



# **Concumer Price Index**

Statistics 2014

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#### Introduction

The Consumer Price Index (CPI) is an important statistical indicator for the purposes of planning and research in various disciplines. Statistics centers and agencies in different countries consistently compile these indices, which depend on the prices of a basket of goods and services consumed by the household sector. The figures thus calculated constitute a time series that provides a measure of changes in the cost of living over time.

Therefore, Statistics Centre - Abu Dhabi has always taken interest in collecting the prices of those goods and services on a regular basis and publishes the indicators derived from this data, following the methodologies adopted internationally in this field.

The Price Indices Section at the Statistics Centre - Abu Dhabi compile CPI according to households' levels of welfare and type. For the welfare level approach, the population is divided into five segments (quintiles), which represent five standard of living levels based on average annual expenditure per capita.

For the household type approach, the population is divided into three types of households as set out in the results of the Household Income and Expenditure Survey (2007), namely, Citizen, Non-Citizen and Share households.

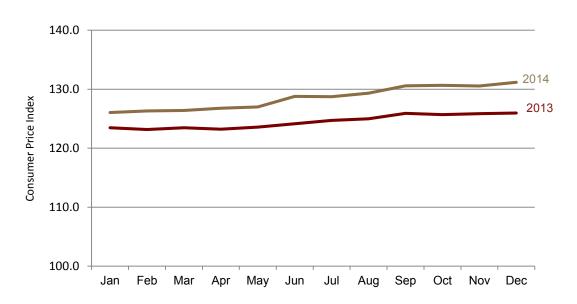
To represent all regions of the Emirate, the selected sample of items included in the Consumer Price Index basket uses actual data from the Household Income and Expenditure Survey 2007. The sample of outlets were selected in such a way to represent points of purchase for a large base of consumers all over the Emirate of Abu Dhabi, taking into account the geographical distribution of sources within the Emirate.

#### 1. Consumer Price Index (CPI) for the year 2014 (100=2007)

## **Key Points**

- The inflation rate in consumer prices was 3.2% in 2014 compared with 2013, as shown by the increase in the CPI to 128.5 points during 2014, up from 124.5 points during 2013.
- The 'Housing, water, electricity, gas and other fuels' group contributed for the largest rise in the index during of 2014 compared with the same period of 2013, contributing 46.1% to the change. This contribution resulted from an increase of 4.0% in the prices of this group.
- ➤ The CPI for 2014 was 'Furnishings, household equipment and routine household maintenance' group contributed for 17.1% of the overall increase occurring during 2014 compared with 2013. This contribution resulted from an increase of 11.1% in the prices of this group.
- The 'Food and beverages' group, which contributed for 14.0% of the overall increase in 2014. Where, prices of this group increased by 2.5% during 2014 compared with 2013.
- The prices of 'Miscellaneous goods and services' rose by 5.4% during 2014 compared with 2013. This group contributed 7.4% of the total increase achieved by all groups.

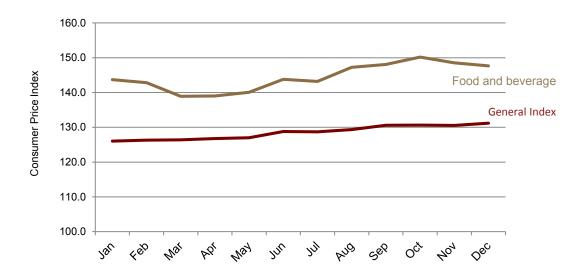
Figure (1) | CPI during the months of 2013 and 2014



## 2. Monthly indices of the main expenditure groups compared with the general price index

Figure (2) Shows that the sub-index for "Food and beverages" was higher than the general index during all months in 2014. This group consistently contributed to the increase in the index in 2014. The average index for "Food and beverages" in 2014 was 144.4 points, while the general consumer price index was at 128.5 points.

