

The 2012 CPI weights and basket

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Changes to the CPI basket

Basket

- Currently have provincial baskets
- 2013 will see baskets for each
 - Primary urban area,
 - Secondary urban area, and
 - rural area
- Aim is to improve relevance and number of price observations per area
- Total number of products in basket

2009	2013
402	393

21 urban and 9 rural 'index' areas

Western Cape	
Primary urban areas	Cape Town
Secondary urban areas	Worcester / Paarl
Eastern Cape	
Primary urban areas	Nelson Mandela (Port Elizabeth), Buffalo City (East London)
Secondary urban areas	Queenstown/Port Alfred/Grahamstown
Northern Cape	
Primary urban areas	Sol Plaatje (Kimberley)
Secondary urban areas	Kuruman
Free State	
Primary urban areas	Mangaung (Bloemfontein), Matjhabeng (Welkom) [combined]
Secondary urban areas	Kroonstad /Bethlehem
KwaZulu-Natal	
Primary urban areas	eThekwini (Durban/Pinetown), Msunduzi (Pietermaritzburg)
Secondary urban areas	Newcastle/Ladysmith
North West	
Primary urban areas	Rustenburg, Matlosana (Klerksdorp) [combined]
Secondary urban areas	Mafikeng /Brits
Gauteng	
Primary urban areas	Johannesburg, Tshwane & Ekurhuleni
Secondary urban areas	Vereeniging /Vanderbijlpark
Mpumalanga	
Primary urban areas	Emalahleni (Witbank) & Mbombela (Nelspruit) [combined]
Secondary urban areas	Ermelo
Limpopo	
Primary urban areas	Polokwane
Secondary urban areas	Tzaneen /Phalaborwa

Basket selection

Some basic terminology

COICOP	Name	Example
2-digit	Category	Food and non-alcoholic beverages
3-digit	Class	Food
4-digit	Group	Bread and cereals
5-digit	Product	Bread
8-digit	Indicator product	Loaf of white bread - lowest level of weights
12-digit	Sampled product	Albany 700g loaf of white bread

- Data sources: IES and retailer/service providers
- Everything per area
- Weights of items not selected – redistributed to lowest level group

Basket selection process

Step	Process
1	All 2 digit categories

01 – Food and non-alcoholic beverages

02 – Alcoholic beverages and tobacco

03 – Clothing and footwear

04 – Housing, water, electricity, gas and other fuels

05 – Furnishings, household equipment and household maintenance

06 – Health

07 – Transport

08 – Communication

09 – Recreation and culture

10 – Education

11 – Restaurants and hotels

12 – Miscellaneous goods and services

Basket selection process

Step	Process
2	Within 3 digit class top 90% of 5 digit product Food – everything at least 0,5% of the class is included

3-digit	5-digit	5-digit description	Proportion of 5-digit within 3-digit	Cumulative proportion	In/Out
021	02131	Beer	39.90%	39.90%	In
021	02111	Spirits	28.57%	68.48%	In
021	02121	Wine	25.71%	94.19%	In
021	02122	Ready-to-drink and home brewed beverages	5.81%	100.00%	Out

Basket selection process

Step	Process
3	<p>Within a 5 digit product all 8 digit indicator products up to 90% of expenditure are selected.</p> <p>Food – any indicator above 5% of the 5 digit</p>

5-digit	8-digit	Item description	Proportion of 8-digit within 5-digit	Cumulative	In/Out
02121	02121100	Table wines (including sparkling wine)	94.62	94.62	In
02121	02121300	Fortified wines (sherry, port)	5.38	100.00	Out

Basket selection process

Step	Process
4	Further splitting of 8 digit indicator product if data is available

8-digit	CPI code	Possible indicator product	Proportion	In/Out
02121100	02121001	Wine from grapes or other fruit- Red Wine	53.33%	In
02121100	02121002	Wine from grapes or other fruit - White Wine	44.50%	In
02121100		Wine from grapes or other fruit- Sparkling Wine	2.17%	Out

Final elimination of products that appeared in less than 5 areas and had a national weight of less than 0,01%

