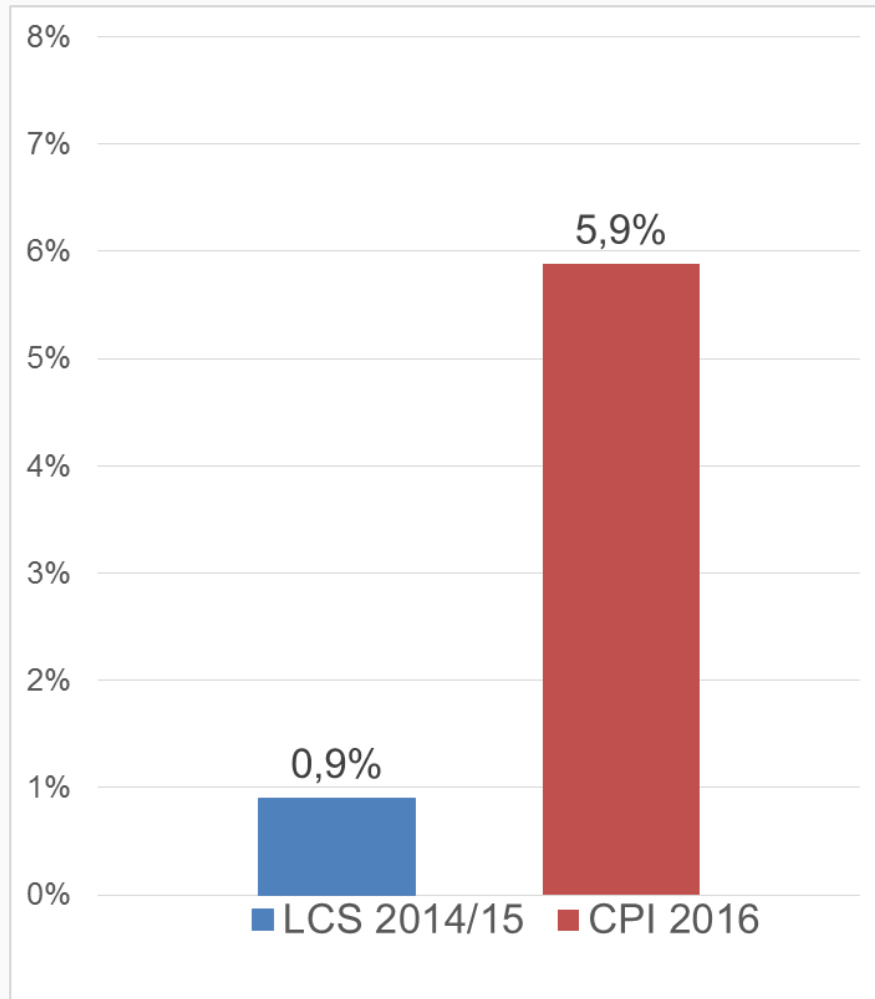
Weights

Food and non-alcoholic beverages - headline



Weights

Alcoholic beverages and tobacco - total country

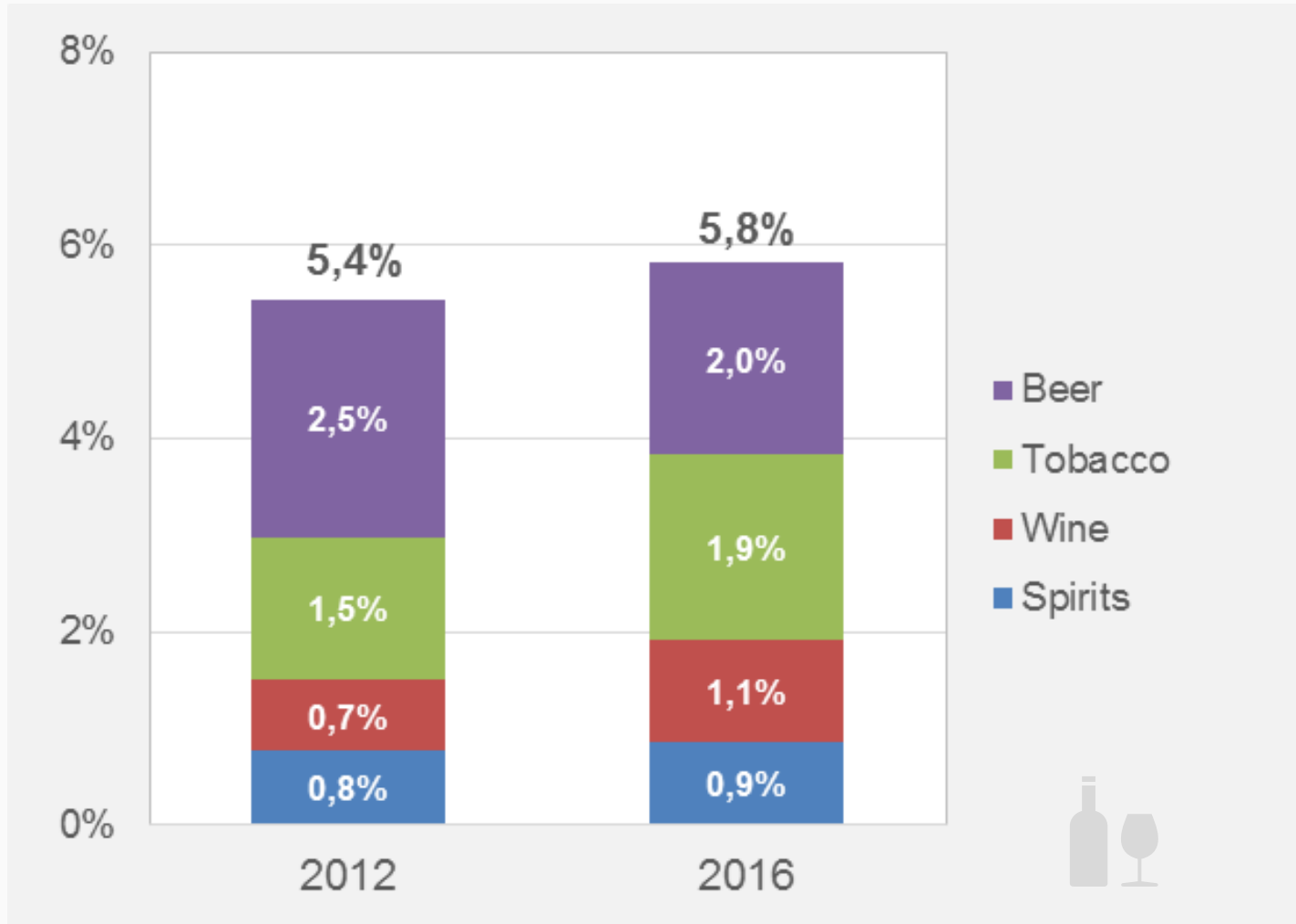


Adjustments:
Excise tax data



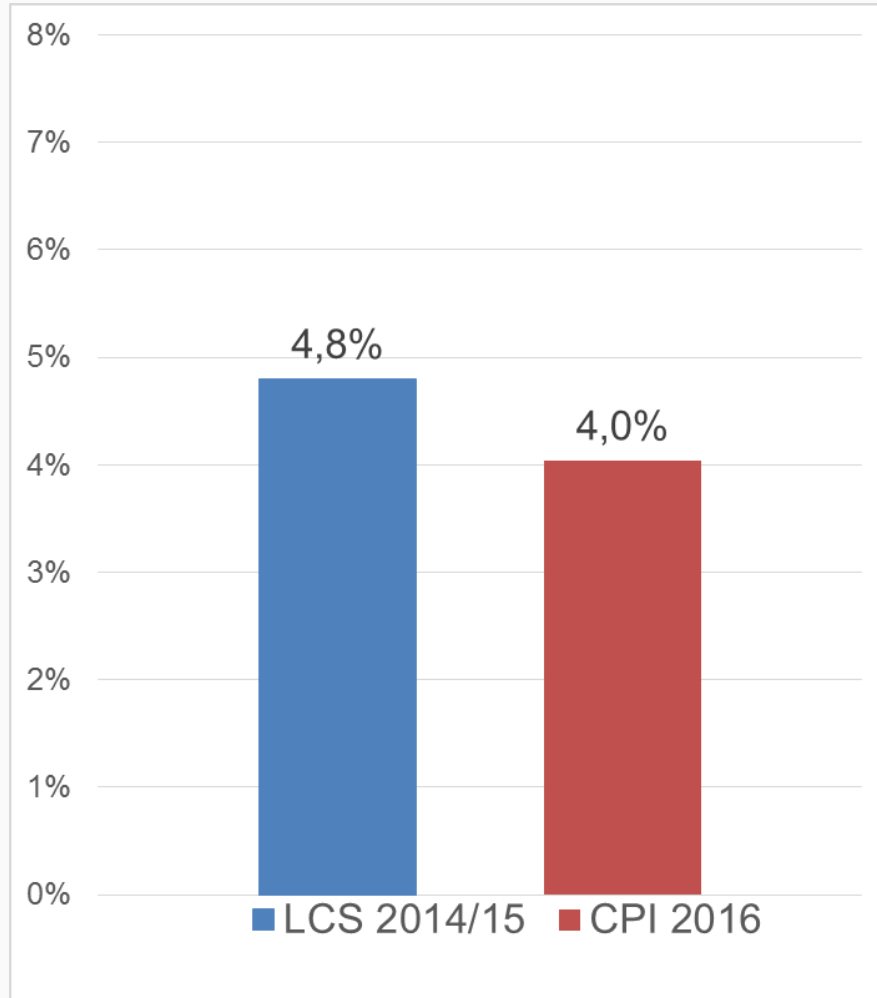
Weights

Alcoholic beverages and tobacco - headline