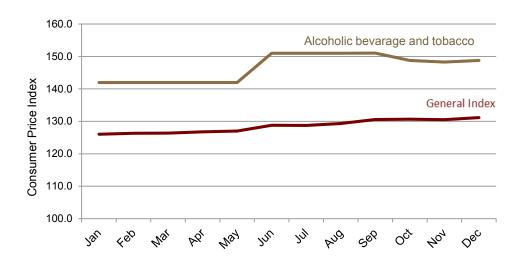
Figure (2) Price trend of the "Food and beverages" group compared with the general price index during the months of 2014



Source: Statistics Centre - Abu Dhabi

Figure (3) shows that the average prices in 2014 for the "Alcoholic beverages and tobacco" group remained higher than the average overall price, with the group's sub-index at 146.6 points, compared with 128.5 points for the general consumer price index.

Figure (3) Price trend of the "Alcoholic beverages and tobacco" group compared with the general price index during the months of 2014



Source: Statistics Centre - Abu Dhabi

The "Clothing and footwear" group contributed to a decrease in price levels during 2014. Figure (4) shows that the level of prices of the "Clothing and footwear" group was lower than the general price level for all months in 2014, with the consumer price index for the "Clothing and footwear" group at 102.4 points while the general consumer price index was 128.5 points.

Figure (4) Price trend of the "Clothing and footwear" group compared with the general price index during the months of 2014

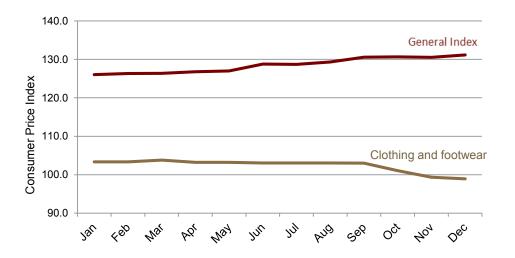
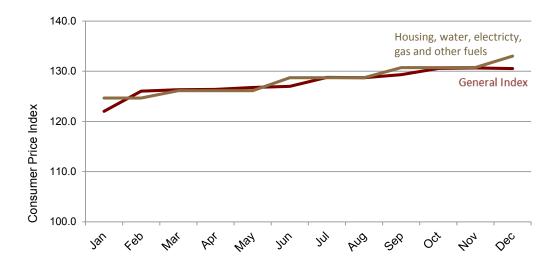


Figure (5) shows that the price level of the "Housing, water, electricity, gas and other fuels" group was lower than the general consumer price index in 2014. The group, which has a weight of about 38 per cent, has contributed to a general decrease in price levels; the consumer price index was 128.3 points while the general consumer price index was 128.5 points.

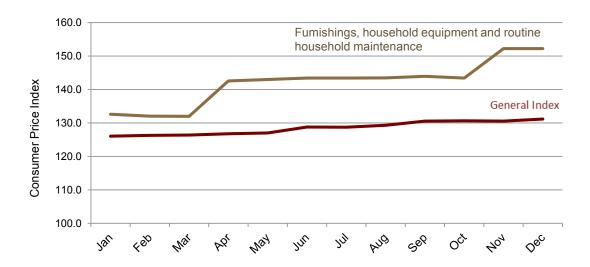
Figure (5) Price trend of the "Housing, water, electricity, gas and other fuels" group compared with the general price index during the months of 2014



Source: Statistics Centre - Abu Dhabi

Figures (6) show the consumer price index for the "Furnishings, household equipment and routine household maintenance" group compared with the general index for 2014. This group contributed to an increase in the overall level of prices during 2014. The average annual consumer price index for the "Furnishings, household equipment and routine household maintenance" group was 142.0 points while the general consumer price index for the same period was 128.5 points.

Figure (6) Price trend of the "Furnishings, household equipment and routine household maintenance" group compared with the general price index during the months of 2014



Source: Statistics Centre - Abu Dhabi

Figure (7) shows the direction of the index for the "Health" group compared with the general index in 2014. This group contributed to a decrease in price levels during 2014 with the average consumer price index for this group at 115.1, compared with 128.5 points for the general consumer price index.

