



# Consumer Price Index, August 2012

(Base year 2007)

Detailed by:

- Expenditure groups
- Household welfare levels
- Household type

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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 has developed the computing of the CPI so that it is compiled according to households' levels of welfare and type. As 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 (2007-2008), namely, Citizen, Non-Citizen and Share households.

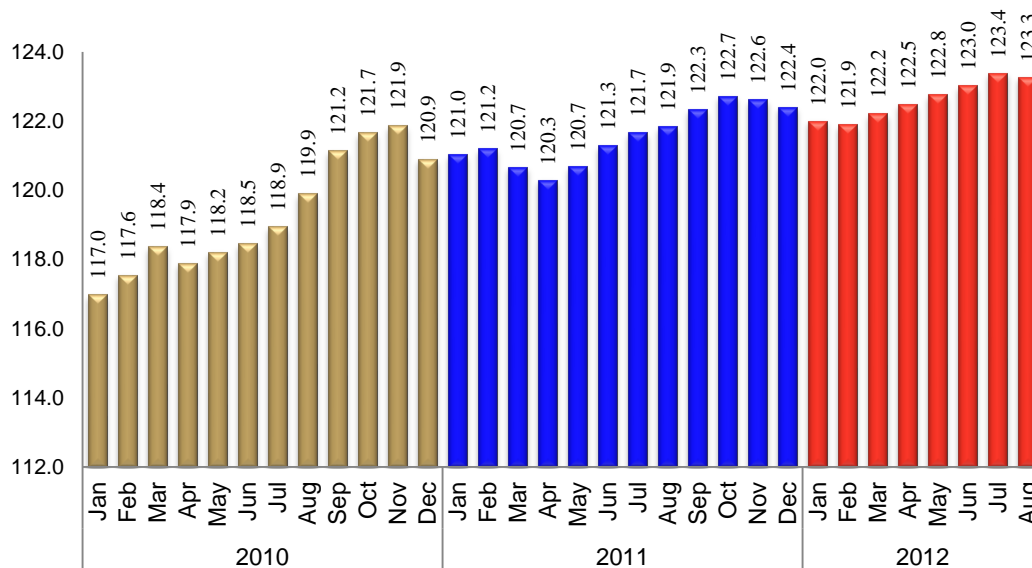
To represent all regions of the Emirate, the selected sample of items included in the Consumer Price Index basket uses actual data from the 2007/ 2008 Household Income and Expenditure Survey. The sample of outlets were selected in such a way to represent points of purchase for a large base of consumers all over the Emirate of Abu Dhabi, taking into account the geographical distribution of sources within the Emirate.

## Key Points

This report provides an analysis of the results of the CPI for the month of August 2012 with the base year 2007. In addition, the report provides the results of the CPI by household welfare levels and by household type. The main findings of this analysis are outlined below:

- The inflation rate in consumer prices for the first eight months of 2012 was 1.3%, compared with the same period of 2011, as shown by the increase in the CPI from 122.6 points during the first eight months of 2012, up from 121.1 points during the same period of 2011.
- The CPI increased by 1.2% in August 2012, compared with the same period of 2011, as shown by the increase in the CPI from 121.9 points in August 2011 to 123.3 points in August 2012.
- The CPI decreased by 0.1% to 123.3 points in August 2012, from 123.4 points in July, 2012.

**Figure (1): CPI for the months of 2010, 2011, 2012**



Source: Statistics Centre- Abu Dhabi

- An overall rise of 1.3% in consumer prices during the first eight months of 2012 compared with the same period in 2011, has led to an increase of 1.5% in consumer prices for households of the bottom welfare quintile over the same period of comparison. As for the other welfare levels, consumer prices grew by 1.1% for households of the top quintile and by 1.4% for the upper middle welfare quintile.
- The rise in consumer prices for the first eight months of 2012 compared with the same period in 2011, pushed up consumer prices for citizen households by 1.4%, and by 1.0% for non-citizen households and 1.7% for Share households.