Weights

Clothing and footwear – total country

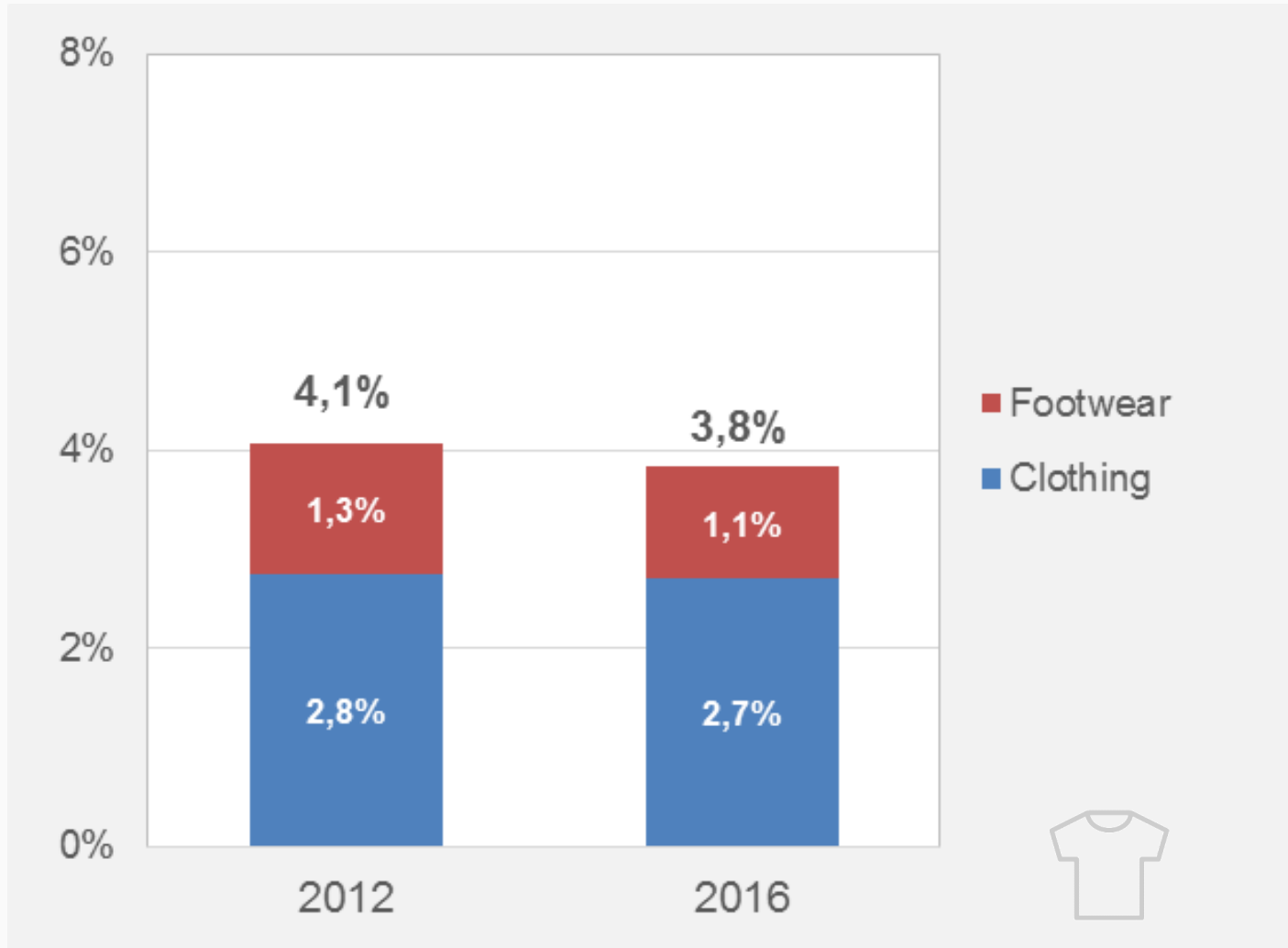


No adjustments made



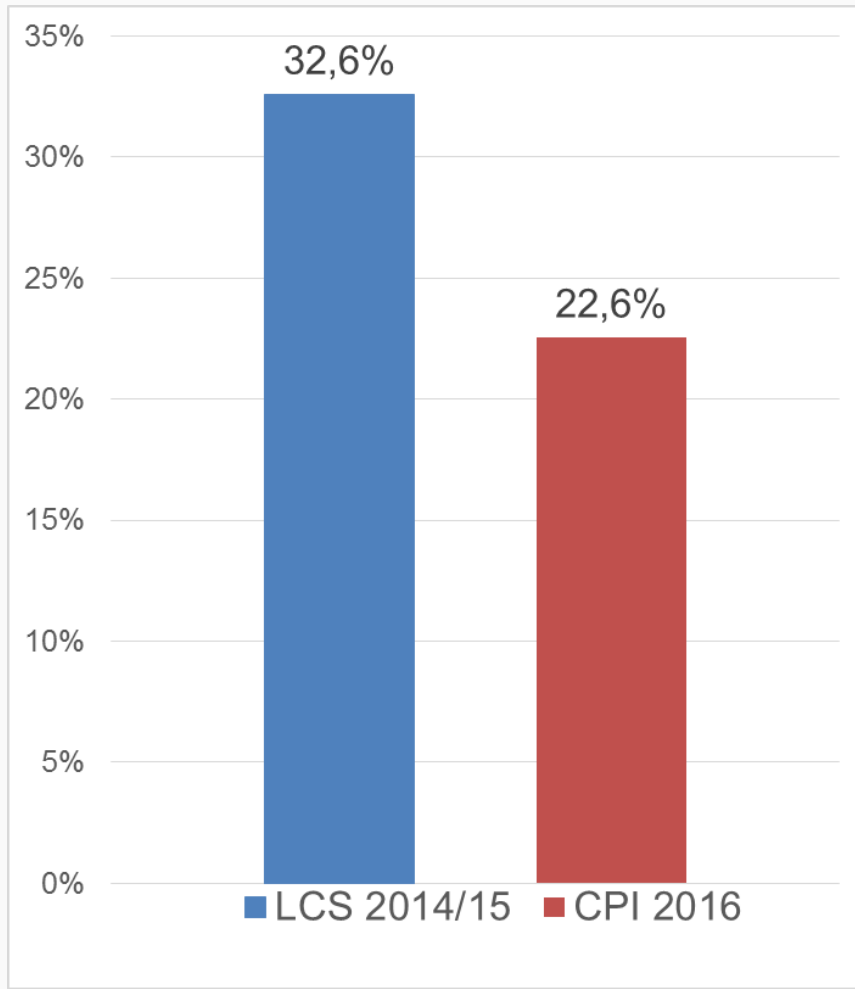
Weights

Clothing and footwear - headline



Weights

Housing and utilities – total country



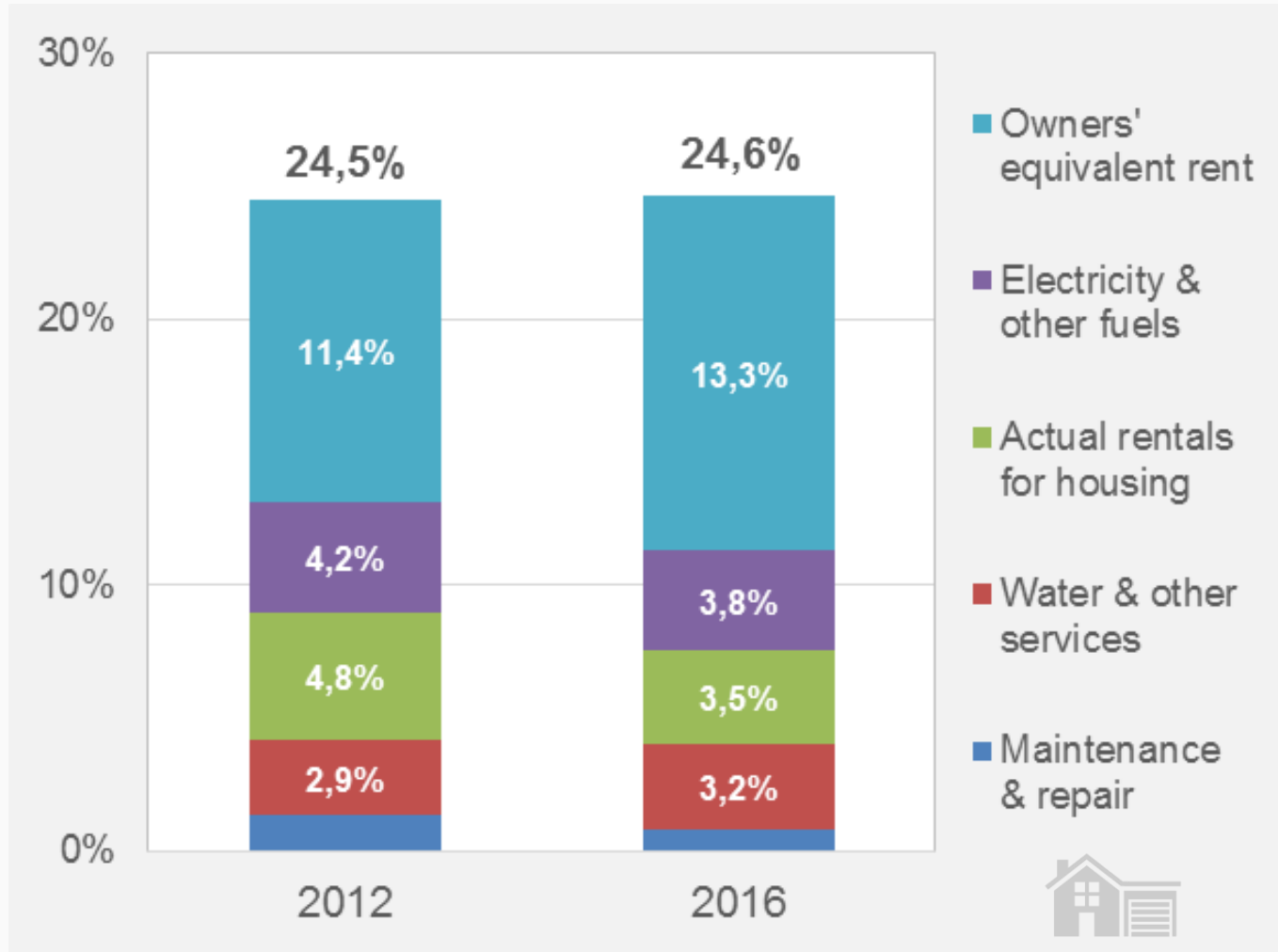
Adjustment:

Owner occupied housing –
rent matching method



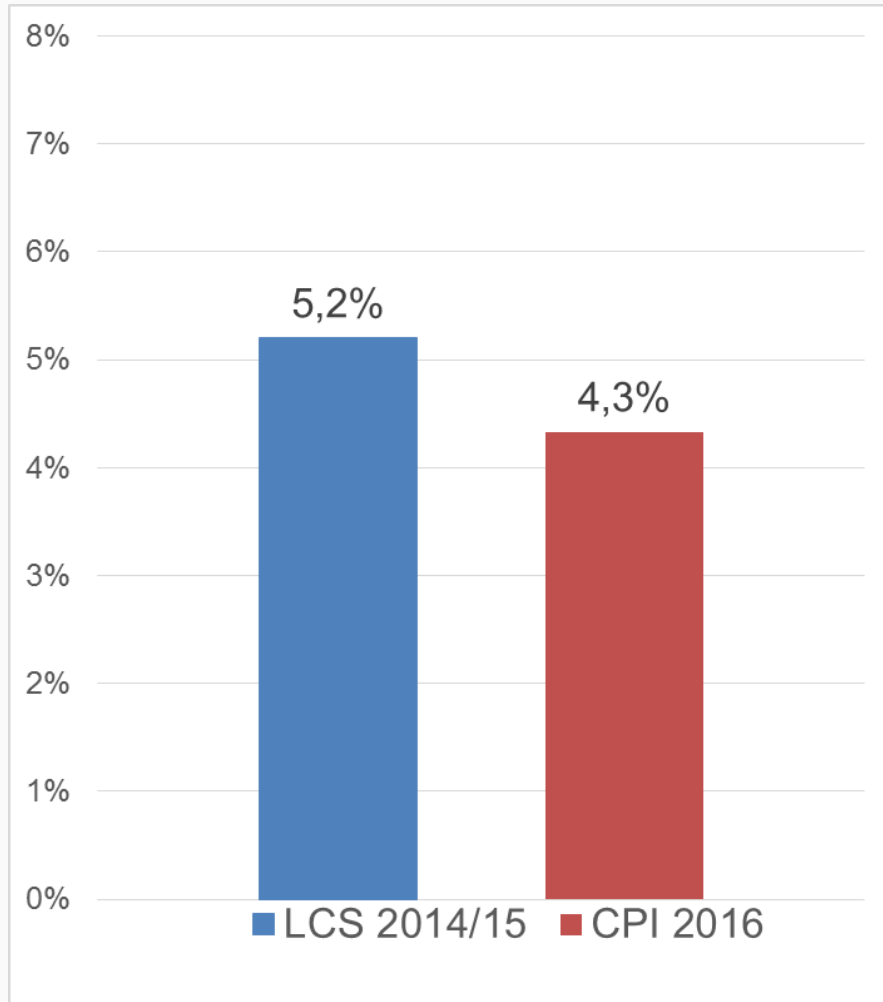
Weights

Housing and utilities - headline



Weights

Household furnishings, equipment & maintenance – total country

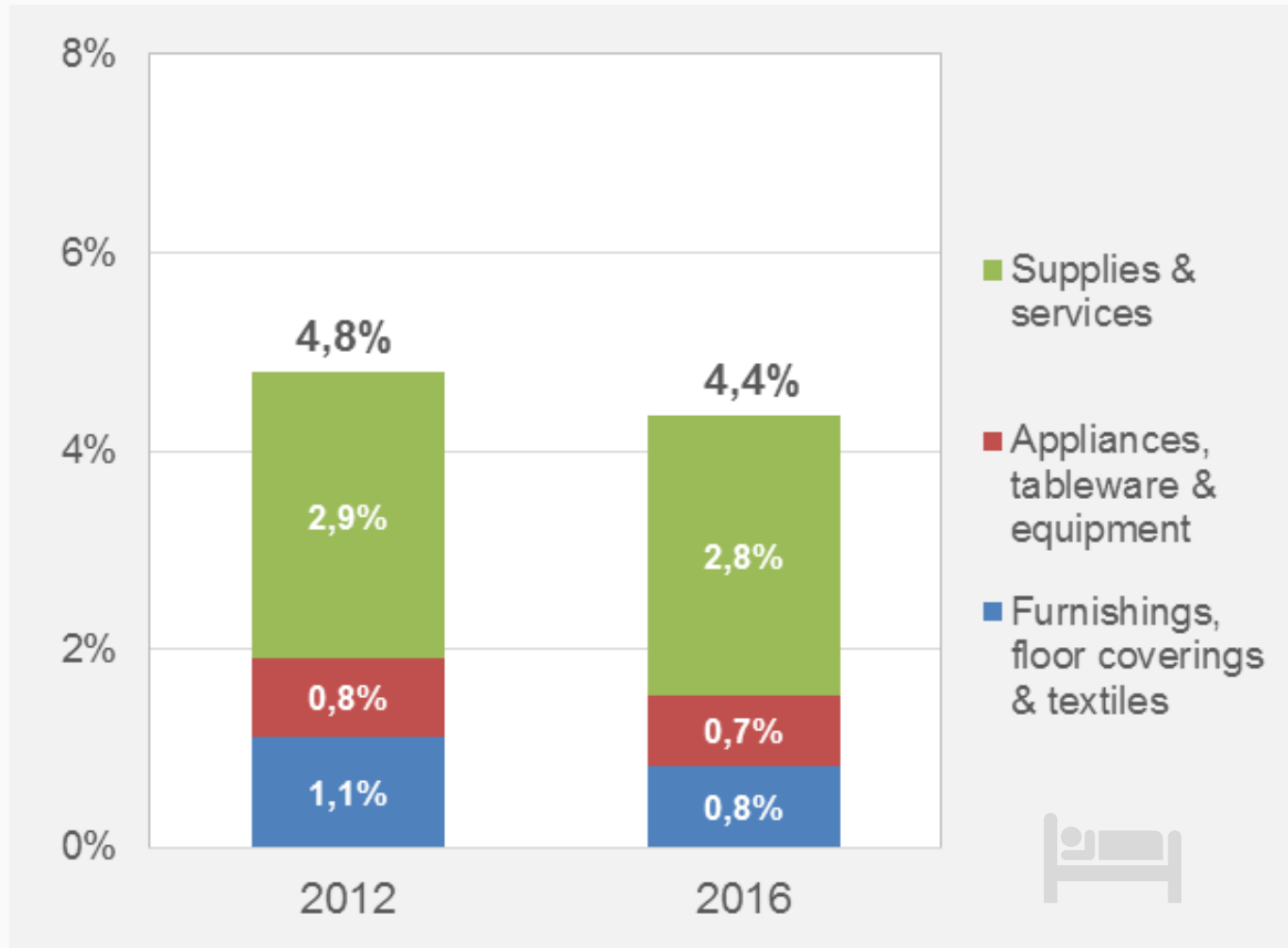


No adjustments made



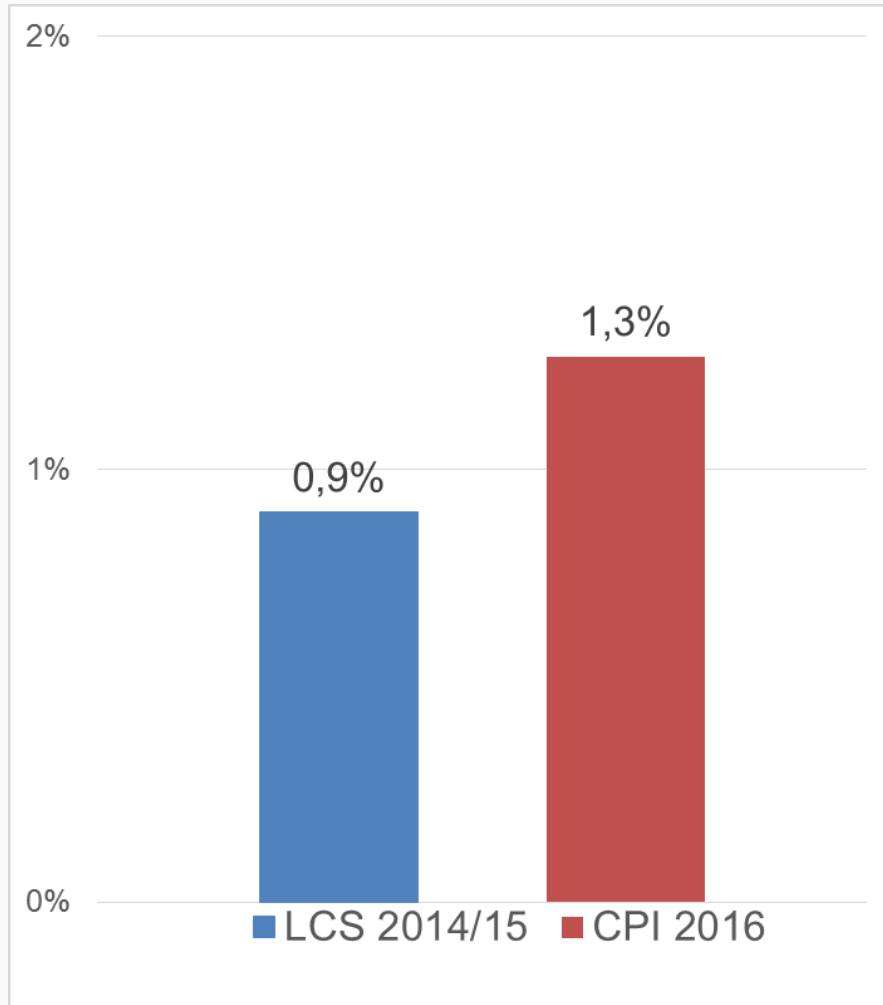
Weights

Household contents and services – headline



Weights

Health – total country

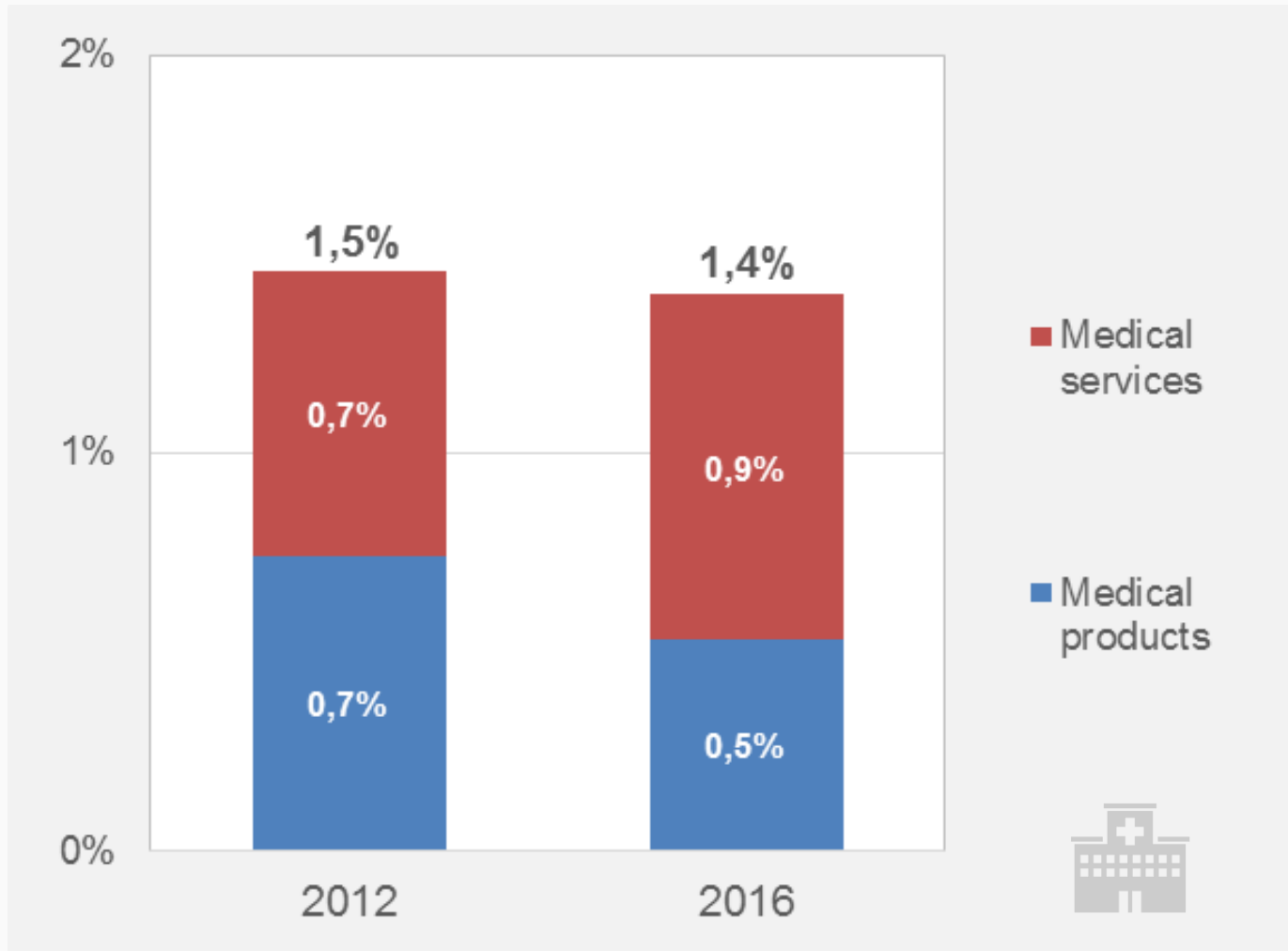


Adjustments:
Regulatory data on out of pocket expenses



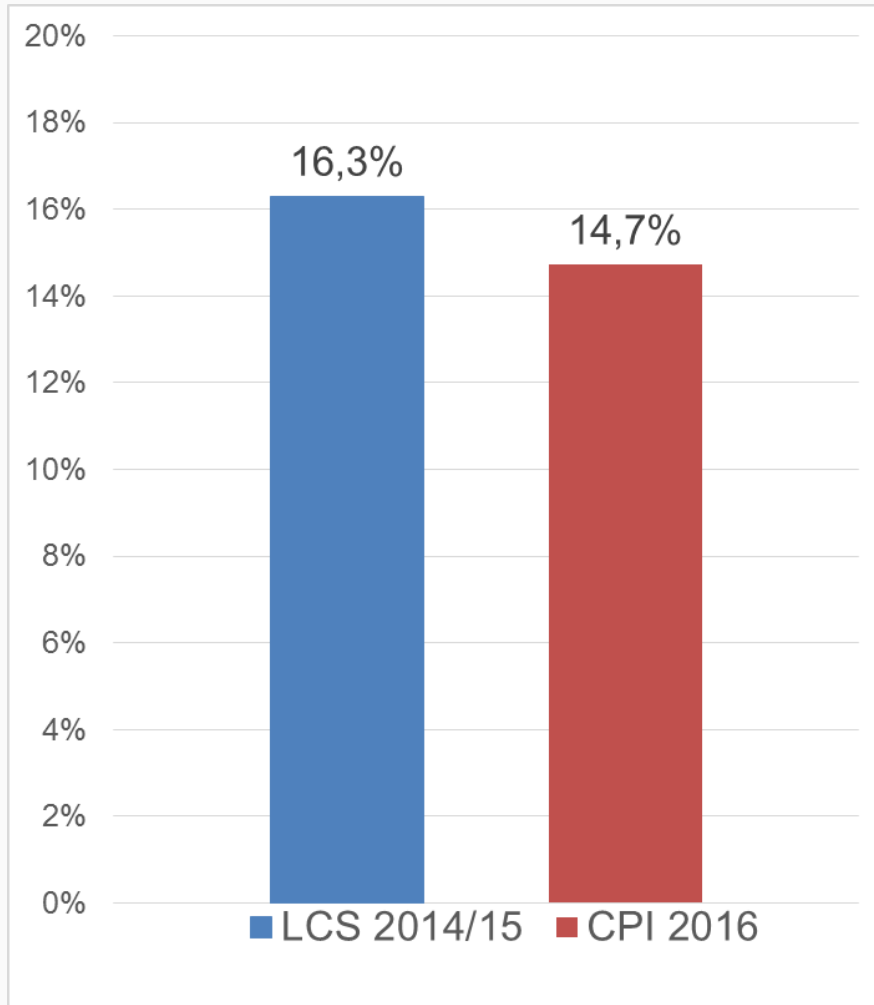
Weights

Health – headline



Weights

Transport – total country



Adjustments:

Used vehicles adjusted with net weight

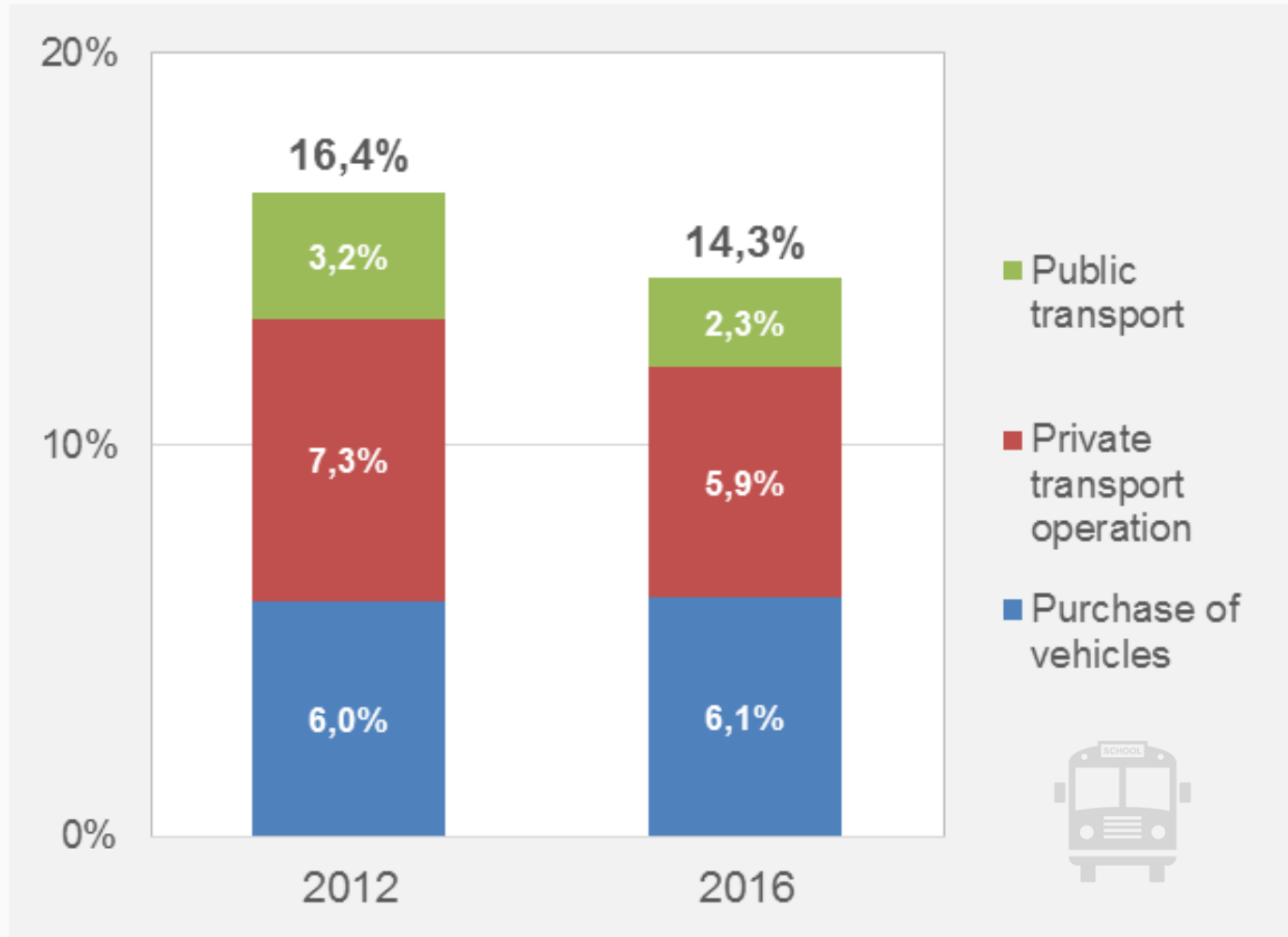
Upward adjustment for purchase of new vehicles using industry data

