Consumer Price Index

October 2018





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A note to the reader

he following report presents the price statistics for October 2018.

- At the end of October 2018 the Consumer Price Index (CPI) shows a decrease of 0.1% compared to the end of September 2018. The sector which affected the CPI the most was "Recreation and culture" (-3.3%), which led to an effect of -0.28 percentage points (ppts) on the Δ CPI of October 2018 (-0.1%).
- Compared to October 2017 the CPI increased by 4.2%. The sector which affected the CPI the most was "Transport" (7.0%). Specifically, the prices of "Operation of personal transport equipment" (12.1%) registered an increase and caused an effect of 1.06 ppts on the end of period inflation of October 2018 (4.2%).
- The period average inflation for the period October 2017 October 2018 is 2.7%, which is 3.1 ppts higher compared to the period average inflation for the period October 2016 October 2017 (-0.4%).
- Utilities (Water and Electricity) did not register price changes in October 2018. The price of gasoline increased by 0.2% and caused an effect of 0.01 ppt. The price of diesel registered an increase of 2.8% in October 2018 and had an effect of 0.01 ppt on the Δ CPI of October 2018 (-0.1%).

This report is divided in 7 sections. An overview of the monthly percentage changes in the CPI and index per sector is presented in section 1. Section 2 provides the yearly percentage changes in the CPI and index per sector. The development of indices of main sectors and utilities is outlined in section 3. Section 4 presents the percentage change in the CPI of Aruba's major trading partners and compares the CPI of Aruba and the USA. Section 5 presents an overview of the monthly and yearly percentage changes of the core inflation. Section 6 presents the price movements in food & catering services. The development of the subsistence level is presented in section 7 and is followed by the appendices.

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1 Monthly change of the CPI

1.1 CPI and Inflation

The CPI of the total population of Aruba for the month of October 2018 is 122.02; a decrease of 0.1% compared to the CPI of September 2018 (122.14). An overview of the percentage change in the CPI (Δ CPI) for different periods during 2017 and 2018 is shown in Table 1. The terms percentage change in the CPI and "inflation" (deflation) are considered similar and are used interchangeably. The inflation over the last 12 months (end of period inflation) is 4.2%, while the inflation over a period of 24 months (period average inflation) is 2.7%.

Table 1: Overview of Δ CPI

Period		2018	2017	Current	Last
Monthly	Sep - Oct	-0.1	0.6	122.02	122.14
Year-to-date	Dec - Oct	3.7	-0.7	122.02	117.63
Last 12 months ¹	Oct - Oct	4.2	-0.4	122.02	117.12
Last 24 months ²	Oct - Oct	2.7	-0.4	119.94	116.82

Source: Central Bureau of Statistics Aruba

¹ End of period inflation

² Period average inflation

Figure 1 depicts the monthly Δ CPI over a period of one year starting from October 2017, whereas the Δ CPI for the month October for the years 2009 to 2018 is illustrated in Figure 2.

1.2 Changes in sector

Figure 3 provides an overview of the percentage changes for the indices per sector for October 2018. The percentage change in index is further denoted as Δ I. The largest Δ I is observed for the sector "Recreation and culture" with a decrease of 3.3%.

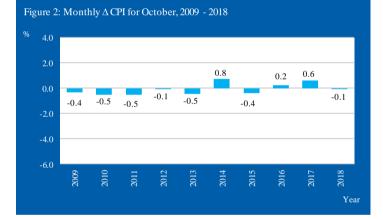
1.3 Changes in categories and subcategories

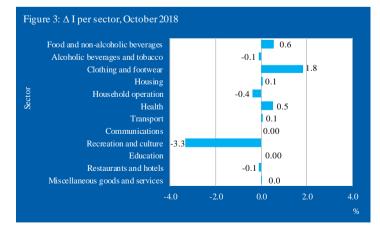
The largest positive and negative Δ I is seen in the categories "Glassware, tableware and household utensils" (2.7%) and "Holidays" (-35.0%). In the "Food and non-alcoholic beverages" sector an increase of 0.6% is observed for the category "Food", while the category "Non-alcoholic beverages" registered an increase of 0.2% in October. In the "Transport" sector the major Δ I is observed for the category "Transport services" (-2.1%), mainly caused by a decrease in "Plane tickets" (-2.0%). In the "Recreation and culture" sector the major Δ I is observed for the category "Holidays" (-35.0%)¹.

The categories which influenced the CPI calculation the most are "Holidays", "Food" and "Clothing", which had an effect of respectively, -0.24, 0.08 and 0.08 ppts on the Δ CPI. Reference is made to tables 16 and 17 in Appendices 1 and 2. Table 16 provides an overview of the indices for the months October 2017, December 2017, September 2018 and October 2018 together with

corresponding weights per sector and the monthly, year-to-date (ytd), end of period and period average percentage changes for October 2018. In table 17 an overview of the effect on the monthly, year-to-date (ytd), end of period and period average CPI per sector and category for October 2018 is presented. The course of indices for 2010 - up to October 2018 is illustrated in Appendix 5.







¹ The focus is on the four major sectors which are: Housing, Transport, Food and nonalcoholic beverages and Recreation and culture. Together these sectors form 64% of the total weight of the basket of goods and services.

S Consumer Price Index Aruba End of period change October 2018

2 End of period change of the CPI

2.1 End of period change CPI for October 2018

The CPI increased from 117.12 in October 2017 to 122.02 in October 2018, an increase of 4.2%. This Δ CPI is the highest registered over a period of 5 years for the month October, and is 4.6 ppts higher than the Δ CPI registered in 2017 (-0.4%) (see table 2).

Period	Δ CPI	Index
2013-2014	1.5	118.71
2014-2015	-0.8	117.72
2015-2016	-0.1	117.61
2016-2017	-0.4	117.12
2017-2018	4.2	122.02

Source: Central Bureau of Statistics Aruba

2.2 Changes in sector

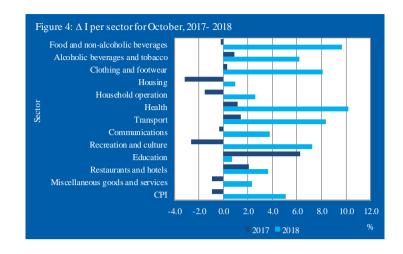
An overview of the percentage change per sector over the period October 2017 - October 2018 is presented in table 3. The largest Δ I is observed for the sector "Health" with an increase of 11.7%. Furthermore, increases of 8.1%, 7.0% and 6.1% are observed for the "Food and non-alcoholic beverages", "Transport" and "Alcoholic beverages and tobacco" sectors, respectively. A comparison of the Δ I's for the years 2017 and 2018 is provided in figure 4.