## Consumer Price Index (CPI) for the Month of August, 2012 (2007=100)

### A. Percentage changes in the CPI

During the first eight months of 2012, the average consumer prices rose by 1.3% compared with the same period of 2011, with the CPI for the first eight months of 2012 at 122.6 points, compared with 121.1 points for the same period of 2011. This rise in prices reflects the net change in the consumer basket prices (resulting from upward and downward movement) during the two periods compared.

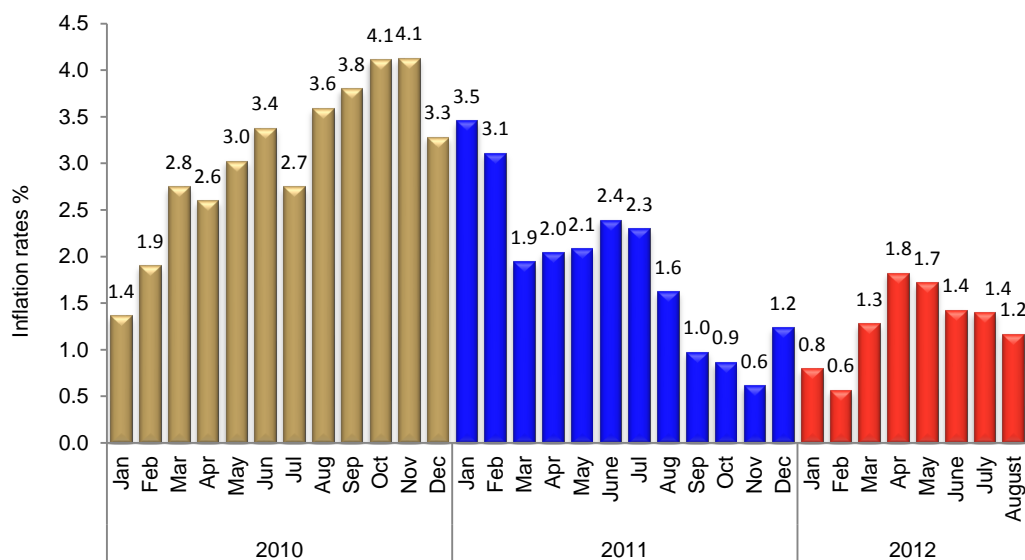
**Table (1): Consumer price index**

Year	July	August	Jan - August
2011	121.7	121.9	121.1
2012	123.4	123.3	122.6
— % —			
Percentage change	1.4	1.2	1.3

Source: Statistics Centre - Abu Dhabi

Figure (2) shows the annual inflation rates for the months of 2010, 2011 and 2012. These rates reflect the price movement of goods and services during the recent years.

**Figure (2): Annual inflation rates for the months of 2010, 2011 and 2012**



Source: Statistics Centre – Abu Dhabi

## B. Average CPI for the first eight months of 2012 compared with the same period of 2011

Table (2) shows the twelve major expenditure groups, as per the Classification of Individual Consumption according to Purpose (COICOP), and the weight or relative importance of each one of the main expenditure groups. The weight of any group is the households' expenditure on that group as a proportion of total expenditure on all groups. The table also shows the relative change, which is the percentage rate of change in the prices of any given group for the first eight months of 2012 compared with the same period of 2011. The percentage contribution reflects the expenditure group's contribution to the overall change in the prices of all groups, which is 1.3%.

**Table (2): Major expenditure groups by weights, relative change and contribution for the first eight months of 2012**

Main Expenditure Groups	Weight	CPI	CPI	Relative change	Contribution
		Jan-August 2011	Jan-August 2012		
Food and non-alcoholic beverages	16.1	132.4	138.0	4.2	58.2
Alcoholic beverages and tobacco	0.3	118.3	129.6	9.6	1.9
Clothing and footwear	9.8	97.4	98.3	0.9	5.7
Housing, water, electricity, gas and other fuels	37.9	125.3	123.7	-1.3	-41.6
Furnishings, household equipment and routine household maintenance	4.8	119.4	123.3	3.2	12.1
Health	0.8	113.2	113.7	0.4	0.2
Transport	9.7	121.5	122.5	0.8	6.1
Communication	7.7	99.6	99.6	0.0	-0.2
Recreation and culture	2.4	108.2	108.0	-0.1	-0.2
Education	2.6	155.4	162.9	4.8	12.6
Restaurants and hotels	3.4	126.9	148.3	16.9	46.9
Miscellaneous goods and services	4.6	118.7	118.1	-0.5	-1.7
Total	100.0				100.0