Fuel purchases adjusted upwards using National accounts



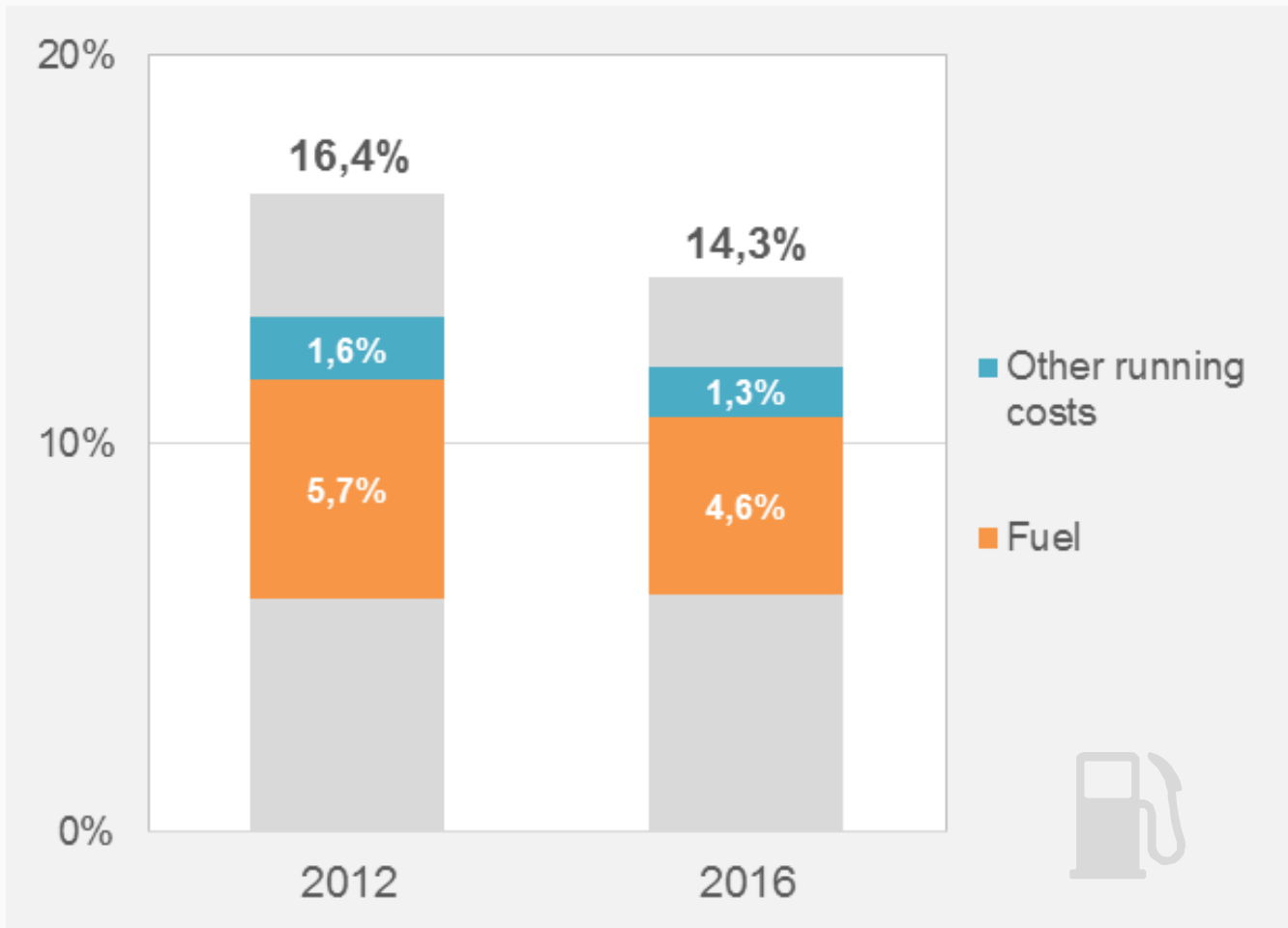
Weights

Transport - headline



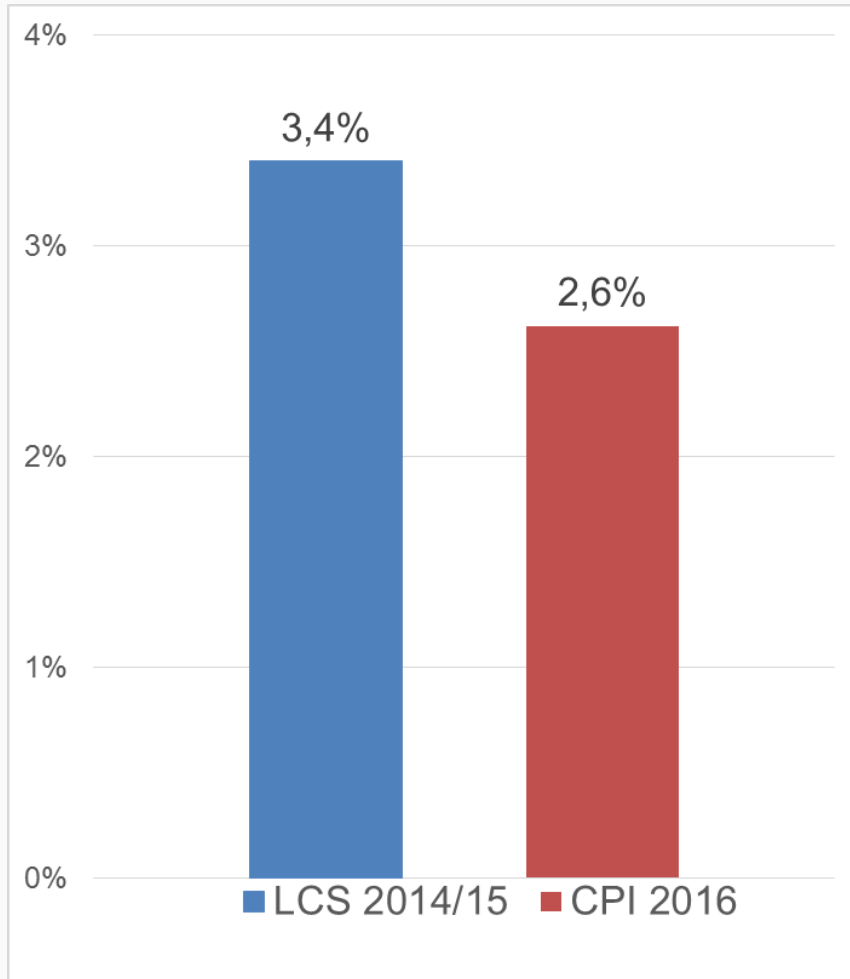
Weights

Private transport operation - headline



Weights

Communication – total country

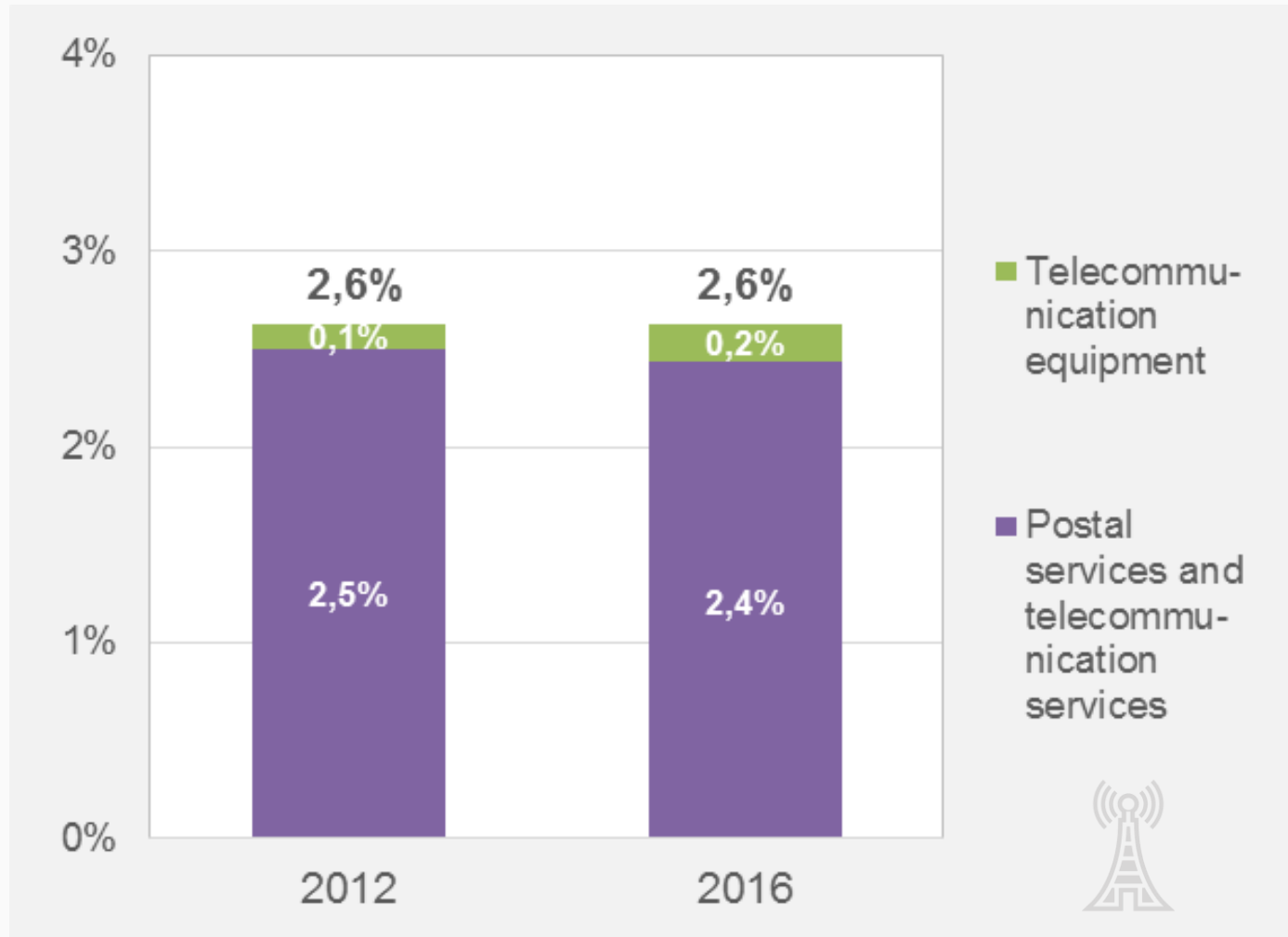


No adjustments



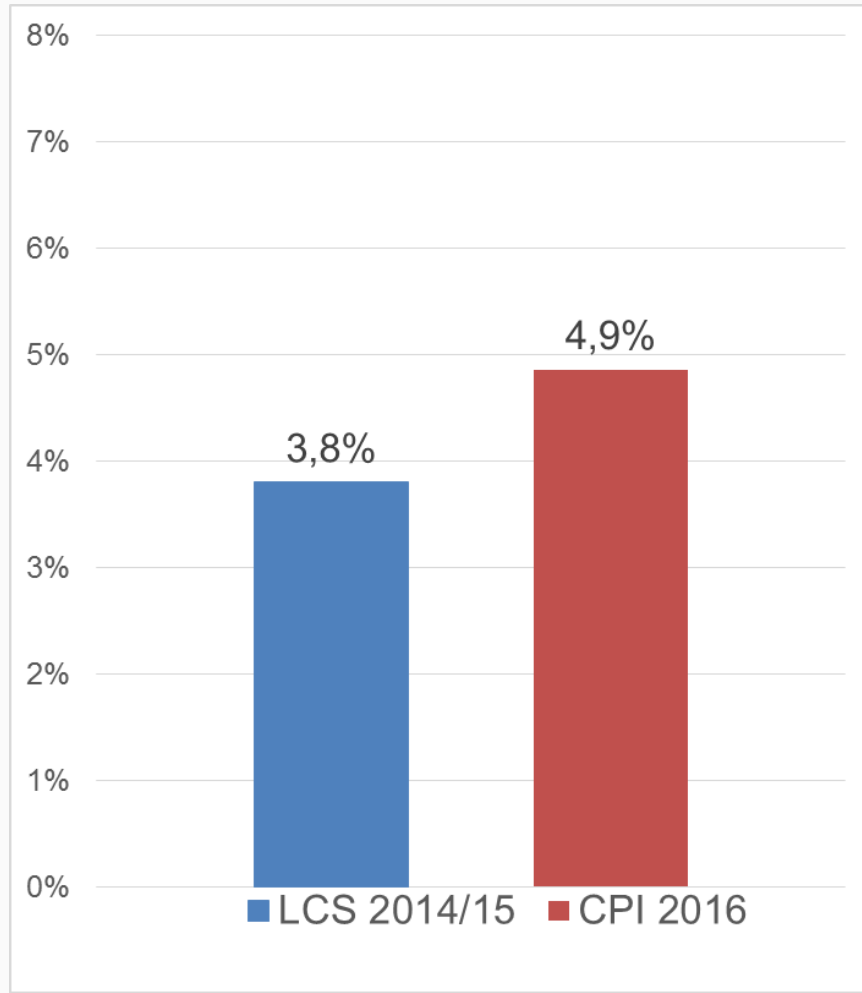
Weights

Communication - headline



Weights

Recreation and culture – total country



Adjustments:

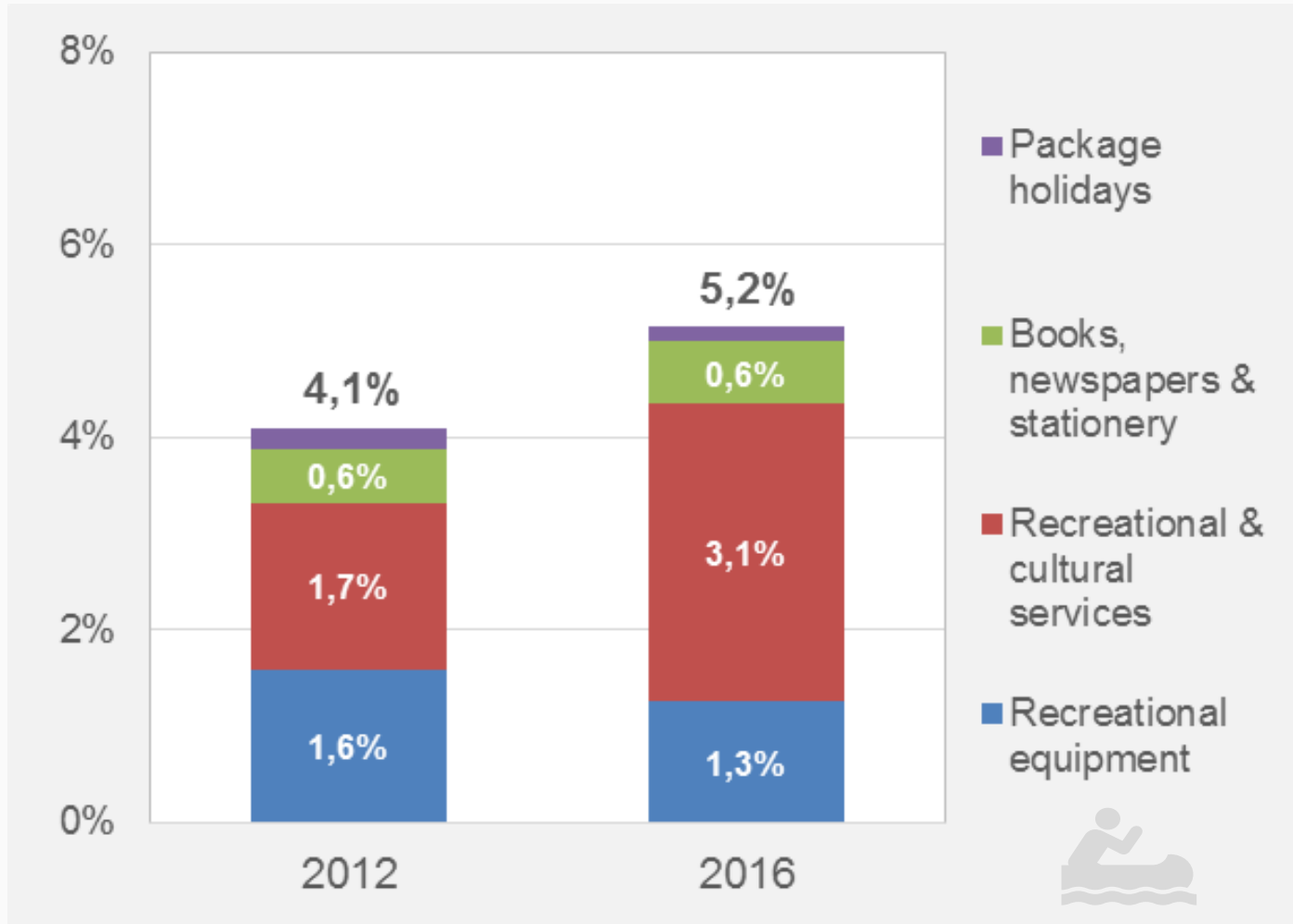
Net expenditure on gambling using regulatory data on revenue and winnings