Table 3: Percentage change for October, 2017 - 2018

Sector	% Change
Food and non-alcoholic beverages	8.1
Alcoholic beverages and tobacco	6.1
Clothing and footwear	3.9
Housing	0.8
Household operation	2.5
Health	11.7
Transport	7.0
Communications	3.8
Recreation and culture	4.4
Education	0.7
Restaurants and hotels	4.3
Miscellaneous goods and services	2.1
CPI	4.2
Source: Central Bureau of Statistics Aruba	1

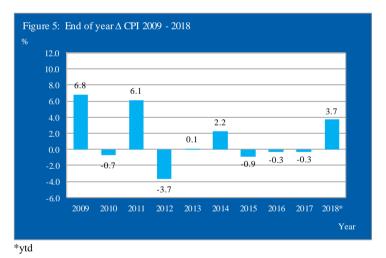
2.3 Changes in categories

The largest positive and negative Δ I in categories observed over a period of one year are respectively, "Out-patient services" (16.4%) and "Holidays" (-15.3%). For an overview of the end of period percentage changes per category refer to table 16 in Appendix 1.



2.4 End of year change CPI 2009 - 2018

The end of year \triangle CPI for the period 2009 - 2018 is shown in figure 5. The Δ CPI for 2018 is calculated by comparing the CPI of October 2018 with the CPI of December 2017. At the end of each year, the end of year percentage change equals the ytd Δ CPI. The ytd Δ CPI for October 2018 is 3.7%.



2.5 Period average change CPI for October 2018

The period average change CPI (Δ ACPI) for October 2018 is 2.7%. Table 4 provides an overview of the Δ ACPI for the month October for the years 2014 to 2018. The Δ ACPI for 2018 increased by 3.1 ppts compared to 2017 (-0.4%).

Table 4: Overview of Δ ACPI for October, 2014 - 2018

Period	Δ ΑCPI	Index
2013-2014	0.1	117.42
2014-2015	0.9	118.43
2015-2016	-1.0	117.30
2016-2017	-0.4	116.82
2017-2018	2.7	119.94

Source: Central Bureau of Statistics Aruba

Tral bureau of statistics **Consumer Price** Index Aruba Indices of main sectors and utilities

3 Development of indices of main sectors and utilities

3.1 Indices main sectors

The four major sectors, "Housing", "Transport", "Food and nonalcoholic beverages" and "Recreation and culture", constitute 64%of the total weight of the basket of goods and services, which are observed on a monthly basis. An overview of the course of indices for 2010 - up to October 2018 per sector and for the CPI is provided in figures 9-1 to 9-12 in Appendix 5.

Changes in the indices of the sectors "Housing" and "Transport" are mainly the result of changes in the international oil prices and prices of utilities during the respective months. The development of crude oil, fuel surcharge, electricity, water, gasoline and diesel prices is provided in table 5 and in the adjoining figures 6-1 and 6-2.

Table 5: Prices of utilities, gasoline and diesel, 2017 - 2018

		Total	Total				
	Crude oil	energy charge ²	energy charge ²				
Month	per barrel ¹	≤ 500 kWh	501-1000 kWh	Electricity ³	$Water^4$	Gasoline⁵	$Diesel^{5}$
Oct-17	51.31	34.52	35.72	265.65	137.05	188.50	156.60
Nov-17	56.23	34.52	35.72	265.65	137.05	183.60	155.50
Dec-17	57.93	34.52	35.72	265.65	137.05	188.90	160.30
Jan-18	63.38	34.52	35.72	265.65	137.05	186.80	161.90
Feb-18	62.59	34.52	35.72	265.65	137.05	194.30	168.30
Mar-18	62.82	34.52	35.72	265.65	137.05	193.20	165.00
Apr-18	66.14	34.52	35.72	265.65	137.05	195.50	164.60
May-18	70.31	34.52	35.72	265.65	137.05	202.50	172.00
Jun-18	67.77	34.52	35.72	265.65	137.05	208.90	179.70
Jul-18	71.16	34.52	35.72	265.65	137.05	214.80	184.70
Aug-18	68.25	34.52	35.72	265.65	137.05	217.10	184.60
Sep-18	70.15	34.52	35.72	265.65	137.05	215.90	185.00
Oct-18	71.44	34.52	35.72	265.65	137.05	216.40	190.10

Source: Central Bureau of Statistics Aruba

¹ Average West Texas Intermediate (WTI) crude oil price per barrel in US\$ (Source: U.S. Energy Information Administration)

² Total energy charge in Afl. cents per kWh

³ Electricty price in Afl.

⁴ Water price in Afl.

⁵ Gasoline and diesel prices in Afl. cents per liter

3.2 Electricity

The price of electricity is determined in Aruban florins (Afl.) for an average usage by households. The average usage is 725.5 kWh per month. The electricity price for an average consumption of 725.5 kWh did not change in October 2018, it remained at Afl. 265.65. Figure 6-1 provides an overview of the course of changes in the electricity price for the period 2011 to 2018.

The total energy charge per kWh for a usage of electricity up to 500 kWh did not change in October 2018, it stayed at Afl. 34.52 cents per kWh. The total energy charge per kWh for a usage of electricity between 501 - 1000 kWh did not change in October 2018, it stayed at Afl. 35.72 cents per kWh.

3.3 Water

The price of water is determined in Afl. for an average usage (water consumption) by households. Figure 6-1 provides an overview of the course of changes in the water price for the period 2011 to 2018. The water price for an average usage by households did not change in October 2018, it remained at Afl. 137.05.

3.4 Gasoline and Diesel

The retail price of gasoline increased by 0.2% from 215.9 cents per liter in September 2018 to 216.4 cents per liter in October 2018. In October 2018, the retail price of diesel registered an increase of 2.8% from 185.0 cents per liter in September 2018 to 190.1 cents per liter in October 2018.