Basket changes – Food and beverages

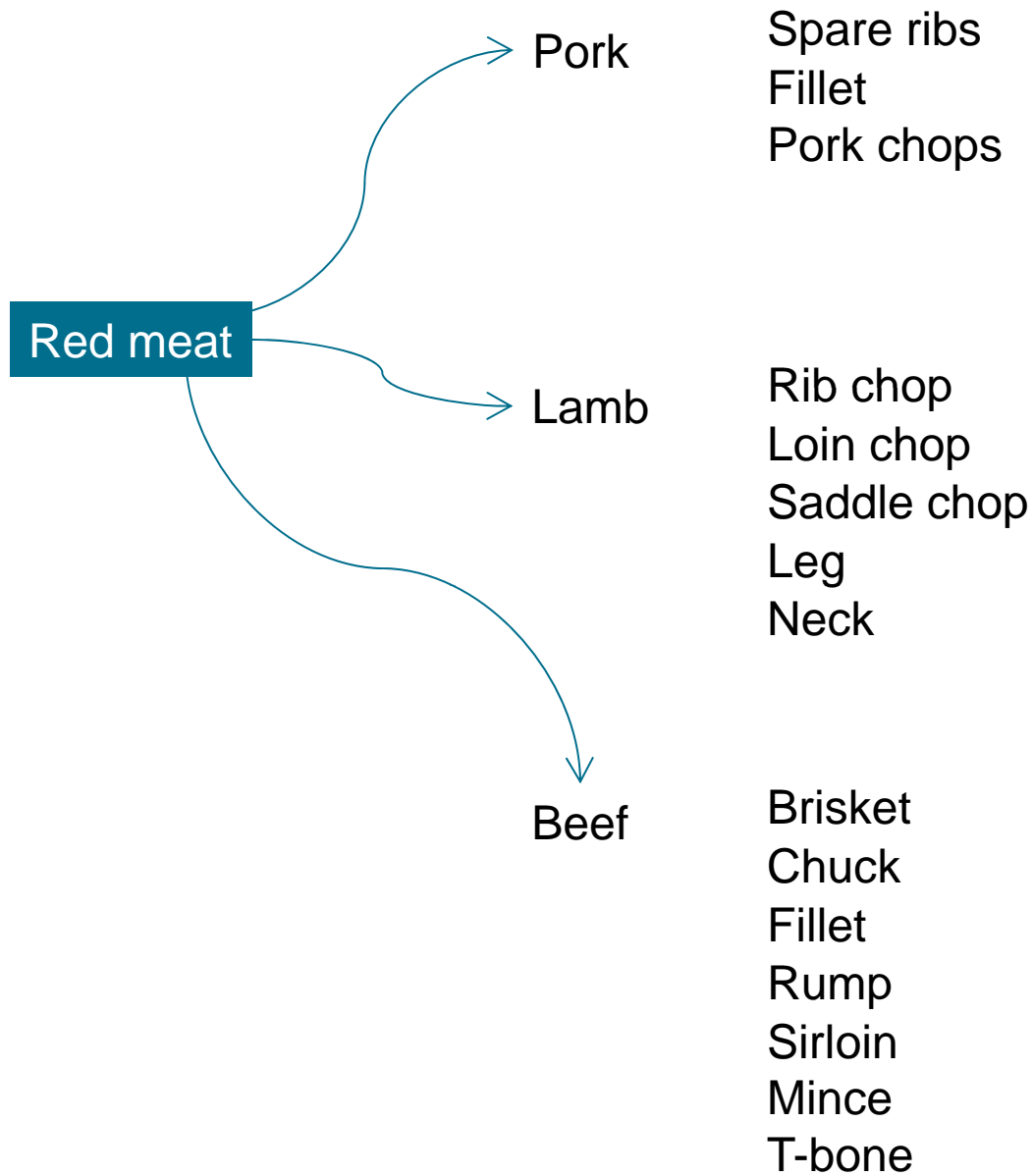
IN

Maize based drink (Mageu)
Feta cheese
Tinned mixed vegetables
Corn chips
Bread rolls
Other spreads (bovril, marmite)
Drinking chocolate
Filter coffee - ground or beans
Other soft drinks (sports drinks/iced tea)
Mineral water
Vodka
Spirit coolers and ciders