Source: Statistics Centre - Abu Dhabi

The above table shows that the "Food and non-alcoholic beverages" group accounted for the largest rise in the index during the first eight months 2012 compared with the same period of 2011, contributing 58.2% to change. Rises in the "Food and non-alcoholic beverages" group came as a result of increases in the prices of most subgroups included in this groups. The prices of "Meat" and "Coffee, tea and cocoa" subgroups rose by 9.3%, "Fish and sea food" by 6.9%, "Oil and fats" by 6.3% and "Vegetables" by 5.3%.

The second highest contributor to the overall increase in the CPI over the first eight months of 2012 was the "Restaurants and hotels" group, accounting for 46.9% of the increase. This contribution resulted mainly from an increase of 16.9% in the prices of this group.

The prices of "Furnishings, household equipment and routine household maintenance" rose by 3.2% during the first eight months of 2012 compared with the same period of 2011. This group contributed 12.1% of the total increase achieved by all groups. The most important subgroups that caused this increase were "Glassware, tableware and household utensils" up by 5.1% and "Goods & used services in the ordinary household maintenance" up by 3.5%.

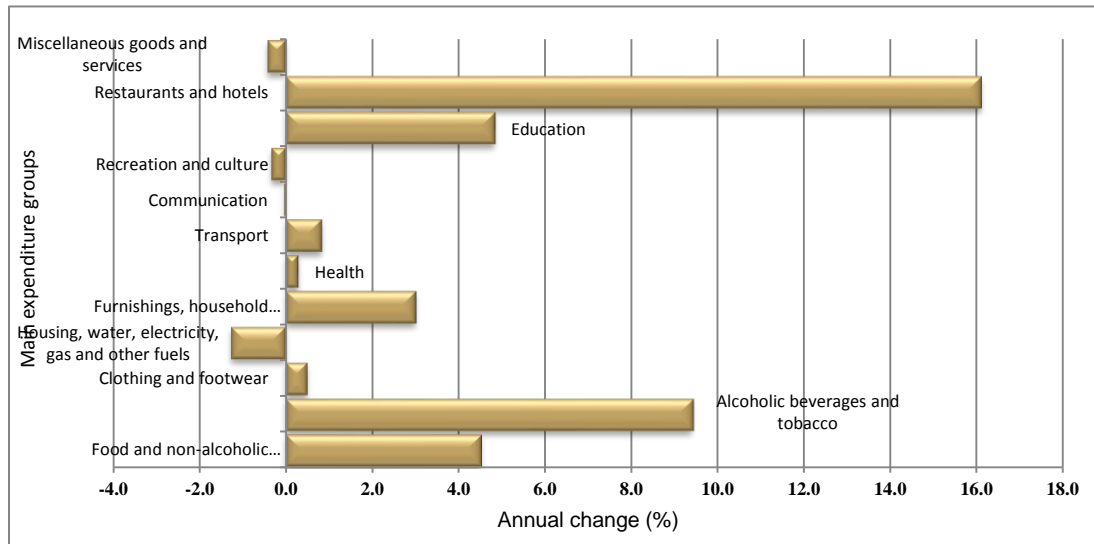
The "Education" group accounted for 12.6% of the overall increase occurring during the first eight months of 2012 compared with the same period of 2011.

The "Transport" group contributed 6.1% to the rise in consumer prices for the periods compared, with its prices increasing by 0.8%.