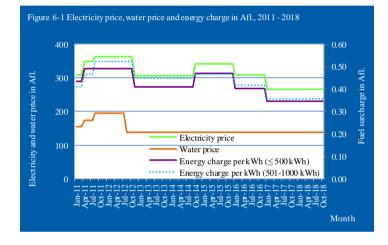
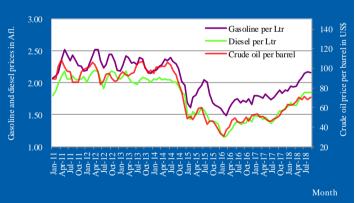


Figure 6-2 Gasoline, diesel and crude oil prices, 2011 - 2018



CDS CONSUMER PRICE INDEX Aruba CPI of Aruba's major trading partners

4 Percentage change CPI of Aruba's major trading partners

4.1 Comparison of the CPI of Aruba and the USA

Table 6 provides an overview of the Δ CPI of Aruba's major trading partners starting from October 2017. In October 2018 the Δ CPI of the USA, Curaçao and the Netherlands were 0.2%, -0.2% and 0.4%.

Table 6: Monthly Δ CPI 2017 - 2018 per Country

Period	Aruba	USA	Curaçao	Netherlands
Oct-17	0.6	-0.1	0.1	0.1
Nov-17	-0.4	0.0	0.3	-0.2
Dec-17	0.8	-0.1	0.2	0.0
Jan-18	0.2	0.5	0.6	-0.1
Feb-18	0.8	0.5	0.1	0.5
Mar-18	0.5	0.2	0.4	0.2
Apr-18	0.0	0.4	0.2	0.6
May-18	0.3	0.4	-0.1	0.3
Jun-18	0.7	0.2	0.5	-0.3
Jul-18	1.5	0.0	0.4	1.1
Aug-18	-0.2	0.1	0.2	0.3
Sep-18	-0.02	0.1	0.3	-0.4
Oct-18	-0.1	0.2	-0.2	0.4

Source: CBS Aruba, Bureau of Labor Statistics (USA), CBS Curaçao and CBS Netherlands

The USA is considered Aruba's largest trading partner². Table 7 provides an overview of the Δ CPI for Aruba and the USA in October 2018. Aruba's monthly Δ CPI for October 2018 is 0.3 ppts lower than the Δ CPI of the USA.

Table 7: Overview of Δ CPI, 2018

Period		Aruba	USA
Monthly	Sep - Oct	-0.1	0.2
Year-to-date	Dec - Oct	3.7	2.6
Last 12 months 1	Oct - Oct	4.2	2.5
Last 24 months ²	Oct - Oct	2.7	2.5

Source: Central Bureau of Statistics Aruba

¹ End of period inflation

² Period average inflation

The Δ CPI of Aruba over the last 12 months is 1.7 ppts higher compared to the USA's 12-month Δ CPI. The Δ CPI over the last 24 months for Aruba is 0.2 ppts higher than the Δ CPI of the USA. The monthly inflation for both Aruba and the USA is depicted in figure 7 over a period of one year. Furthermore, an overview of the end of year Δ CPI over the period 2008 - 2018 for Aruba and the USA is provided in table 8 and figure 8.

2 "55% of Aruba's import by sea and air originates from the USA" (Source: Foreign Trade Statistics Report, $2^{\rm nd}$ Quarter 2018).

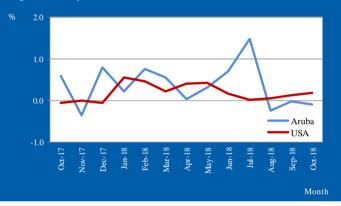
Table 8: End of year Δ CPI, 2008 - 2018

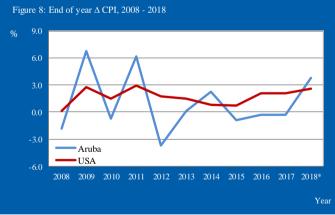
Period	Aruba	USA
2008	-1.9	0.1
2009	6.8	2.7
2010	-0.7	1.5
2011	6.1	3.0
2012	-3.7	1.7
2013	0.1	1.5
2014	2.2	0.8
2015	-0.9	0.7
2016	-0.3	2.1
2017	-0.3	2.1
2018*	3.7	2.6

Source: Central Bureau of Statistics Aruba

* ytd

Figure 7: Monthly Δ CPI for Aruba and the USA, 2017 - 2018





*ytd

CDS Consumer Price Index Aruba

5 Core inflation

5.1 Core inflation

Core inflation is a measure of inflation which excludes certain items that face volatile price movements e.g. food products and energy. By calculating the core inflation these more volatile components are eliminated from the inflation. Core inflation indices serve to assess the mid- and long-term trend of the overall price level. For the purpose of adjusting monetary policy, many economists focus more intently on the core rate of inflation, as this allows for an in-depth assessment of inflationary processes ongoing in the economy.

5.2 Monthly change of the core inflation

In October 2018 the core inflation (measured over the period October 2017 - 2018) was 2.0%, an increase of 1.7 ppts compared to October 2017. In October 2018 the food index was 6.1%, while the energy index shows an increase of 2.9%. Over the past year the food index increased by 5.0 ppts and the energy index increased by 7.0 ppts. Table 9 provides an overview of the monthly inflation and core inflation starting from October 2017.

Table 9: Monthly inflation¹ and core inflation, 2017 - 2018

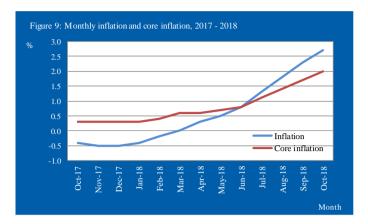
Period	Inflation	Food	Energy ²	Core Inflation
Oct-17	-0.4	1.1	-4.1	0.3
Nov-17	-0.5	0.9	-4.3	0.3
Dec-17	-0.5	0.8	-4.2	0.3
Jan-18	-0.4	0.8	-3.8	0.3
Feb-18	-0.2	1.3	-3.4	0.4
Mar-18	0.0	1.7	-3.1	0.6
Apr-18	0.3	2.2	-2.5	0.6
May-18	0.5	2.7	-1.8	0.7
Jun-18	0.8	3.3	-0.9	0.8
Jul-18	1.3	4.1	0.3	1.1
Aug-18	1.8	4.8	1.3	1.4
Sep-18	2.3	5.4	2.2	1.7
Oct-18	2.7	6.1	2.9	2.0

Source: Central Bureau of Statistics Aruba

¹ Period average inflation

² Energy : Electricity, water, gasoline and diesel

The monthly inflation and core inflation for Aruba is shown in figure 9 over a period of one year starting from October 2017.