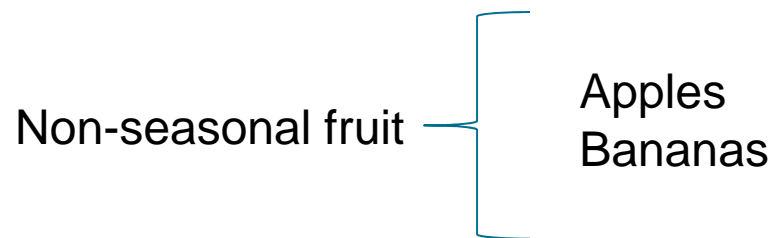
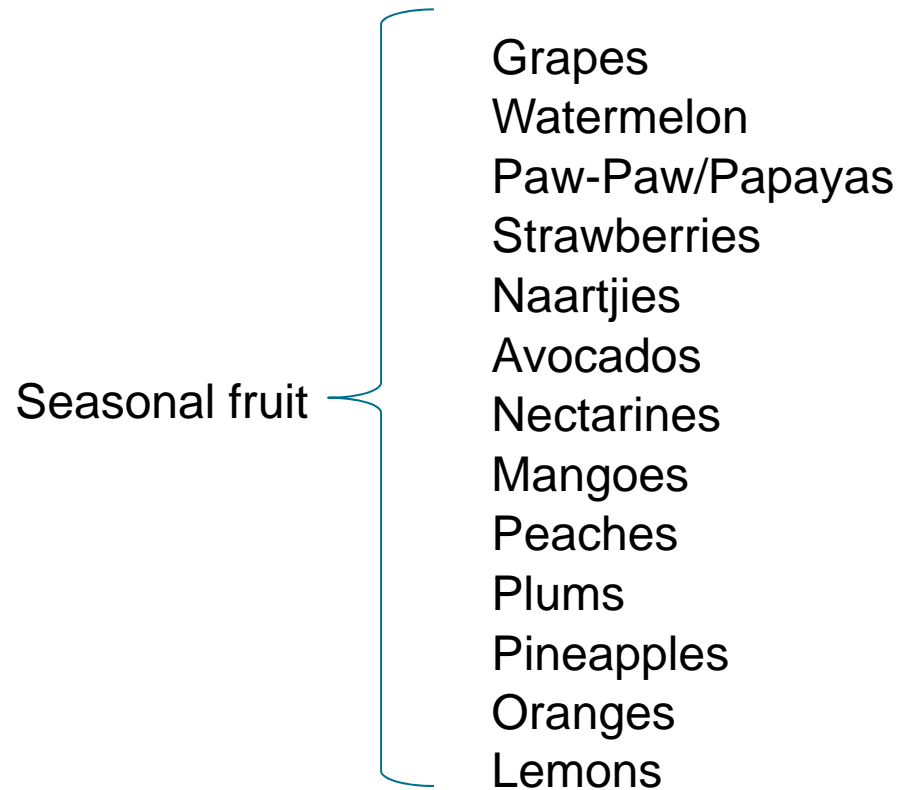
OUT

Savoury biscuits
Porridge
Samp
Viennas
Beef meat patties
Frozen meat /chicken pies
Frozen fish portions in crumbs or batter
Evaporated milk
Dried fruit
Raisins
Nuts and peanuts
Frozen peas and carrots
Green mealies - fresh
Dried peas and lentils
Butter beans - tinned
Mustard
Dairy mixtures
Sherry and port

Basket changes – Red meat



Basket changes – Fruit



Basket changes – Household items

IN

Bricks
Cement
Power drills
Door and door frame
Electricians
Plumbers
Gas stoves and heaters
Washing machines
Fan
Hotplate
Grater
Lawn mower
Garden hand tools (e.g. spades)
Garden water sprinkler
Light bulbs - energy savers
Toilet cleaners

OUT

Tile adhesive
Paint thinner
Paint brush
Filler
Varnish
Firewood
Candles
Carpets and tiles
Electrical frying pan
Toaster
Cups and saucers and mugs
Saucepan and Casserole dish
Plastic bowl
Garden hose
Ladder
Laundry soap (green bar)

Basket changes – Others

IN

Eyedrops
Courier services
Aerials and satellite dishes
Camera
Tablet computers
Blank dvd
Musical instruments
Sports boots
Textbooks
Swimming pool cleaning equipment
Package holidays
Baby powder
Hair relaxers
Hair colour
Hair pieces
Bubble bath