Increased value for Pay TV subscription



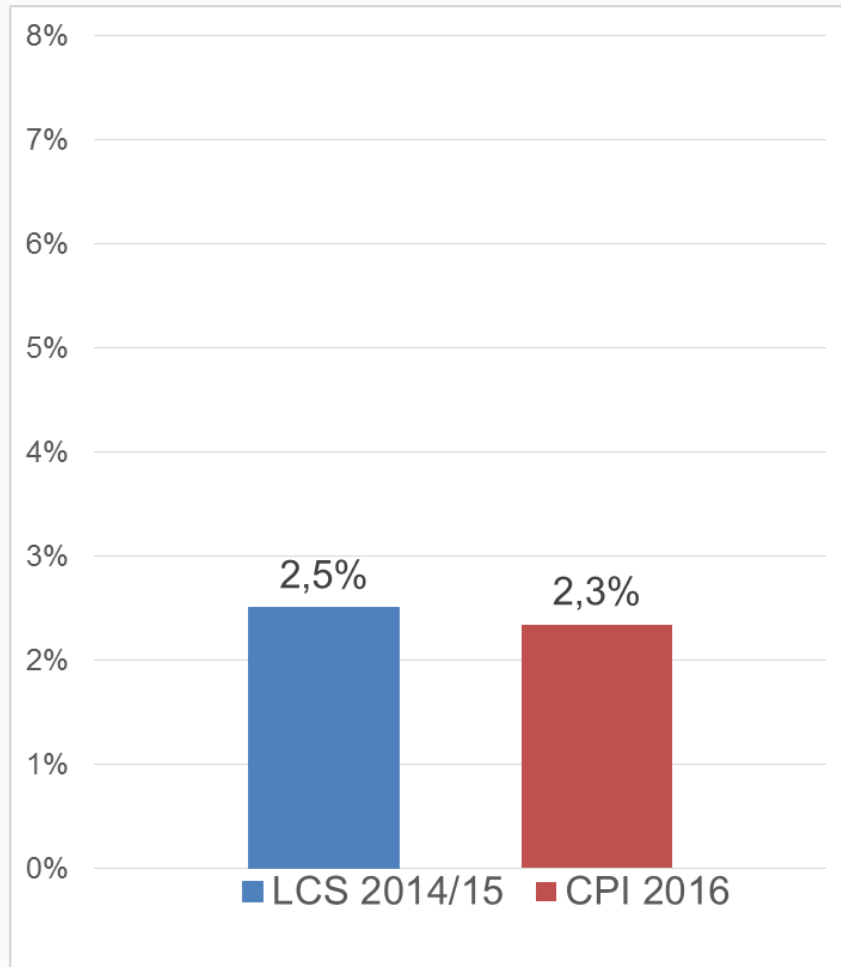
Weights

Recreation and culture - headline



Weights

Education – total country



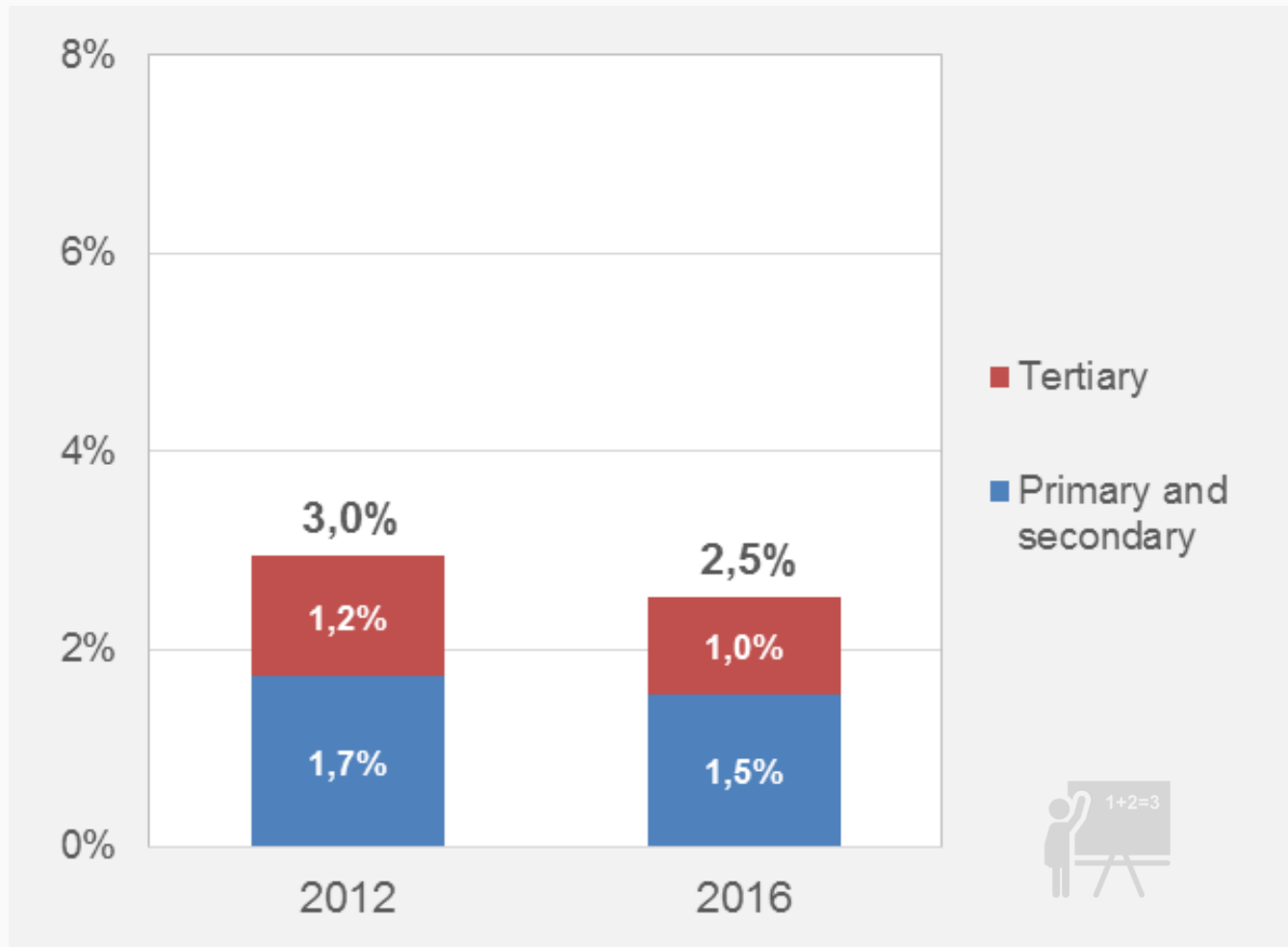
Adjustments:

Increased tertiary tuition fees using official data on fees paid and student numbers



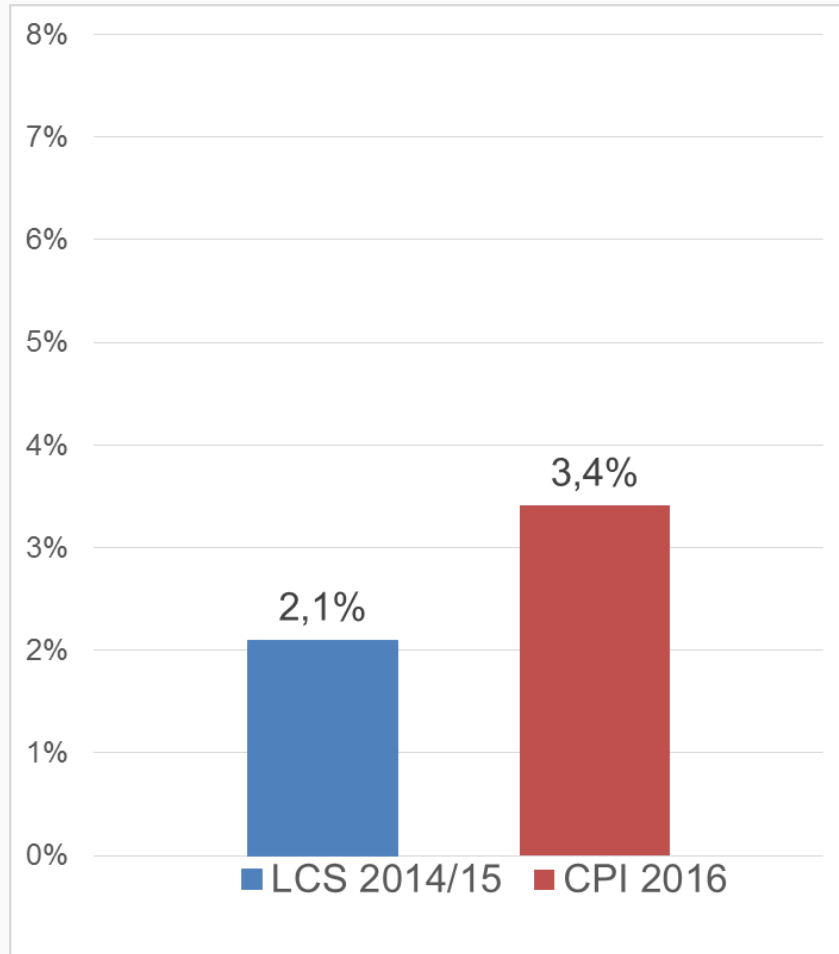
Weights

Education – headline



Weights

Restaurants and hotels – total country



Adjustments:

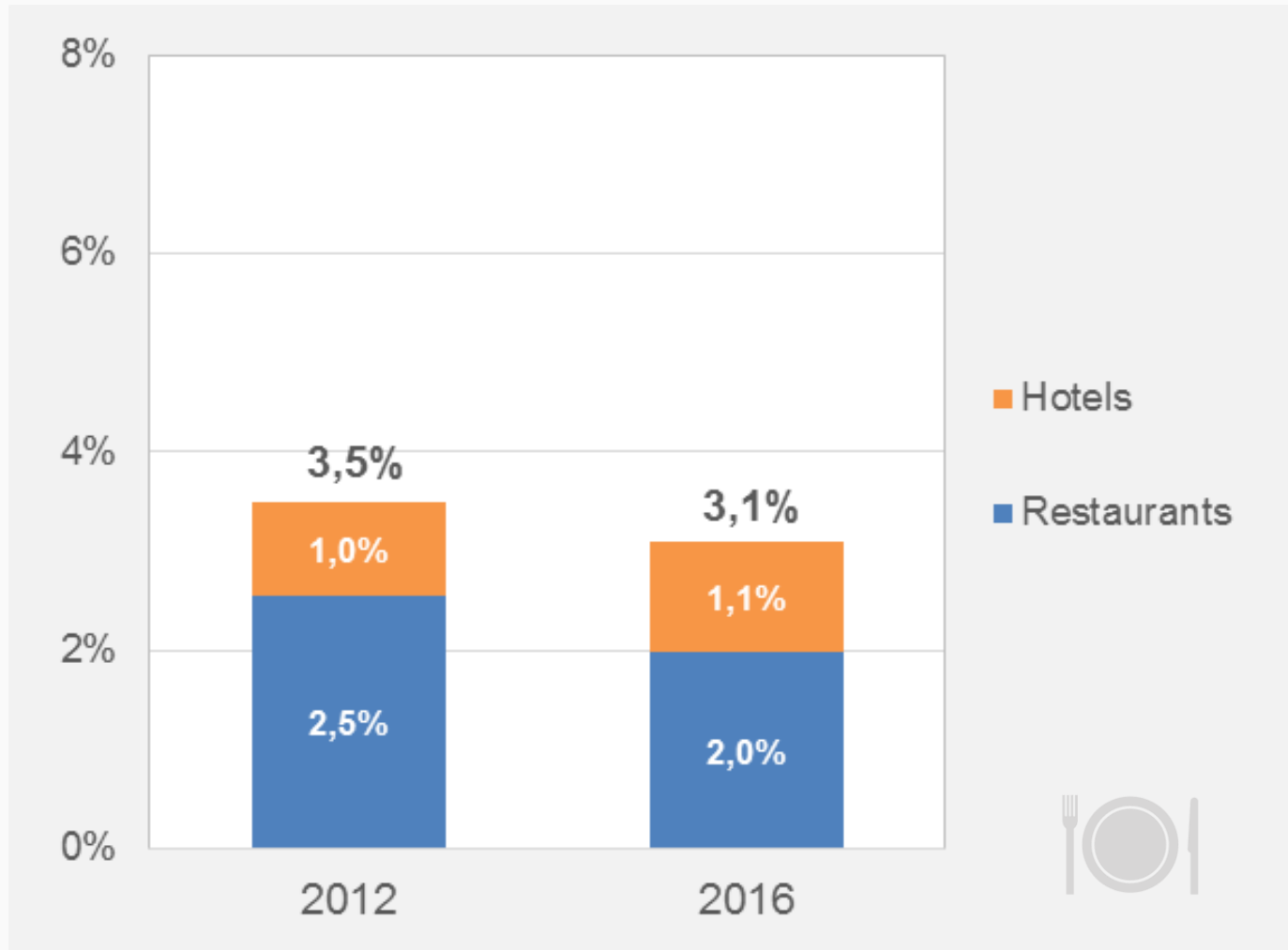
Restaurants using trade survey data

Alcoholic beverages using national accounts



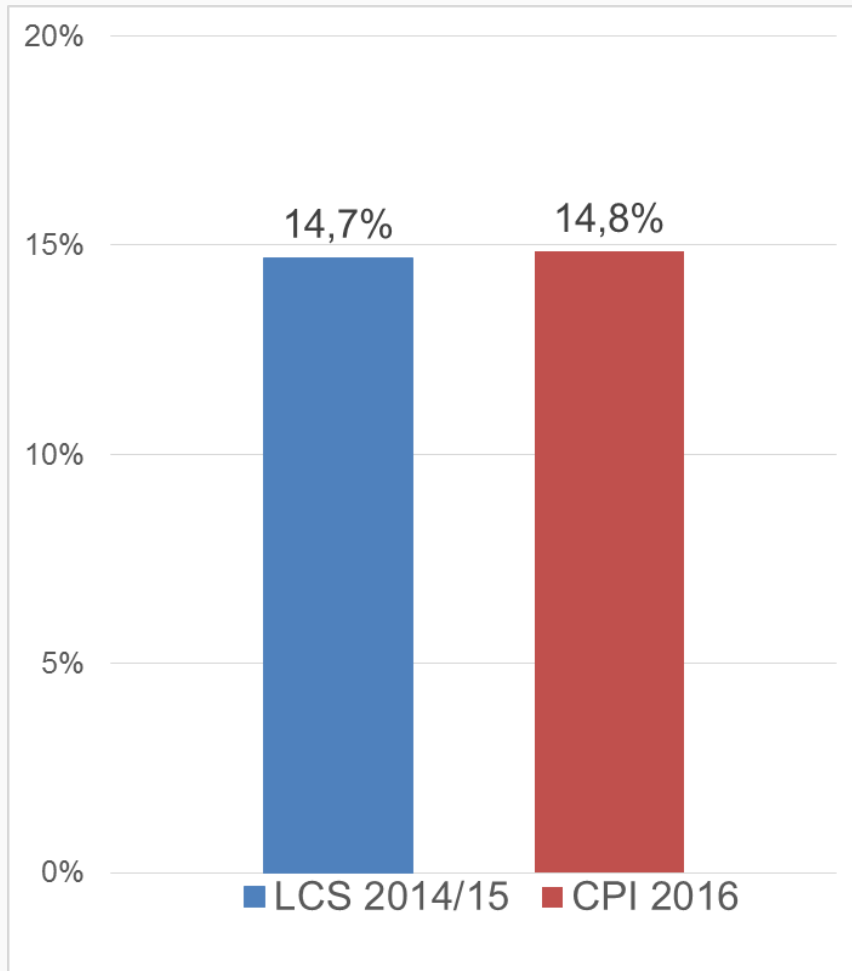
Weights

Restaurants and hotels – headline



Weights

Miscellaneous – total country



Adjustments:

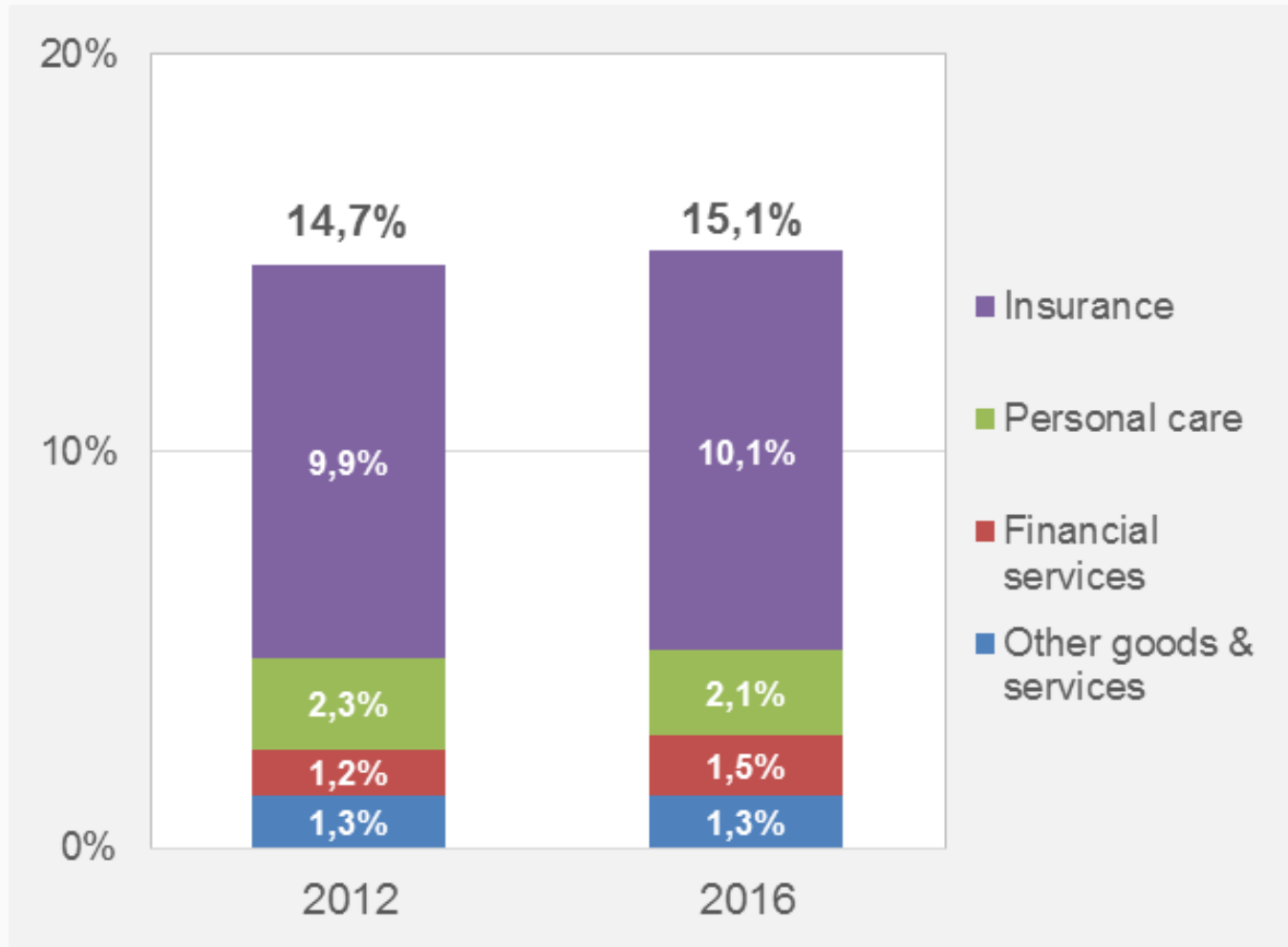
Insurance adjusted with net weight

Personal care increased by same % as food



Weights

Miscellaneous – headline



A stack of approximately 15 silver-colored South African coins is centered in the image. The coins are stacked on top of several South African banknotes, including a prominent red 500 Rand note. The background is a blurred collage of various South African banknotes in different colors like green, blue, and orange. The text 'Rebasing indices' is overlaid in white on a semi-transparent dark horizontal band across the middle of the image.

Rebasing indices

Rebasing

- Base period where all indices = 100
- Rebasing eliminates influence of historical inflation trends
- Rebasing when reweighting avoids change in index because of weight change
- Month before implementation of new weights = base period
 - Current: December 2012 = 100
 - New: December 2016 = 100



Methodology changes

Games of chance

Used vehicles

Used vehicles

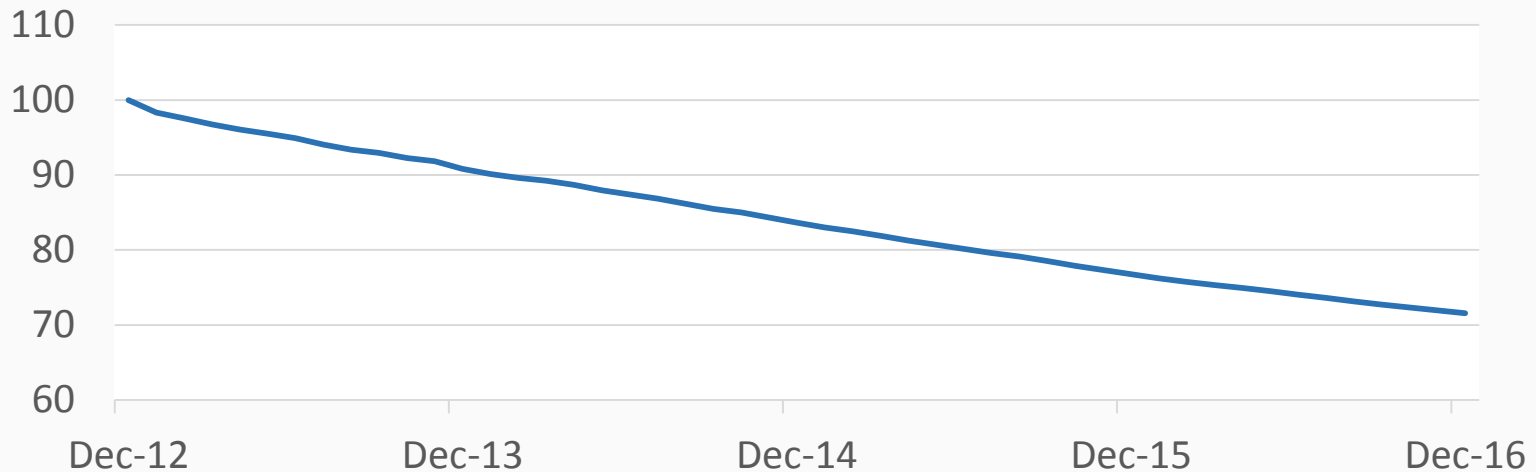
Aim to identify alternative index calculation method to better reflect annual inflation experience