5.3 End of year change of the core inflation, 2013 - 2018

The end of year core inflation of the total population of Aruba for the year 2018 (up to October) is 2.0%, an increase of 1.7 ppts compared to the core inflation of 2017. Table 10 provides an overview of the end of year inflation and core inflation over the period 2013 - 2018.

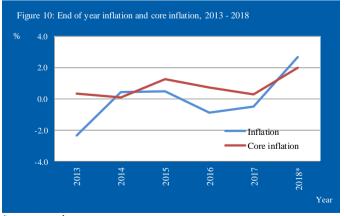
The end of year inflation and core inflation is presented in figure 10 over the period 2013 - 2018.

Table 10: End of year core inflation, 2013 - 2018

Period	2013	2014	2015	2016	2017	2018*
Inflation	-2.4	0.4	0.5	-0.9	-0.5	2.7
Food	0.0	2.2	1.9	-0.1	0.8	6.1
Electricity	-13.3	2.9	8.5	-9.9	-14.0	-2.6
Water	-19.9	0.0	0.0	0.0	0.0	0.0
Gasoline and diesel	-2.5	-2.3	-20.1	-7.9	9.2	13.4
Core inflation	0.3	0.1	1.3	0.7	0.3	2.0

Source: Central Bureau of Statistics Aruba

*current month



*current month

6 Development of Food & catering services

6.1 Monthly change of Food & catering services for October 2018

The "Food & catering services" index showed an increase of 0.4% in October 2018, after an increase of 0.2% in September 2018. The index for "Food at home" showed an increase of 0.6% in October, as nine (9) of the eleven (11) "Food at home" indices decreased in October 2018. The "Potatoes and other tubers" index registered the largest increase (4.3%) in October 2018. Furthermore, increases were posted in the indices for "Vegetables" (2.7%) and "Fish and other seafood" (1.8%). Furthermore, decreases of 0.6% and 0.2% were posted in the indices for "Bread and cereals" and "Food products n.e.c.".

Table 11 provides an overview of the corresponding weights per food group together with the percentage changes and effect for October 2018.

Table 11: Percentage change of Food for October 2018

Food	Weight	% Change	Effect
Food & catering services	1,492.8	0.4	0.079
Food at home	1,125.3	0.6	0.084
Bread and cereals	205.2	-0.6	-0.015
Meat	229.8	0.2	0.005
Fish and other seafood	56.4	1.8	0.011
Milk, cheese and eggs	140.0	0.5	0.008
Oils and fats	31.6	0.1	0.001
Fruit	72.0	1.4	0.028
Potatoes and other tubers	18.5	4.3	0.010
Vegetables	75.7	2.7	0.032
Sugar, jam, honey and other confectionery	49.6	0.5	0.002
Food products n.e.c.	82.7	-0.2	-0.002
Non-alcoholic beverages	163.9	0.2	0.003
Food away from home	367.5	-0.1	-0.005

Source: Central Bureau of Statistics Aruba

Reference is made to table 18 in Appendix 3. Table 18 provides an overview of the monthly and end of period percentage changes and effect for October 2018 for the food groups.

In October 2018, "Food at home" and "Food away from home" as a group showed an increase in price of 0.4% compared to September 2018, and had an influence of 0.08 ppts on the CPI, while the remaining goods and services, as a group, experienced a decrease in price of 0.2%, causing an effect of -0.17 ppts on the CPI.

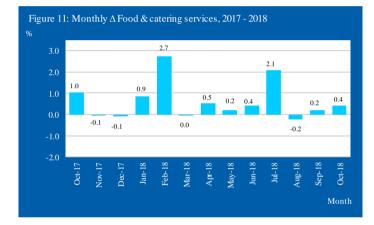
An overview of the percentage change and effect for "Food at home" and "Food away from home" for October 2018 is presented in table 12.

Table 12: Effect on the CPI of October 2018 of "Food at home" and "Food away from home"

Category	Weight	% Change	Effect
Food at home	1,125.3	0.6	0.08
Food away from home	367.5	-0.1	0.00
Total group	1,492.8	0.4	0.08
Remaining goods and services	8,507.2	-0.2	-0.17
CPI	10,000.0	-0.1	-0.10

Source: Central Bureau of Statistics Aruba

Figure 11 depicts the monthly Δ Food and catering services over a period of one year starting from October 2017.



6.2 End of Period change of Food & catering services for October 2018

Over the last twelve (12) months, the "Food & catering services" has increased by 7.2%. The "Food at home" index showed an increase of 8.1%. The "Potatoes and other tubers" index increased by 19.1%, the largest increase among the "Food at home" food groups. The index for "Food away from home" decreased by 0.1% in October 2018 and has increased by 4.3% over the last twelve (12) months.

An overview of the End of Period percentage change and effect for the "Food & catering services" for October 2018 is presented in table 18 in Appendix.

7 Subsistence level

7.1 Subsistence level

The subsistence level is the minimum level of income which is perceived necessary to achieve an adequate standard of living in a given country. The subsistence level is usually determined by estimating the cost of all the essential resources that an average adult consumes in one month or year. This is commonly called a basic needs index, and varies according to the price of food, clothing, housing, transport and other items in the "basket". Equivalence scales are used to adjust for the assumed standard of living, of households of different sizes and composition. The scale assigns a weight of 1.0 for the first adult and 0.5 for each additional adult in the household (aged 15+) and a weight of 0.3 for each child (aged 0-14 years). The subsistence level is based on figures of the report "Bestaansminimum 2010" published by the CBS in December 2010 and is monthly updated for inflation using the monthly CPI. The reference unit used in this report is one of a household consisting of two adults and two children (aged 0-14 vears).

7.2 Monthly change of the subsistence level for October 2018

Table 13 provides an overview of the subsistence level for a family of two adults and two children (aged 0-14 years) by sector registered over a period of 5 years for the month October. Over a period of one year the subsistence level increased by Afl.200, from Afl. 4,339 in October 2017 to Afl. 4,539 in October 2018. The "Food and non-alcoholic beverages" sector shows the largest increase (Afl. 130), over this period.