OUT

Sinus medication
Fungal medication (foot and hand)
Muscle pain relief gel
Car wash
Licence issue and application fees
Parking fees
Car-seats for babies
Portable radio and cd
Music centre or hi-fi
Calculator
Roll on deoderant
Clock
Garden fertilizers
Swimming pool entrance fees
Pencil
Air freshener

New weights

About the weights

- Aim: Best possible representation of proportions of total consumer expenditure
- IES is basis of weights
- Adjustments made mainly for:
 - Under-reporting
 - Methodology changes
- Methodology changes aim to align more closely with national accounts and international CPI practices
- Additional data sourced from national accounts, industry surveys, other industry sources
- Most figures here are for total country (in R million)

Proportions of total expenditure – goods/services

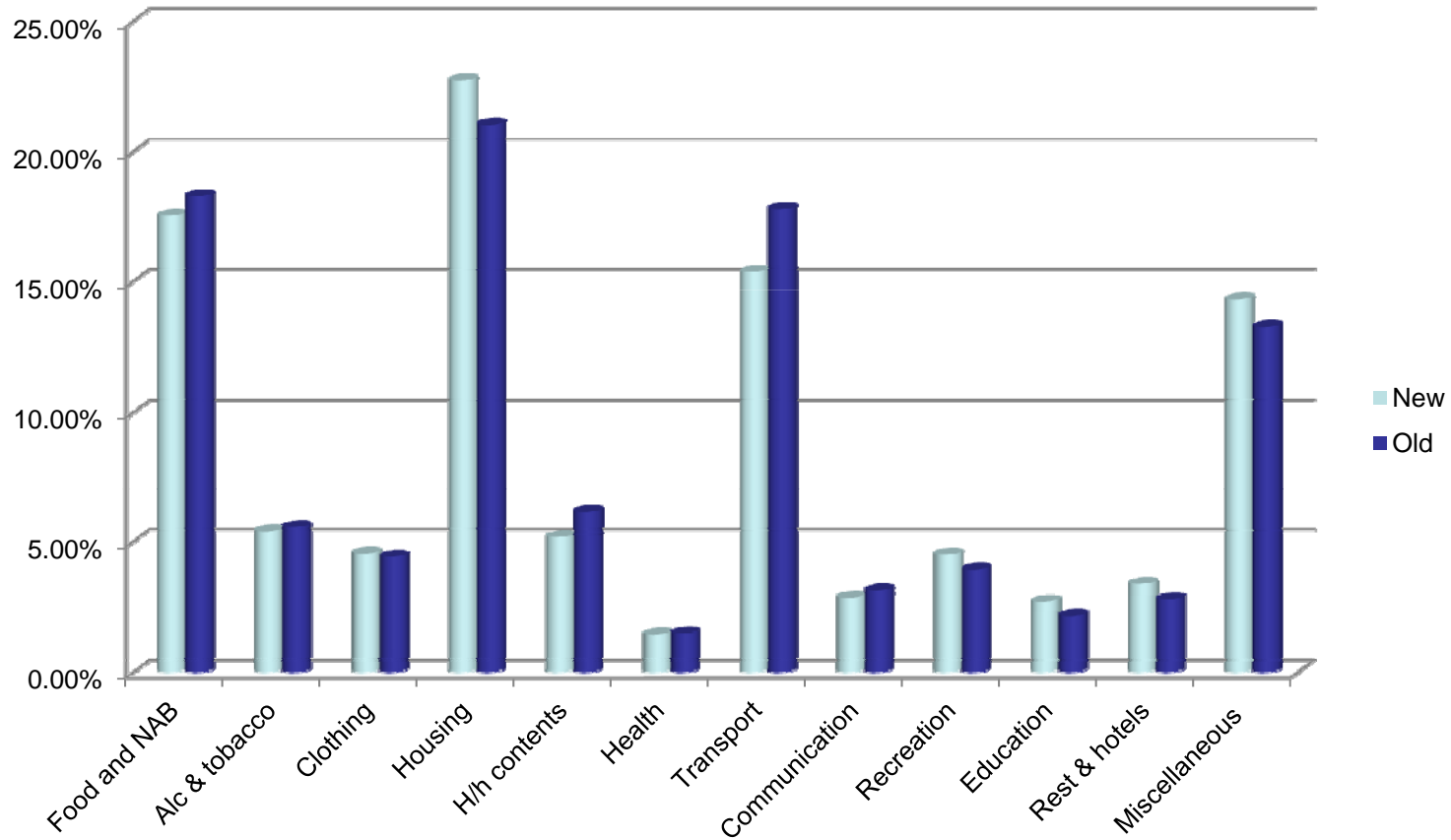
Goods and Services (Urban areas)