- Each used vehicle is unique
- Used standardised prices from dealer guide

Current method: No linking

- Compares same age from December – January
- Tracks price from month to month

Used cars - published index



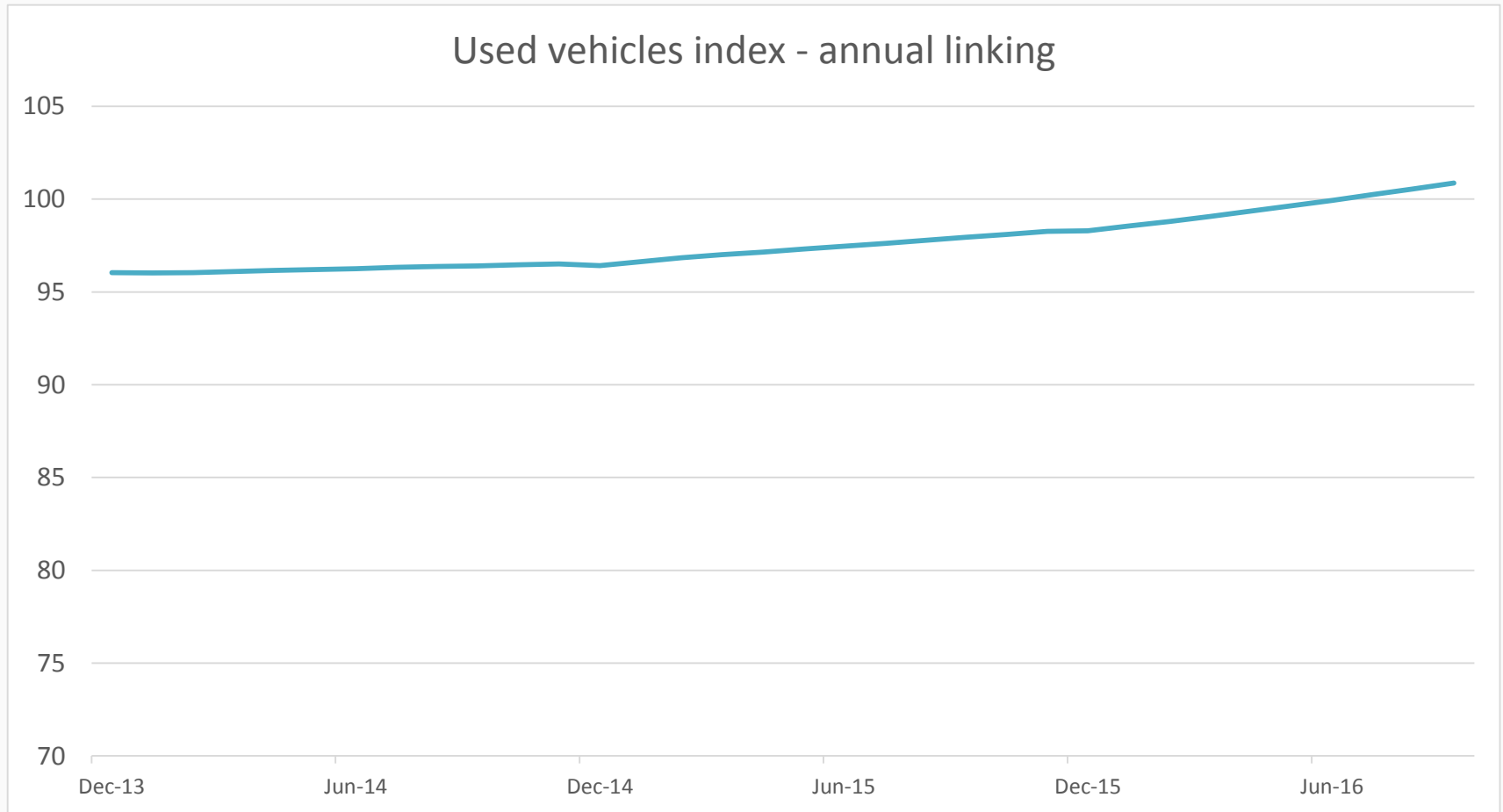
New method: Annual linking

Transforms annual change to monthly

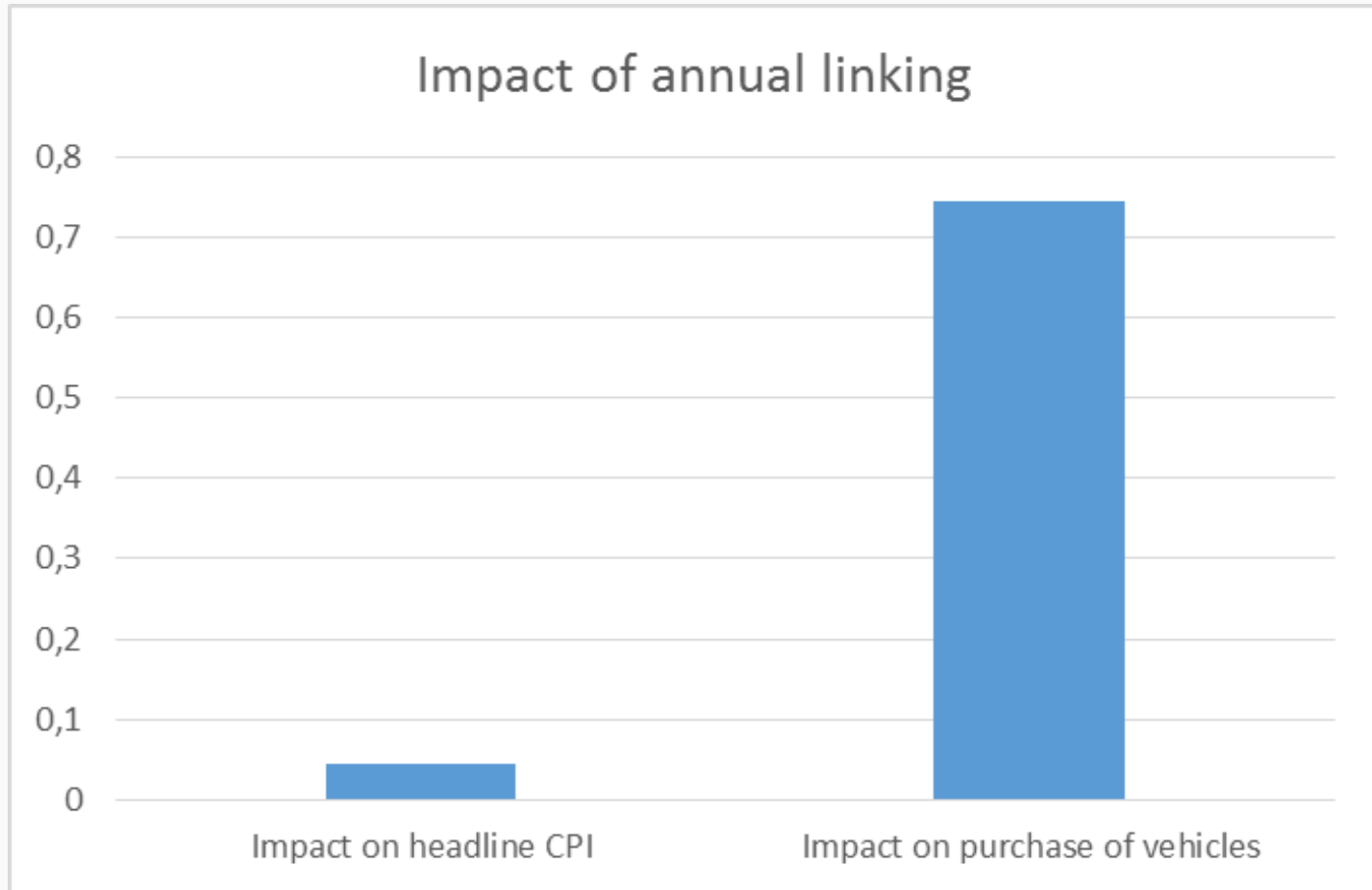
$1/12$

$$\left[\frac{\text{Jan } t}{\text{Jan } t-1} \right]$$

Used vehicles



Used vehicles



Changes to the publication

Expenditure survey designed for precision at provincial level

No city level CPI

CPI with COICOP detail will be published for:

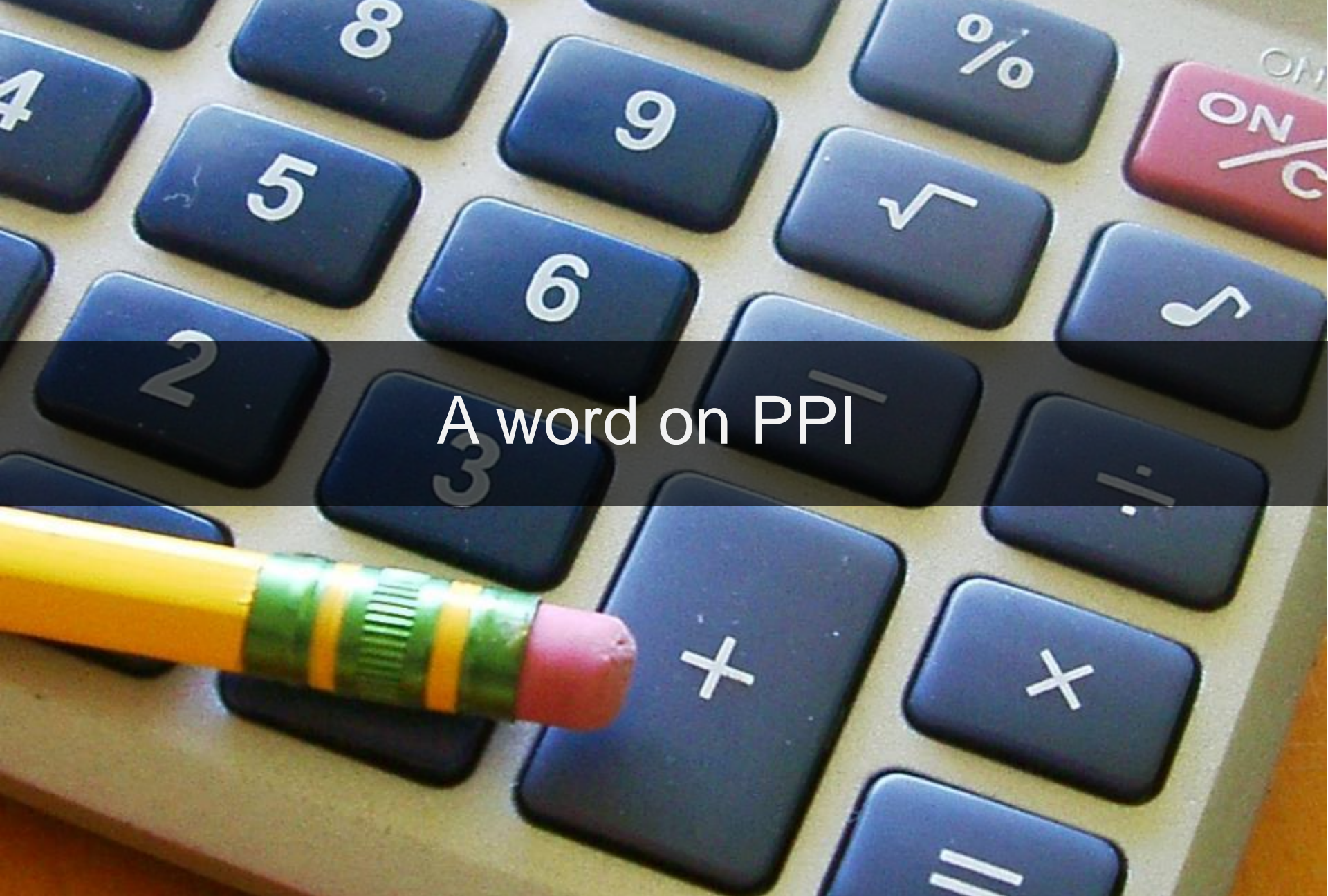
- Urban areas – headline CPI
- Total country
- Each province
- Rural areas (national)

30 Analytical indices including CPI for deciles

Next reweighting

Next expenditure survey in 2018/19

Next reweighting implemented in January 2021




A word on PPI



Producer Price Index (PPI)

PPI also to be reweighted and rebased from January 2017 release (in February)

- Manufacturing final and intermediate
 - National accounts and Manufacturing large sample survey
 - New products to only be implemented in 2018
 - Electricity and water
 - Mining and Quarrying
 - Agriculture, forestry and fishing
- } updated with national accounts and administrative data each year

A vintage platform scale made of brass and wood. The scale has a horizontal beam with a ruler marked from 0 to 14 pounds. The beam is attached to a vertical wooden post with a ruler. A weighing pan is suspended from the end of the beam by a chain. The scale is set against a white, textured wall.

Thank you!