Table 13: Monthly subsistence level in Aruba (in Afl.) by sector for a family of 2 adults and 2 childr (aged 0-14 years) for October, 2014 - 2018

						Change in Afl.
Sector	Oct-14	Oct-15	Oct-16	Oct-17	Oct-18	Oct-17 - Oct-18
Food and non-alcoholic beverages	1,577	1,581	1,598	1,609	1,739	130
Clothing and footwear	250	240	244	247	257	10
Housing	1,430	1,443	1,406	1,361	1,373	12
Household operation	130	130	131	130	133	3
Health	68	69	69	69	77	8
Transport	258	236	240	247	264	17
Communications	124	128	128	127	132	5
Recreation and culture	175	178	178	175	182	7
Education	63	64	65	70	70	0
Miscellaneous goods and services	302	304	306	304	310	6
Total	4,376	4,372	4,365	4,339	4,539	200

Source: Central Bureau of Statistics Aruba

An overview of the subsistence level, for the most common family types, over the period October 2017 - October 2018 is presented in table 14.

Table 14: Subsistence level in Aruba (in Afl.) by family size and composition, October 2018 (Base period December 2010)

	Equivalence scales									
	1	1.3	1.8	2.1						
	1 adult	1 adult	2 adults	2 adults	2 adults					
Period		+ 1 child		+ 1 child	+ 2 children					
Oct-17	2,066	2,686	3,100	3,719	4,339					
Nov-17	2,062	2,680	3,093	3,711	4,330					
Dec-17	2,067	2,687	3,100	3,720	4,340					
Jan-18	2,075	2,697	3,112	3,735	4,357					
Feb-18	2,106	2,737	3,159	3,790	4,422					
Mar-18	2,112	2,746	3,168	3,802	4,435					
Apr-18	2,118	2,753	3,177	3,812	4,447					
May-18	2,122	2,759	3,183	3,820	4,457					
Jun-18	2,131	2,771	3,197	3,836	4,476					
Jul-18	2,162	2,810	3,242	3,891	4,539					
Aug-18	2,157	2,804	3,235	3,882	4,529					
Sep-18	2,157	2,804	3,235	3,882	4,530					
Oct-18	2,161	2,810	3,242	3,890	4,539					

Source: Central Bureau of Statistics Aruba

7.3 Comparison of the subsistence level and minimum wage

In October 2018 the subsistence level for a single adult household is Afl. 2,161, which represents an income deficit of Afl. 450, an increase of Afl. 95 compared to the deficit observed one year ago (Afl. 355). This deficit is the second highest registered over a period of five years for the month October.

Tabel 15: Monthly income surplus/deficit (in Afl.) for

a single adult household for October, 2014 - 2018

	Minimum	
1 adult	wage	Surplus/deficit
2,084	1,637	-447
2,082	1,637	-445
2,079	1,678	-401
2,066	1,711	-355
2,161	1,711	-450
	2,084 2,082 2,079 2,066	1 adult wage 2,084 1,637 2,082 1,637 2,079 1,678 2,066 1,711

Source: Central Bureau of Statistics Aruba



DESCRIPTION	WEIGHT	2017	2017	2018	2018	Monthly	Ytd	End of period	Period avera
	coefficient	Oct	Dec	Sep	Oct	Sep - Oct	Dec - Oct	Oct 17 - Oct 18	Oct 17 - Oct
Food and non-alcoholic beverages	1,125.3	150.15	149.57	161.37	162.28	0.6	8.5	8.1	5.7
Food	961.4	152.18	151.33	163.87	164.89	0.6	9.0	8.3	6.1
Non-alcoholic beverages	163.9	138.24	139.25	146.72	146.97	0.2	5.5	6.3	3.3
Alcoholic housespect and tohacco	91.0	150 41	150 10	150.90	150 61	0.1	6.3	6.1	3.3
Alcoholic beverages and tobacco Alcoholic beverages for consumption at home			150.19 124.69			- 0.1 0.1	5.5	5.3	3.3 2.5
Tobacco			217.04			-0.5	7.5	7.4	4.7
Clothing and footwear	625.9	90.60	89.70	92.45	94.14	1.8	5.0	3.9	0.0
Clothing		92.71	91.54	94.32	96.05	1.8	4.9	3.6	0.0
Footwear	75.5	75.21	76.26	78.82	80.23	1.8	5.2	6.7	0.2
Housing	2.553.3	130.08	130.01	131.10	131.17	0.1	0.9	0.8	0.1
Actual rentals for housing	854.2	154.68	155.13	157.15	157.38	0.1	1.4	1.7	1.7
Maintenance and repair of the dwelling	444.6	110.30	109.09	110.61	110.61	0.0	1.4	0.3	0.2
Water supply and miscellaneous services relating to the dwelling	505.7	119.95	119.95	120.06	120.06	0.0	0.1	0.1	0.0
Electricity, gas and other fuels	748.8	120.59	120.59	121.00	121.00	0.0	0.3	0.3	-2.4
Household operation	741 3	95.55	96.43	98.30	97.94	-0.4	1.6	2.5	0.4
Household operation Furniture, furnishings, carpets and other floor coverings		54.31	58.76	56.03	55.43	-0.4 -1.1	-5.7	2.5	1.0
Household textiles		87.09	88.04	88.83	88.82	0.0	-3.7	2.1	-9.2
Household appliances		64.26	65.38	69.37	67.26	-3.0	2.9	4.7	3.5
Glassware, tableware and household utensils	31.8	68.87	66.57	71.27	73.17	2.7	9.9	6.2	0.4
Tools and equipment for house and garden		72.79	72.79		79.70	0.0	9.5	9.5	3.0
Goods and services for routine household maintenance and cleaning	346.6	129.29	129.01	131.46	131.44	0.0	1.9	1.7	1.0
Health	225.0	95.56	06.22	106.22	100 70	0.5	11.0	11.7	5.1
Medical products, appliances and equipment			102.98			0.9	10.8	12.0	5.6
Out-patient services		82.85	82.85	96.42	96.42	0.0	16.4	16.4	5.5
Other health products and services		91.59	91.46		95.47	-0.5	4.4	4.2	2.3
Transport	1,815.4					0.1	5.7	7.0	6.5
Purchase of vehicles			107.75			0.0	5.4	5.4	3.6
Operation of personal transport equipment Transport services			123.68 116.77		91.60	0.4 -2.1	11.1 -21.6	12.1 -14.5	10.3 -0.3
	105.0	107.10	110.77	55.57	51.00	2.1	21.0	14.5	0.5
Communications	706.3	89.71	89.70	93.11	93.11	0.0	3.8	3.8	1.8
Postal services	6.1	118.02	118.02	126.22	126.22	0.0	6.9	6.9	2.3
Telephone and telefax equipment		34.23	33.87	31.86	31.86	0.0	-6.0	-6.9	8.4
Telephone and telefax services	670.6	91.90	91.90	95.50	95.50	0.0	3.9	3.9	1.7
Recreation and culture	901 2	106 72	110.00	115 26	111 /2	-3.3	1.3	4.4	3.3
Audio-visual, photographic and information processing equipment		90.87		102.37		-4.9	0.4	7.1	25.7
Other major durables for recreation and culture		47.56	46.54		50.96	0.0	9.5	7.1	1.6
Other recreational items and equipment; gardens and pets	260.1	135.47	134.11	135.21	135.21	0.0	0.8	-0.2	-3.0
Recreational and cultural services	335.0	101.92	102.39	112.58	112.58	0.0	10.0	10.5	4.9
Newspapers, books and stationery		88.59			98.18	1.1	13.2	10.8	3.3
Holidays	71.0	88.76	124.51	115.69	75.21	-35.0	-39.6	-15.3	-2.3
Education	83.0	129 16	129.16	130.08	130.08	0.0	0.7	0.7	2.6
Pre primary and primary education			109.07			0.0	0.0	0.0	0.0
Secondary education			119.45			0.0	2.0	2.0	0.7
Post-secondary non-tertiary education	4.6	129.44	129.44	129.44	129.44	0.0	0.0	0.0	0.0
Tertiary education			201.98			0.0	0.0	0.0	10.8
Education not definable by level	12.4	136.91	136.91	138.11	138.11	0.0	0.9	0.9	2.8
Restaurants and hotels	272 7	138 51	139.29	144 60	144 44	-0.1	3.7	4.3	2.5
Catering services			139.97			-0.1	3.7	4.3	2.5
Accommodation services			99.14			0.0	0.7	0.8	0.4
Miscellaneous goods and services			102.73			0.0	2.2	2.1	0.5
Personal care			118.12			0.1	2.0	1.4	-0.3
Personal effects n.e.c.			110.41			-0.5	9.3	12.6	7.0
Social protection Insurance			145.84 85.46			0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0
Financial services n.e.c.		85.46 96.73		85.46 99.13		0.0	3.4	2.7	-0.1
Other services n.e.c.		96.73			99.36	0.2	3.4	2.7	-0.1