	New	Old
Goods	49%	54%
Services	51%	46%
	100%	100%

Goods: Durables, Semi Durables and non-durables (Urban areas)

	New	Old
Durables	18%	27%
Non Durables	68%	60%
Semi durables	14%	12%
	100%	100%

High level weights



High level weights – total country

Category	New weights		Current weights	
	Value	%	Value	%
Food and non-alcoholic bevs	216 747	17,5	143 401	18,3
Alcohol and tobacco	66 690	5,4	43 597	5,6
Clothing	56 169	4,5	34 638	4,4
Housing	281 560	22,8	165 002	21,0
Household contents	63 944	5,2	48 181	6,1
Health	17 794	1,4	11 620	1,5
Transport	190 054	15,4	139 509	17,8
Communication	35 288	2,9	24 533	3,1
Recreation	55 756	4,5	30 821	3,9
Education	33 355	2,7	16 894	2,2
Restaurants and hotels	41 773	3,4	21 834	2,8
Miscellaneous	177 498	14,4	104 315	13,3
Total	1 236 632	100	784 350	100

Weights - Headline and total country CPI

	Headline	Rural areas	Total country
	%	%	%
Food and NAB	14,8	30,4	17,5
Alc & tobacco	5,5	5,0	5,4
Clothing	4,2	6,0	4,5
Housing	24,1	16,5	22,8
H/hold contents	5,0	6,1	5,2
Health	1,5	1,1	1,4
Transport	15,8	13,3	15,4
Communication	2,9	2,4	2,9
Recreation	4,5	4,4	4,5
Education	3,0	1,4	2,7
Rest & hotels	3,6	2,6	3,4
Miscellaneous	15,1	10,8	14,4

Food and non-alcoholic beverages

- Affected by under-reporting in the IES – international phenomenon
- High-level total built up using sales data from Stats SA's Large sample surveys
- Similar method to that used for current weights
- Distributions within food based on IES

		2010/11	2005/06
IES		159 973	100 971
LSS		170 477	
Adjusted with monthly retail sales	11,6%	190 320	
Add informal sector sales	10,7%	210 685	
Plus wholesales sales to households	6 063	216 747	143 401
Weight		17,5%	18,3%

Food increases

	2010/11	2005/06	Change
IES (R m)	159 973	100 971	58,4%
Inflation (food index)	115,9	78,2	48,2%
CPI value (R m)	216 747	143 402	51,6%

Alcohol

Under-reported in IES

Alcohol	R m
Industry sales	66 521
Less sales through bars, restaurants and business	17 845
Final value	48 676
Weight 2010/11	3,9%
Weight 2005/06	3,3%

Tobacco

Under-reported in IES

Tobacco	2010/11	2005/06	Change
National Accounts	28 854	20 170	43.1%
Inflation	136,9	81,9	67.2%
Increase in excise tax collection	9 367	6 024	55.5%
2008 CPI value inflated by increase in excise tax collection	18 013	11 585	55.5%
Weight	1,5%	2,3%	

Electricity

	2010/11	2005/06	Change
Inflation (index)	174,8	76,2	129%
Eskom sales*	38 894	16 034	143%
National Accounts	38 163	16 145	136%
IES	41 197	13 665	202%
Weight	3,3%	1,7%	

*Eskom sales to households and redistributors

Owner-occupied housing

- Propose change of method in getting this value
- Matching of dwelling types between owner-occupied and rented dwellings from IES
- Impute annual rental to owner-occupied dwellings

	2010/11	2005/06	Change
IES value	256 708	88 213	191%
Dwelling value inflated with CPI (and apply rental yield)	135 945	88 213	54%
National Accounts	127 985	80 126	60%
Inflated with ABSA house price index and increase in housing stock	164 133	88 213	86%
Imputed rentals – matching	139 051	88 213	58%
Weight	11,2%	11,3%	