Among the main groups that slowed down the rise in consumer prices during the first eight months of 2012 compared with the same period of 2011, was the "Housing, water, electricity, gas and other fuels" group which contributed -41.6%.The prices of this group decreased by 1.3%.



**Figure (2): Annual change in CPI for main groups (First eight months of 2012 compared with same period 2011)**



Source: Statistics Centre - Abu Dhabi

### C. CPI of August 2012

#### 1. Comparing the CPI of August 2012 with the CPI of August 2011

The average consumer prices increased by 1.2% in August 2012 compared with August 2011, with the CPI at 123.3 points in August 2012, up from 121.9 points in August 2011. This increase in prices is due to the net movement (increases and decreases) of consumer prices during the mentioned months.

The most significant groups, which experienced increases in prices during August 2012 compared with August 2011, were the “Restaurants and hotels” group with a 22.4% increase, followed by “Alcoholic beverages and tobacco” with 10.7%, “Furnishings, household equipment and routine household maintenance” with 4.7% and “Food and non-alcoholic beverages” group with 2.2%. Meanwhile the “Housing, water, electricity, gas and other fuels” group decreased by 2.0%.

**Table (3): Main expenditure group by weights, relative change and contribution, August 2012 compared with August 2011**

Main Expenditure Groups	Weight	CPI August 2011	CPI August 2012	Relative change	Contribution
Food and non-alcoholic beverages	16.1	136.7	139.7	2.2	34.1
Alcoholic beverages and tobacco	0.3	118.3	130.9	10.7	2.2
Clothing and footwear	9.8	95.8	99.6	4.0	26.3
Housing, water, electricity, gas and other fuels	37.9	125.9	123.4	-2.0	-66.8
Furnishings, household equipment and routine household maintenance	4.8	117.9	123.5	4.7	19.0
Health	0.8	113.2	114.5	1.1	0.7
Transport	9.7	121.8	122.5	0.6	4.8
Communication	7.7	99.7	99.6	-0.1	-0.4
Recreation and culture	2.4	108.0	109.3	1.2	2.2
Education	2.6	155.4	162.9	4.8	13.7
Restaurants and hotels	3.4	126.9	155.3	22.4	67.4
Miscellaneous goods and services	4.6	120.1	119.1	-0.9	-3.3
Total	100.0				100.0

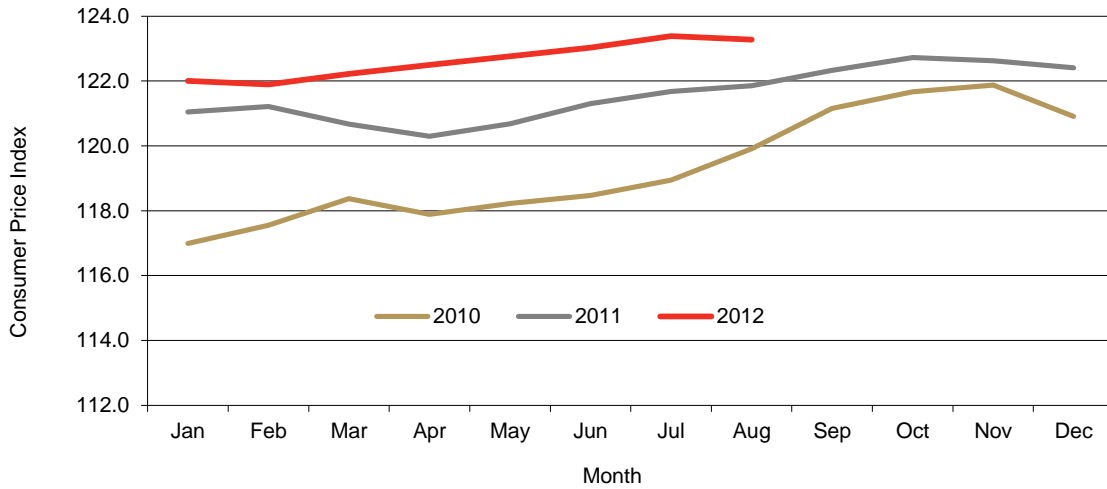
Source: Statistics Centre - Abu Dhabi

## 2. Comparing the CPI of August 2012 with the CPI of July 2012

The average consumer prices decreased by 0.1% in August 2012 compared with July 2012, with the CPI decreasing from 123.4 points in July 2012 to 123.3 points in August 2012. This overall decrease in prices between the two months reflects the net movement (increases and decreases) of consumer prices during the periods compared.