Table 16: Monthly & Yearly Changes (%) in the Consumer Price Index for October 2018, Total Population (Dec 2006 = 100)

CDS Consumer Price Index Aruba

DESCRIPTION	WEIGHT	Monthly	Ytd	End of period	Period aver
	coefficient	Sep - Oct	Dec - Oct	Oct 17 - Oct 18	Oct 17 - Oc
Food and non-alcoholic beverages	1,125.3	0.08	1.22	1.17	0.81
Food	961.4	0.08	1.11	1.04	0.75
Non-alcoholic beverages	163.9	0.00	0.11	0.12	0.06
Alcoholic beverages and tobacco	81.9	0.00	0.07	0.06	0.04
Alcoholic beverages for consumption at home	59.3	0.00	0.03	0.03	0.02
Tobacco	22.6	0.00	0.03	0.03	0.02
Clothing and footwear	625.9	0.09	0.24	0.19	0.00
Clothing	550.4	0.08	0.21	0.16	0.00
Footwear	75.5	0.01	0.03	0.03	0.00
Hender			0.05		
Housing Actual rentals for housing	2,553.3 854.2	0.02 0.02	0.25 0.16	0.24 0.20	0.02 0.20
Maintenance and repair of the dwelling	444.6	0.02	0.06	0.01	0.20
Watter supply and miscellaneous services relating to the dwelling	505.7	0.00	0.00	0.00	0.01
Electricity, gas and other fuels	748.8	0.00	0.03	0.03	-0.19
Electricity, gas and other rules	740.0	0.00	0.05	0.05	0.15
Household operation	741.3	-0.02	0.10	0.15	0.02
Furniture, furnishings, carpets and other floor coverings	142.1	-0.01	-0.04	0.01	0.01
Household textiles	69.5	0.00	0.00	0.01	-0.05
Household appliances	111.3	-0.02	0.02	0.03	0.02
Glassware, tableware and household utensils	31.8	0.00	0.02	0.01	0.00
Tools and equipment for house and garden	40.0	0.00	0.02	0.02	0.01
Goods and services for routine household maintenance and cleaning	346.6	0.00	0.07	0.06	0.04
Health	235.8	0.01	0.21	0.23	0.10
Medical products, appliances and equipment	140.3	0.01	0.13	0.15	0.07
Out-patient services	57.2	0.00	0.07	0.07	0.02
Other health products and services	38.3	0.00	0.01	0.01	0.01
Transport Purchase of vehicles	1,815.4 811.4	0.01 0.00	1.03 0.40	1.25 0.40	1.14 0.27
Operation of personal transport equipment	840.1	0.00	0.98	1.06	0.27
Transport services	163.8	-0.03	-0.35	-0.22	0.00
Communications	706.3	0.00	0.20	0.20	0.10
Postal services	6.1	0.00	0.00	0.00	0.00
Telephone and telefax equipment	29.6	0.00	-0.01	-0.01	0.01
Telephone and telefax services	670.6	0.00	0.21	0.21	0.09
Recreation and culture	891.2	-0.28	0.11	0.36	0.28
Audio-visual, photographic and information processing equipment	123.8	-0.05	0.00	0.07	0.21
Other major durables for recreation and culture	19.2	0.00	0.01	0.01	0.00
Other recreational items and equipment; gardens and pets	260.1	0.00	0.02	-0.01	-0.09
Recreational and cultural services	335.0	0.00	0.29	0.30	0.15
Newspapers, books and stationery	82.1	0.01	0.08	0.07	0.02
Holidays	71.0	-0.24	-0.30	-0.08	-0.02
Education	83.0	0.00	0.01	0.01	0.02
Pre primary and primary education	30.4	0.00	0.00	0.00	0.00
Secondary education	25.2	0.00	0.01	0.01	0.00
Post-secondary non-tertiary education	4.6	0.00	0.00	0.00	0.00
Tertiary education	10.4	0.00	0.00	0.00	0.02
Education not definable by level	12.4	0.00	0.00	0.00	0.00
Restaurants and hotels	373.7	0.00	0.16	0.19	0.11
Catering services	367.5	0.00	0.16	0.19	0.11
Accommodation services	6.2	0.00	0.00	0.00	0.00
Miscellaneous goods and services	767.0	0.00	0.15	0.14	0.03
Personal care	262.0	0.00	0.05	0.04	-0.01
Personal effects n.e.c.	67.3	0.00	0.06	0.08	0.04
Social protection	28.7	0.00	0.00	0.00	0.00
Insurance	289.1	0.00	0.00	0.00	0.00
Financial services n.e.c. Other services n.e.c.	26.9 93.0	0.00 0.00	0.01 0.03	0.01 0.02	0.00 0.00
Other services fi.e.c.	55.0	0.00	0.05	0.02	0.00