Figure (7) Price trend of the "Health" group compared with the general price index during the months of 2014

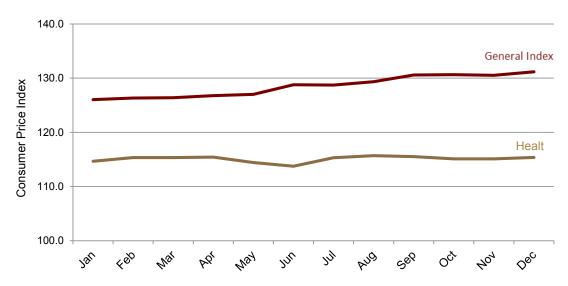
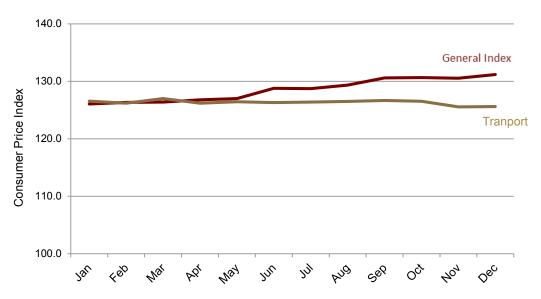


Figure (8): shows the direction of the price index for "Transport" group compared with the general consumer price index in 2014. It has contributed to decrease in the overall price level in 2014 with the average price index for this group at 126.3 points, while the general consumer price index was 128.5 points in 2014.

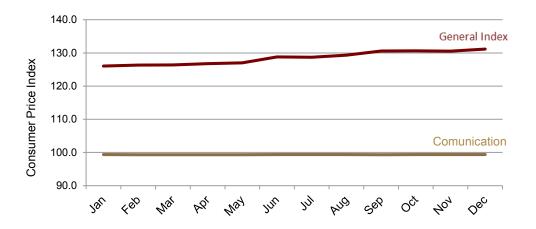
Figure (8) Price trend of the "Transportation" group compared with the general price index during the months of 2014



Source: Statistics Centre - Abu Dhabi

The "Communication" group contributed to a decrease in the overall price level in 2014 as shown in figure (9), with the price level for this group lower than the general consumer price index for 2014.

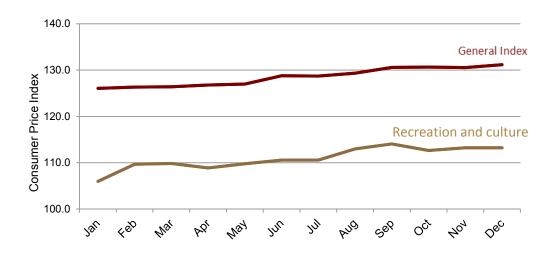
Figure (9) Price trend of the "Communication" group compared with the general price index during the months of 2014



Source: Statistics Centre - Abu Dhabi

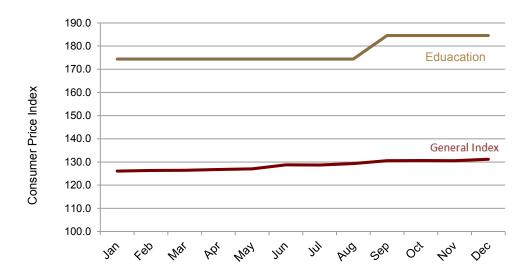
Figure (10) shows the direction of the price index for "Recreation and culture" compared with the general index in 2014. This group has contributed to a decrease in the overall price levels in 2014 with the price index for this group at 111.0 points, compared with 128.5 points for the general consumer price index.

Figure (10) Price trend of the "Recreation and culture" group compared with the general price index during the months of 2014



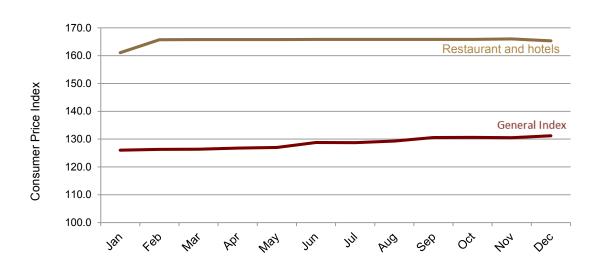
Both the "Education" and "Restaurants and hotels" groups contributed to the higher general level of prices during 2014. Figures (11) and (12) show the high levels of prices for those two groups compared with the general price levels.