The “Food and non-alcoholic beverages” group recorded the largest decrease at 0.7%, followed by the “Miscellaneous goods and services” group by 0.5%.

**Figure (4): Consumer price index for the months of 2010, 2011 and 2012**



Source: Statistics Centre - Abu Dhabi

#### **D. CPI by household welfare level**

1. Comparing the average CPI by household welfare level for the first eight months of 2012 with the same period of 2011

The rise of 1.3% in consumer prices during the first eight months of 2012 compared with the same period in 2011, resulted in a surge of 1.5% in consumer prices for households of the bottom welfare quintile for the same period of comparison. The corresponding rise for other welfare levels was 1.1% for households of the top quintile and 1.4% for the middle quintile. Table (4) shows the average CPI values and percentage change, detailed by household welfare level for the first eight months of 2011 and 2012.

**Table (4): Average CPI values by household welfare level for the first eight months of 2011 and 2012**

Period	Bottom level	Bottom-Middle Level	Middle Level	Top-Middle Level	Top Level	All households
— CPI —						
2011	121.2	121.9	121.9	121.6	120.2	121.1
2012	123.1	123.9	123.7	123.0	121.6	122.6
— % —						
Relative Change	1.5	1.6	1.4	1.2	1.1	1.3

Source: Statistics Centre - Abu Dhabi

## 2. Comparing the average CPI by household welfare level for August 2012 with August 2011

The rise in consumer prices in August 2012 by 1.2% compared with August 2011 caused a rise in consumer prices for households in the bottom welfare quintile by 1.5%, while prices increased for households in the top quintile by 1.1%. At the same time, prices for households in the middle quintile increased by 1.2%.

**Table (5): Average CPI values by household welfare level for the months of August 2011 and August 2012**

Period	Bottom level	Bottom-Middle Level	Middle Level	Top-Middle Level	Top Level	All households
— CPI —						
Aug-11	122.5	122.9	122.8	122.4	120.8	121.9
Aug-12	124.3	124.6	124.2	123.7	122.2	123.3
— % —						
Relative Change	1.5	1.4	1.2	1.1	1.1	1.2

Source: Statistics Centre - Abu Dhabi

## 3. Comparing the average CPI by household welfare level for August 2012 with July 2012

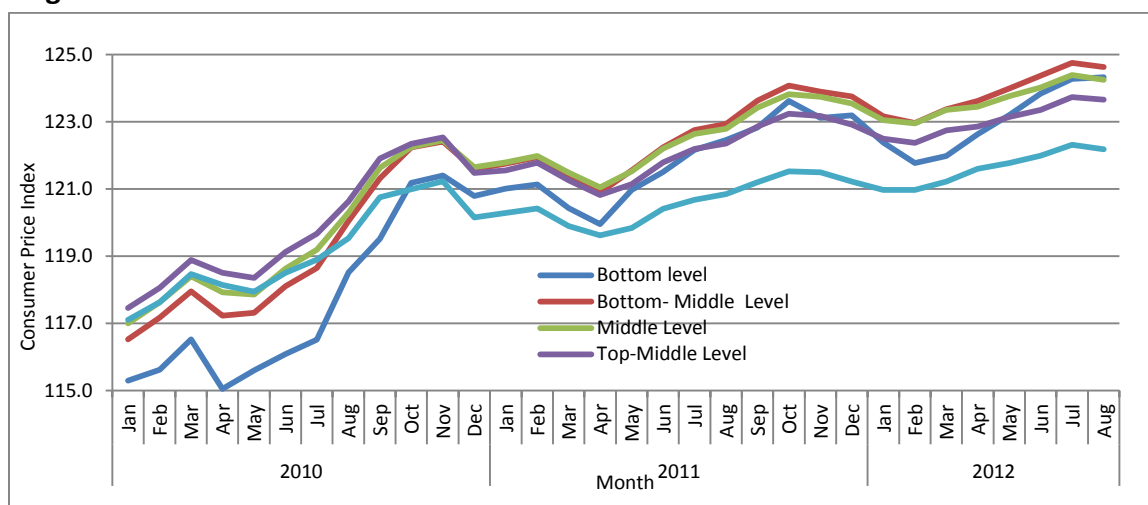
In August 2012 consumer prices decreased by 0.1% compared with July 2012. This caused a decrease in consumer prices for households in the middle welfare quintile, bottom middle welfare quintile, and top middle welfare quintile by 0.1% for each one of them.