Table 18: Monthly & Yearly Changes (%) and effect	in the Food & c	-						
			Change	Effect				
DESCRIPTION	WEIGHT coefficient	Monthly Sep - Oct	End of period Oct 17 - Oct 18	Monthly Sep - Oct	End of period Oct 17 - Oct 18			
Food & catering services	1,492.8	0.4	7.2	0.079	1.354			
Food at home	1,125.3	0.6	8.1	0.084	1.165			
Bread and cereals	205.2	-0.6	5.5	-0.015	0.129			
Rice	18.8	0.5	11.0	0.001	0.027			
Bread	98.1	0.6	6.5	0.007	0.076			
Pasta products	7.6	0.4	4.2	0.000	0.003			
Other cereals and cereal products	80.7	-2.7	2.6	-0.023	0.023			
Meat	229.8	0.2	8.0	0.005	0.229			
Bovine	44.7	0.6	4.9	0.003	0.026			
Swine	28.1	-0.4	5.7	-0.001	0.019			
Poultry	59.5	0.8	12.6	0.007	0.102			
Other meat and meat preparations	97.5	-0.3	7.0	-0.004	0.083			
Fish and other seafood	56.4	1.8	5.7	0.011	0.037			
Fish and seafood preparations	56.4	1.8	5.7	0.011	0.037			
Milk, cheese and eggs	140.0	0.5	11.2	0.008	0.172			
Milk	58.8	1.0	12.8	0.008	0.096			
Cheese	46.9	0.0	9.6	0.000	0.049			
Eggs	14.3	0.0	12.9	0.000	0.014			
Other milk products	19.9	0.1	7.5	0.000	0.014			
	24.6			0.004				
Oils and fats	31.6	0.1	10.1	0.001	0.044			
Butter and margarine	9.9	-0.6	14.0	-0.001	0.020			
Corn oil	9.4	0.4	9.9	0.001	0.014			
Other oils and fats	12.3	0.6	6.6	0.001	0.010			
Fruit	72.0	1.4	18.7	0.028	0.323			
Oranges, lemons and mandarins	11.1	4.8	8.7	0.007	0.013			
Bananas and plantains	13.8	3.5	26.4	0.010	0.063			
Apples and pears	11.2	0.7	12.6	0.001	0.024			
Grapes	6.0	-7.8	16.2	-0.009	0.016			
-								
Melons and watermelons	6.7	-2.3	12.0	-0.009	0.043			
Nuts Other fruits and fruit products	6.9 16.4	2.3 3.6	4.3 25.6	0.001 0.026	0.003 0.161			
Potatoes and other tubers	18.5	4.3	19.1	0.010	0.040			
Potatoes	11.2	4.8	26.1	0.008	0.039			
Sweet potatoes and yucca	2.5	12.2	10.5	0.002	0.002			
Other tubers	4.8	-0.8	-1.8	0.000	-0.001			
Vegetables	75.7	2.7	-0.5	0.032	-0.007			
Lettuce	6.7	5.6	-29.2	0.003	-0.020			
Celery and broccoli	6.3	1.6	-6.9	0.002	-0.012			
Tomatoes & peppers	15.5	6.0	16.1	0.012	0.030			
Onions	7.8	5.4	-11.4	0.014	-0.038			
Frozen vegetable mixtures	6.7	0.7	7.1	0.001	0.005			
Other vegetables Other preserved or processed vegetables	12.7 20.0	-0.4 0.5	12.9 3.2	-0.001 0.001	0.018 0.010			
Sugar, jam, honey and other confectionery	49.6	0.5	5.7	0.002	0.026			
Sugar	14.4	0.8	6.4	0.001	0.008			
Jams and jellies	2.8	0.4	4.3	0.000	0.001			
Other confectionery products	32.4	0.4	5.5	0.001	0.017			
Food products n.e.c.	82.7	-0.2	5.1	-0.002	0.050			
Other food products	82.7	-0.2	5.1	-0.002	0.050			
Non-alcoholic beverages	163.9	0.2	6.3 7.2	0.003	0.122			
Coffee and tea	30.1	0.4	7.2	0.001	0.021			
Soft and sports drinks	49.7	-0.3	6.7	-0.002	0.038			
Fruit juices	61.0	0.0	4.9	0.000	0.040			
Other non-alcoholic beverages	23.1	1.4	8.7	0.004	0.024			
Food away from home	367.5	-0.1	4.3	-0.005	0.189			
Food and beverage consumption away from home	367.5	-0.1	4.3	-0.005	0.189			
Other goods and services	8,507.2	-0.2	3.5	-0.175	2.827			
Other goods	5,147.2	0.2	4.4	0.077	2.120			
Other services	3,360.0	-0.8	2.1	-0.251	0.706			
СЫ	10,000	-0.1	4.2	-0.096	4.181			

Table 18: Monthly & Yearly Changes (%) and effect in the Food & catering services for October 2018, Total Population (Dec 2006 = 100)

Source: Central Bureau of Statistics Aruba

Table 19: CPI: Main indices for October 2018, Total Population (Dec 2006 = 100)