Figure (11) Price trend of the "Education" group compared with the general price index during the months for 2014



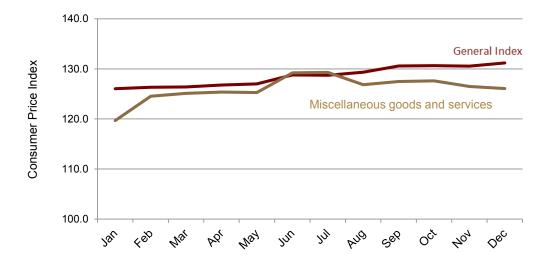
Source: Statistics Centre - Abu Dhabi

Figure (12) Price trend of the "Restaurants and hotels" group compared with the general index during the months for 2014



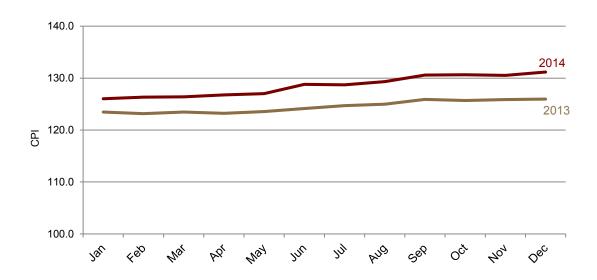
The levels of prices in 2014 for the "miscellaneous goods and services" group was lower than the general price level, thus the prices of this group have contributed to reducing the general price level in 2014.

Figure (13) Price trend of the "Miscellaneous goods and services" group compared with the general price index during the months of 2014



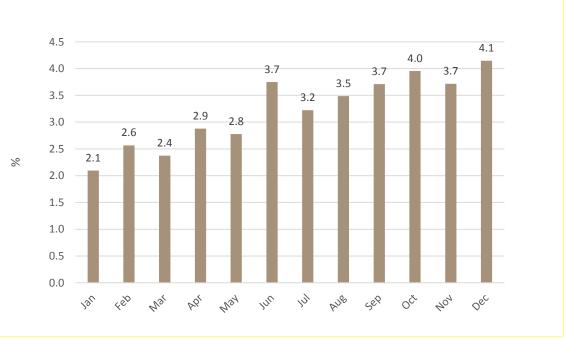
#### 3. Monthly and annual Consumer Price Index (2013 – 2014)

Figure (14) | Monthly Consumer Price Index 2013 – 2014



Source: Statistics Centre - Abu Dhabi

Figure (15) Annual rates of inflation for the months of 2014



16.0 14.9 14.0 12.0 10.7 10.0 8.8 % 8.0 6.2 6.0 3.3 3.1 3.7 4.2 3.2 4.0 3.1 2.0 2.0 2.2 2.0 0.8

Figure (16) Annual inflation rates 1996 – 2014

Source: Statistics Centre - Abu Dhabi

0.0

## 4. CPI Methodology

#### Introduction

Statistics Centre- Abu Dhabi is the sole official body responsible for calculating and publishing the Consumer Price Index (CPI) within the Emirate of Abu Dhabi. The Centre updated the CPI base year to 2007 for both prices and weights in 2008. Weights that are used in the new CPI were calculated using the results derived from the Household Income and Expenditure Survey 2007, which was carried out in the Emirate of Abu Dhabi. The methodology used in calculating the CPI follows best international recommendations and practices in this field.

#### 1. What is the Consumer Price Index?

The CPI is a tool that measures the rate of change in the prices of a basket of goods and services between two periods. The period against which prices are compared is known as the base period and the period under review is known as the comparison period.

#### 2. Importance of the Consumer Price Index

The CPI provides monthly estimates on the rate of change in the prices of a consumer price basket in the Emirate of Abu Dhabi. Some of the significant utilizations of the CPI are:

- The CPI is used as an important economic indicator to calculate inflation rates. The Inflation rate is a key statistic for economic policymaking and is used for adjusting payments (such as rents and wages).
- Salaries and wages are being adjusted by international entities and big corporations based on the change taking place in the CPI.
- The CPI is used as a deflator while producing national accounts at constant prices.

#### 3. Updating the Consumer Price Index

The Consumer Price Index weights are updated on a regular basis once the necessary data becomes available. Usually the update takes place after releasing the results of the Household Income and Expenditure Survey, which is carried out periodically about every eight years. Updating the weights of goods and services of the CPI basket ensure that these weights represent as close as possible the current consumption pattern of households.

The last CPI update in the Emirate of Abu Dhabi took place in 2007-2008, where 2007 was regarded as the new CPI base year for both weights and prices.