**Table (6): Average CPI values by household welfare level for the months of August 2012 and July 2012**

Period	Bottom level	Bottom-Middle Level	Middle Level	Top-Middle Level	Top Level	All households
— CPI —						
Jul-12	124.3	124.8	124.4	123.7	122.3	123.4
Aug-12	124.3	124.6	124.2	123.7	122.2	123.3
— % —						
Relative Change	0.0	-0.1	-0.1	-0.1	-0.1	-0.1

Source: Statistics Centre - Abu Dhabi

**Figure (5): Monthly CPI movements by household welfare levels from January 2010 to August 2012.**



Source: Statistics Centre - Abu Dhabi

## E. CPI by household type

1. Comparing the average CPI by household type for the first eight months of 2012 with the same period of 2011

The 1.3% rise in consumer prices for the first eight months of 2012 compared with the same period of 2011, pushed up consumer prices for citizen households by 1.4%, non-citizen households by 1.0% and share households by 1.7%.

**Table (7): Average CPI values for the first eight months of 2011 and 2012 by household type**

Period	Citizen	Non-Citizen	Share	All households
— CPI —				
2011	120.5	121.9	121.7	121.1
2012	122.2	123.1	122.8	122.6
— % —				
Relative Change	1.4	1.0	1.7	1.3

Source: Statistics Centre - Abu Dhabi

## 2. Comparing the average CPI by household type for the month of August 2012 with August 2011

The 1.2% rise in consumer prices in August 2012 compared with August 2011 caused a rise in consumer prices for citizen households by 1.1% during the same period. Prices for non-citizen households increased by 1.0%, while prices for share households increased by 2.0%.

**Table (8): Average CPI values during August 2011 and August 2012 by household type**

Period	Citizen	Non-Citizen	Share	All households
— CPI —				
August 2011	121.2	122.6	121.9	121.9
August 2012	122.6	123.8	124.4	123.3
— % —				
Relative Change	1.1	1.0	2.0	1.2