Petrol

Petrol	2010/11	2005/06	Change
Consumption of petrol (SAPIA) litres	12 124	11 222	8%
Price change (inland 93)	R9,42	R5,39	75%
Sapia price x quantity	114 208	60 487	89%
IES	57 822	28 333	104%
Weight	4,7%	3,6%	

Purchase of vehicles

Used vehicles = Profit margin based on National Accounts information

	2010/11 – net weight		2010/11 – gross weight		2005/06	
	Value	Weight	Value	Weight	Value	Weight
Used vehicles	10 381	0,8%	33 905	2,7%	25 065	3,8%
New vehicles			63 711	5,1%	48 269	7,4%

Gambling

- Under-reported in IES
- Apply net weight approach
- Data sourced from Lotto and Gambling Board

	2010/11		2005/06
	Value	Weight	Weight
IES value	1 496		
CPI value	16 356	1,32%	0,36%

Restaurants and hotels

- Adjusted for possible under-reporting and domestic concept (accounting for tourist expenditure)
- Used large sample (LSS) and monthly surveys of tourist accommodation and food and beverages
- Similar method to 2009 for food and beverages

	2010/11	2005/06	Change
IES	30 331	15 354	98%
NA	42 682	27 528	55%
CPI	41 773	16 894	147%
Weight	3,4%	2,8%	

Personal care items

- Under-reported in IES
- Used LSS values updated with monthly retail sales

	2010/11		2005/06
	Value	Weight	Weight
IES value	14 659		
CPI value	21 419	2,4%	2,2%

Insurance

- Includes medical aid and short term insurance
- Change of method to calculate 'net expenditure'
- Exclude claims paid out to household
- Also adjustment for under-reporting of medical aid premiums
- Data sourced from Financial Services Board, Council for Medical Schemes and insurance companies

	2010/11		2005/06	
	Value	Weight	Value	Weight
Total Insurance	114 665	9,7%	56 554	7,2%
Medical Aid		7,2%		3,4%
Short term insurance		2,5%		3,9%

Price updating the weights

1. IES data shows expenditure in March 2011 prices
2. Price updating captures impact of price changes on expenditure
3. Assumes no change in consumer behaviour
4. Weights published today
5. Indices used at lowest level possible
6. New products updated by closest aggregate
7. Weights here are updated to September 2012
8. Final weights to be updated to the average of 2012

Price updating weights – Headline CPI

	Price updated	Original
	%	%
Food and NAB	15,0	14,8
Alcohol & tobacco	5,5	5,5
Clothing	4,1	4,2
Housing	24,6	24,1
H/h contents	4,8	5,0
Health	1,5	1,5
Transport	16,5	15,8
Communication	2,7	2,9
Recreation	4,1	4,5
Education	3,0	3,0
Restaurants & hotels	3,5	3,6
Miscellaneous	14,8	15,1

Linking and rebasing

Aim: to introduce the new weights and rebase the indices so as to preserve historical rates of change and ensure additivity going forward

Rebasing

- Current base year = 2008
- New base year = 2012
- All indices – from elementary to headline to be rebased = 100

Linking

- Splicing and chainlinking
- Use a ratio of new and old weights in January 2013

Other method improvements

- Blended rural index with rural collection
- Informal sector collection of fresh fruit and vegetables
- Quality adjustments for motor vehicles, high tech items, household appliances and cell phones
- Quantity adjustments
- Trimmed mean index of core inflation

New format of PPI

No aggregate PPI

5 PPIs for domestic output – stages of production concept

- Agriculture, forestry and fishing
- Mining and quarrying
- Electricity and water
- Intermediate manufactured goods
- Final (finished) manufactured goods – new headline

Unit value indices (UVI) for exports and imports

- Based on customs data
- Weights = total value of goods traded
- Price changes from value/quantity each month

PPI weights

- Industry level based on 2011 value-added in the national accounts
- Industry weights to be updated each year from the annual national accounts
- Product weights to be updated annually on available information from LSS
- Chain linking of indices between years
- Document shows weights based on 2010 values

Thank you



Statistics
South Africa



the South Africa I know. the home I understand