#### 4. CPI Compilation

The CPI is calculated using the Laspeyres method  $CPI_{L} = \sum \frac{P_{1i}}{P_{0i}} \times W_{0i}$ 

Prices of goods and services of the CPI basket are collected periodically, except for the vegetables, fruits, meat, fish and chicken groups which are collected on a weekly basis due to the continuous change that occur in its prices. Rentals prices are collected quarterly, while education fee prices are collected semi- annually.

The current CPI uses 2007 as the base year in the Emirate of Abu Dhabi. The current CPI basket consists of 334 goods and services, while the consumer basket contains 760 goods and services. The new CPI included the CPI of residential units occupied by their owners; this was done by adding the weight of this item to the weight of the rented residential units followed by calculation of a single index for all rented units.

The average item price at the 'elementary group level' is calculated using the geometric mean. Regarding the price ratio and the new weight, price ratio is calculated by dividing the comparison price by the base year price, and then the new weight is calculated by multiplying the price ratio by the base year weight.

To calculate the CPI on the sub- group level, the new weight of all goods and services of the subgroup should be added and then divided by the base price of the same group. The CPI of the main groups and the general CPI are calculated using the same method.

#### 5. Weights

The Consumer Price Index is a weighted average of the change in the price of goods and services of the CPI basket. The weight of the good or service reflects its relative importance. The weight of good (C) is calculated by dividing the total expenditure of all households on the good (C) by the total expenditure of all households on all goods and services.

The relative importance<sup>1</sup> of goods and services were calculated based on the results of the 2007-2008 Household Income and Expenditure Survey. Goods and services with a weight of 0.002 per cent or more were included in the CPI basket of goods and services. Goods with weights below this value were distributed proportionally among the other goods in the same group.

#### 6. CPI basket and Consumer basket

After calculating weights and identifying goods and services representing the CPI, the 334 goods and services in the consumer basket was identified. Each item in the CPI basket is represented by one good or service or more, therefore the consumer basket is larger than the CPI basket. The CPI basket includes 760 goods and services.

#### 7. Classifications used in the CPI

The Classification of Individual Consumption according to Purpose (COICOP) is used in the construction of the CPI. The COICOP is a United Nations classification, which is used for statistical purposes. Based on the COICOP, goods and services of the CPI basket were classified into the 12

<sup>&</sup>lt;sup>1</sup> Relative importance of a given good or the weight of the good is the total expenditure of all households on the good divided by the total expenditure of all households on all groups

main groups, 34 subgroups (two digits) and 63 subgroups (three digits). The following table shows the main groups (one digit) and their weights:

Exp. Grp. No.	Main Expenditure Groups	Weight
	Total	100.0
01	Food and beverages	16.1
02	Alcoholic beverages and tobacco	0.3
03	Clothing and footwear	9.8
04	Housing, water, electricity, gas and other fuels	37.9
05	Furnishings, household equipment and routine household maintenance	4.8
06	Health	0.8
07	Transport	9.7
08	Communication	7.7
09	Recreation and culture	2.4
10	Education	2.6
11	Restaurants and hotels	3.4
12	Miscellaneous goods and services	4.6

#### 8. Terms related to the CPI

Term	Description
Price	Price is defined as the value of one unit of a product or service; this means the market value of the product or service. This value is established through the exchange of products and services in the markets. This value is equivalent to the benefit achieved by the consumer.
Consumer Price Index (CPI)	The Consumer Price Index (CPI) is a statistical indicator that measures changes in the level of prices of goods, services and rents of residential units within the consumer spending basket of households between two periods, the reference period and the comparison period.
Expected Inflation	Expected inflation is the expected rate of the rise in consumer prices. It is calculated using the CPI time series data by studying the movement of prices at the level of main and sub groups of the index basket, taking into account the seasonal changes. The expected inflation rates are statistical estimates, subject to increase or decrease depending on the unexpected changes in market prices.
Weight	Weight is the relative importance of a product or service within the CPI basket compared with all other products or services.
Outlet	Outlets where products or services are sold such as shops, supermarkets and stores.
Periods of Collection	Periods of collection are the adopted periods to repeat the survey of all groups in each basket. The period might be weekly, monthly or quarterly.