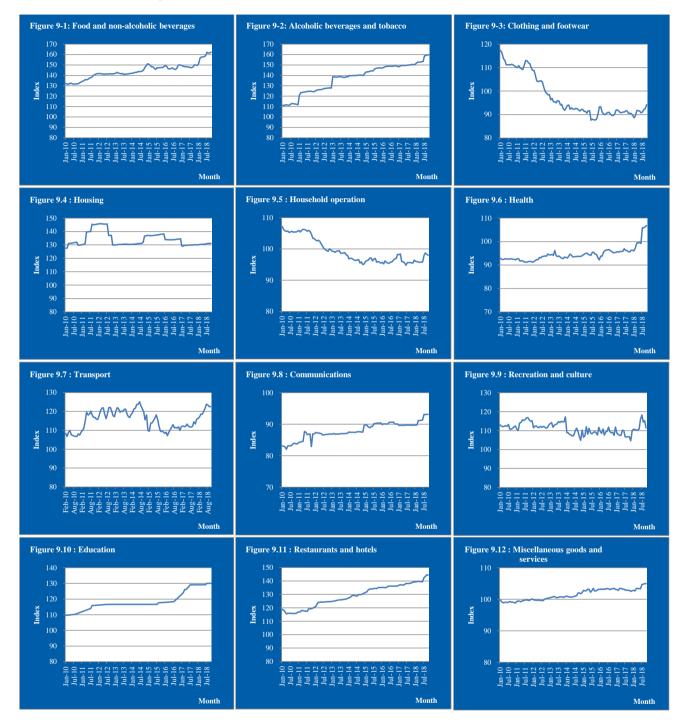
DESCRIPTION	WEIGHT	2017	2017	2018	2018	Monthly	Ytd	End of period	Period average
	coefficient	Oct	Dec	Sep	Oct	Sep - Oct	Dec - Oct	Oct 17 - Oct 18	Oct 17 - Oct 18
CPI for "All items"	10,000.0	117.12	117.63	122.14	122.02	-0.1	3.7	4.2	2.7
CPI for "Goods"	6,272.5	116.09	115.99	121.91	122.22	0.3	5.4	5.3	3.1
CPI for "Durable goods"	1,293.2	94.68	95.89	101.13	100.43	-0.7	4.7	6.1	5.6
CPI for "Semi-durable goods"	954.1	89.19	88.49	90.86	92.22	1.5	4.2	3.4	-0.8
CPI for "Non-durable goods"	4,025.2	129.34	128.96	135.95	136.34	0.3	5.7	5.4	3.1
CPI for "Services"	3,727.5	118.87	120.40	122.52	121.68	-0.7	1.1	2.4	2.0
CPI for "Gasoline" and "Diesel"	552.3	120.97	121.34	138.75	139.23	0.3	14.7	15.1	13.4
CPI excluding "Food and non-alcoholic beverages"	8,874.7	112.94	113.58	117.16	116.92	-0.2	2.9	3.5	2.2
CPI excluding "Gasoline" and "Diesel"	9,447.7	116.90	117.41	121.17	121.02	-0.1	3.1	3.5	2.1
CPI excluding "Food and non-alcoholic beverages", "Gasoline" and "Diese	8,322.4	112.40	113.07	115.73	115.44	-0.3	2.1	2.7	1.4
CPI excluding "Rentals actually paid by tenants or subtenants"	9,145.8	113.62	114.13	118.87	118.72	-0.1	4.0	4.5	2.8
CPI excluding "Housing"	7,446.7	112.68	113.38	119.07	118.88	-0.2	4.8	5.5	3.7
CPI excluding "Gasoline", "Diesel", "Water" and "Electricity"	7,435.0	111.85	112.45	116.99	116.77	-0.2	3.8	4.4	2.7

Table 20: CPI: Effect on main indices for October 2018, Total Population (Dec 2006 = 100)

JESCRIPTION	WEIGHT coefficient	Monthly Sep - Oct	Ytd Dec - Oct	End of period Oct 17 - Oct 18	Period average Oct 17 - Oct 18
CPI for "All items"	10,000.0	-0.10	3.73	4.18	2.67
CPI for "Goods"	6,272.5	0.16	3.33	3.29	1.90
CPI for "Durable goods"	1,293.2	-0.07	0.50	0.63	0.58
CPI for "Semi-durable goods"	954.1	0.11	0.30	0.25	-0.06
CPI for "Non-durable goods"	4,025.2	0.13	2.52	2.40	1.38
CPI for "Services"	3,727.5	-0.26	0.41	0.90	0.76
CPI for "Gasoline" and "Diesel"	552.3	0.02	0.84	0.86	0.72
CPI excluding "Food and non-alcoholic beverages"	8,874.7	-0.18	2.52	3.02	1.85
CPI excluding "Gasoline" and "Diesel"	9,447.7	-0.12	2.89	3.32	1.94
CPI excluding "Food and non-alcoholic beverages", "Gasoline" and "Diese	8,322.4	-0.20	1.68	2.15	1.13
CPI excluding "Rentals actually paid by tenants or subtenants"	9,145.8	-0.11	3.57	3.98	2.47
CPI excluding "Housing"	7,446.7	-0.11	3.48	3.94	2.65
CPI excluding "Gasoline", "Diesel", "Water" and "Electricity"	7,435.0	-0.13	2.73	3.12	1.95

Appendix 5

Course of Indices for 2010 up to October 2018



Glossary

The Consumer Price Index and Inflation

The Consumer Price Index (CPI) measures changes in prices of consumer goods and services by households. Consumer price indices can be intended to measure either the rate of price inflation or deflation as perceived by households or changes in their cost of living. In case of inflation, the percentage change is positive and it indicates a decrease in the purchasing power of the consumers.

Monthly percentage change

Percentage change in price indices of any aggregates of the CPI in relation to the respective price indices of the previous month.

Year-to-date (ytd)

Percentage change in price indices of any aggregates of the CPI in relation to the respective price indices of December prior to the year under review.

End of period inflation (last 12 months)

Percentage change in price indices of any aggregates of the CPI in relation to the respective price indices of the same month of the previous year.

Period average inflation (last 24 months)

The period average inflation is calculated by comparing the annual average CPI of the concerning period with the annual average CPI of the concerning period of the previous year.

Effect

Contribution of all percentage changes (of all respective aggregates) to the CPI.

Core inflation

Core inflation is a measure of inflation that excludes certain items which face volatile price movements. Core inflation eliminates the inflation of certain products that can have temporary price shocks because these shocks can diverge from the overall trend of inflation and give a false measure of inflation. The core rate of inflation is calculated by: total inflation excluding food and energy prices. In part, that is because the core is less volatile and reflects better the relationship of supply and demand in domestic product markets. The core usually is a better measure of the basic rate of inflation that will tend to emerge in the absence of supply shocks.

Food & catering services

The "Food & catering services" index is composed of the indices for the "Food & Non-alcoholic beverages" sector ("Food at home") and the "Catering services" ("Food away from home") category.

Subsistence level

The subsistence level is the minimum level of income which is perceived necessary to achieve an adequate standard of living in a given country. The subsistence level is usually determined by estimating the cost of all the essential resources that an average adult consumes in one month or year. This is commonly called a basic needs index, and varies according to the price of food, clothing, housing, transport and other items in the "basket". The subsistence level is monthly updated for inflation using the monthly CPI.