#### 9. Geographical Scope

The current geographical scope of SCAD covers the Emirate of Abu Dhabi including all sub regions. However, the comprehensive coverage to the whole Emirate is essential but it requires a huge effort in order to collect the prices on a regular basis from all the regions of the Emirate.

#### 10. Sources of Goods and Services

Sources used for the collection of price data were determined through field visits conducted by a team from SCAD's Price Indices Section. The team updates SCAD on a regular basis if any source closes down or relocates premises. While choosing a source, it has been taken into consideration that it should represent a large segment of consumers in the Emirate of Abu Dhabi. Price data are currently collected from 180 sources.

#### 11. Collection of Price Data

Price data collection is a crucial stage that requires a significant amount of time and effort. The collection of price data is conducted by a group of employees who are well trained. To ensure the accuracy of the collected prices, the price of a sample of goods and services are reviewed through field visits. Each group of prices is collected differently, some is collected weekly, and others are collected monthly and quarterly.

In order to develop the price collection mechanism and cope with the latest IT trends, SCAD developed a comprehensive system that aims at calculating CPI using tablets. The system aims at:

- Automation of all CPI stages.
- Provision of electronic programs and tools required for the price data collection (field collection) and transfer of data to the tablets, in addition to receiving data and transfer to the prices database.
- Ability to examine data accuracy and integration at all stages of the system, including preparation of the goods and services basket, the field work and calculating the index.
- Ability to calculate the CPI for any region of the Emirate (according to the geographical scope).
- Ability to deal with special situations that may arise during data collection or CPI calculation such as disappearance of goods, resources, and changes in the goods.
- Determining the goods and services basket of the base year with the relative weights of the groups, in addition to calculating the prices of goods and services of the base year.
- Assisting data collectors while editing data by connecting the current database with the previous one.

#### 12. Publishing

SCAD publishes the CPI and prices of consumer goods and service on a monthly basis, two weeks after the end of the month. SCAD also publish annual CPI results and inflation rates. The CPI can also be provided on CDs upon request.

#### 13. How to read the CPI

The CPI reflects the rate of the change in the prices of a specified goods and services basket between two periods, the base period and the comparison period. For example, if the price of the goods and services basket during a specified base period is AED 100, and the CPI of the comparison period was 105.0, this means that prices of goods and services increased by about 5%.

In order to measure the change in the prices of the current period and the previous period, the current CPI should be divided by the previous CPI, and the result then multiplied by (100) followed by subtracting 100.

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#### **Data Collection:**

Abu Dhabi	Al Ain	Al Garbia
Al Fandi Al Mazrouei	Mohammed Al Githi	Abdulla Ismail
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## الأرقــام القياسية الشهرية لاسعار المستهلك لعام 2014 (100=2007) Monthly Consumer Price Index, 2014 (2007=100)

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Groups of Commodities &	المعدل					المستهلك hly Cor								الموزن	مجموعات السلع	COICOP
Services &	.Av	Dec	Nov	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	.Jan	Weights	والخدمات	COICOP
General Index	128.5	131.2	130.5	130.6	130.6	129.3	128.7	128.8	127.0	126.8	126.4	126.3	126.0	100000	الرقم العام	
Food and beverages	144.4	147.7	148.6	150.19	148.1	147.2	143.2	143.8	140.1	139.0	138.9	142.8	143.7	16051	الاغذية والمشروبات	01
Food	145.1	148.6	149.7	151.4	149.0	148.1	143.8	144.5	140.3	139.3	139.1	143.3	144.6	14661	الاغذية	011
Bread and cereals	131.6	133.8	133.3	132.4	132.7	132.2	131.9	131.0	130.1	131.5	130.2	129.9	130.1	2193	الخبز والحبوب	0111
Meat	146.4	150.8	149.8	151.1	151.2	148.4	142.7	144.6	143.0	143.3	144.6	144.0	143.2	4130	اللحوم	0112
Fish and seafood	181.1	181.7	197.2	212.4	207.3	203.7	187.2	182.5	153.8	139.8	154.7	178.5	174.4	1044	الاسماك والاغذية البحرية	0113
Milk, cheese and eggs	117.5	118.5	117.6	118.1	117.8	117.3	116.9	117.5	117.3	117.2	116.8	117.6	117.7	2011	اللبن والجبن والبيض	0114
Oils and fats	136.5	135.7	137.2	136.7	137.3	137.6	135.7	136.1	135.0	134.5	137.6	138.5	136.4	502	الزيوت والدهون	0115
Fruit	146.0	145.5	143.1	148.0	142.3	146.85	146.3	149.1	147.4	147.7	147.8	148.6	139.6	1663	الفواكه	0116
Vegetables	146.6	160.0	163.9	162.0	153.4	151.4	144.1	143.4	132.9	133.6	118.2	138.0	158.9	1902	البقول	0117
Sugar, jam, honey, chocolate and confectionery	184.0	185.3	186.5	187.5	183.7	184.2	179.2	182.2	182.4	178.0	187.5	185.2	186.4	912	السكر، والمربى، والعسل، والشيكولاته، والحلوى	0118
Food products .n.e.c	168.8	171.1	172.6	172.5	165.5	168.6	165.5	170.4	170.8	169.7	165.0	166.7	167.1	304	منتجات الاغذية غير المصنفة تحت بند اخر	0119
Non-alcoholic beverages	137.0	137.5	136.7	137.0	138.7	138.0	137.0	136.8	137.9	135.7	136.5	137.5	134.3	1389	المشروبات غير الروحية	012
Coffee, tea and cocoa	169.5	169.1	170.1	172.1	175.0	172.2	172.8	172.7	173.8	166.8	163.9	166.9	158.6	376	البن والشاي والكاكاو	0121
Mineral waters, soft drinks, fruit and vegetable juices		125.7	124.3	124.0	125.2	125.2	123.7	123.5	124.5	124.2	126.3	126.7	125.3	1014	المياه المعدنية، والمشروبات المرطبة، وأنواع عصير الفواكه والبقوليات	0122
Alcoholic beverages, tobacco	146.6	148.8	148.3	148.8	151.0	151.0	151.0	151.0	142.0	142.0	142.0	142.0	142.0	253	المشروبات الكحولية والتبغ	02
Clothing and footwear	102.4	98.9	99.4	101.0	103.0	103.1	103.1	103.1	103.2	103.2	103.8	103.3	103.3	9765	الملابس والاحذية	03
Housing, water, electricity, gas and other fuels	128.3	133.0	130.8	130.7	130.7	128.7	128.7	128.7	126.1	126.1	126.1	124.7	124.7	37865	السكن، والمياه، والكهرباء، والغاز، وأنواع الوقود الاخرى	4
Actual rentals for housing, Imputed rentals for housing	132.2	137.6	135.0	135.0	135.0	132.7	132.7	132.7	129.8	129.8	129.8	128.1	128.1	33206	ايجارات السكن الفعلية والمحتسبة	(41,42)
Furnishings, household equip- ment and routine household mainte- nance	142.0	152.2	152.2	143.4	144.0	143.5	143.4	143.4	143.0	142.6	132.0	132.1	132.6	4833	التجهيزات والمعدات المنزلية واعمال الصيانة الاعتيادية للبيوت	5
Health	115.1	115.4	115.1	115.1	115.5	115.7	115.3	113.8	114.4	115.4	115.3	115.3	114.7	847	الصحة	6
Transport	126.3	125.6	125.5	126.5	126.7	126.5	126.4	126.3	126.4	126.2	127.0	126.2	126.6	9668	النقل	7
Communication	99.3	99.4	99.4	99.3	99.3	99.4	99.4	99.4	99.3	99.3	99.3	99.3	99.4	7715	الاتصالات	8
Recreation and culture	111.0	113.2	113.2	112.7	114.1	113.0	110.6	110.6	109.8	108.9	109.8	109.7	106.0	2424	الترويح والثقافة	9
Education	177.8	184.6	184.6	184.6	184.6	174.4	174.4	174.4	174.4	174.4	174.4	174.4	174.4	2591	التعليم	10
Restaurants and hotels	165.4	165.3	166.0	165.8	165.8	165.8	165.8	165.8	165.8	165.8	165.8	165.7	161.0	3373	المطاعم والفنادق	11
Miscellaneous goods and services	126.1	126.1	126.5	127.6	127.5	126.8	129.3	129.2	125.3	125.4	125.1	124.5	119.7	4616	سلع وخدمات متنوعة	12



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