Source: Statistics Centre - Abu Dhabi

### 3. Comparing the average CPI by household type for the month of August 2012 with July 2012

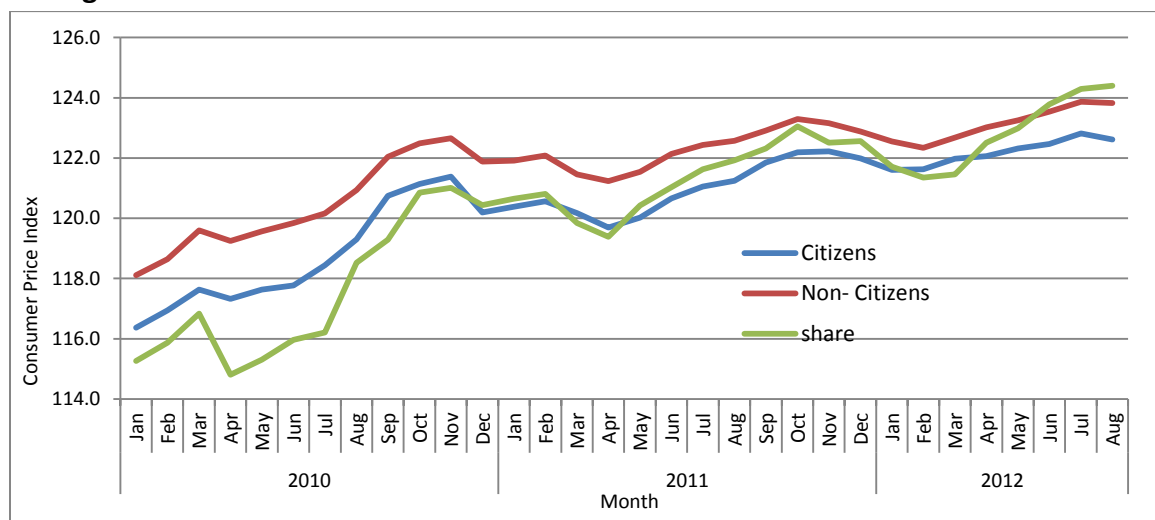
The 0.1% decrease in consumer prices in August 2012 compared with July 2012 caused a 0.2% decrease in consumer prices for citizen households.

**Table (9): Average CPI values during August 2012 and July 2012 by household type**

Period	Citizen	Non-Citizen	Share	All households
— CPI —				
July 2012	122.8	123.9	124.3	123.4
August 2012	122.6	123.8	124.4	123.3
— % —				
Relative Change	-0.2	0.0	0.1	-0.1

Source: Statistics Centre - Abu Dhabi

**Figure (6): Monthly CPI movements by household type for the period January 2010 to August 2012.**



Source: Statistics Centre - Abu Dhabi

#### Next release:

The CPI for September 2012 will be released on 10 October 2012. For more information on prices and other official statistics, please visit the SCAD website at <http://www.scad.ae>

# **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. Weights that are used in the new CPI were calculated using the results derived from the Household Expenditure and Income Survey 2007-2008, 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.

## **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 time 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.

## **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. Inflation rates are deemed to be a key tool for big corporations while creating monetary policies and economic plans.
- 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.

## **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 Expenditure and Income Survey, which is carried out periodically about every five years. Updating 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.

## 1. CPI Compilation

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

Prices of goods and services of the CPI basket are collected periodically, except for 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 Abu Dhabi region. 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 is calculated “on the main group level” using the geometric mean of elementary aggregates. The price ratio is calculated by dividing the comparison price by the base price, while the new price is calculated by multiplying by the base price.

To calculate the CPI on the sub- group level, the new weight of all goods and services of the sub-group 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.

## 2. 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 the household on the good (C) by the total expenditure of the household 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.

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<sup>1</sup> Relative importance of a given good or the weight of the good is the total expenditure of the household on the good divided by the total expenditure of all households on that good

Goods with weights below this value were distributed proportionally among the other goods in the same group.

### 3. 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.

### 4. 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 main 12 groups, 34 subgroups (two digits) and 63 subgroups (three digits). The following table shows the main groups (one digit) and their weights:

COICOP Classification	Main Expenditure Groups	Weight
	General Number	100.00
1	Food and non-alcoholic beverages	16.05
2	Alcoholic beverages and tobacco	0.3
3	Clothing and footwear	9.76
4	Housing, water, electricity, gas and other fuels	37.86
5	Furnishings, household equipment and routine household maintenance	4.83
6	Health	0.85
7	Transport	9.67
8	Communication	7.72
9	Recreation and culture	2.42
10	Education	2.59
11	Restaurants and hotels	3.37
12	Miscellaneous goods and services	4.62

### 5. The Classification used in the CPI by household welfare

According to this classification, households were divided into five segments based on the average expenditure per capita in 2007, when the last Household Income and Expenditure Survey was carried out.

The bottom welfare quintile represented the segment with the lowest income, while top welfare quintile represented the segment with the highest income.

The below table shows the average expenditure per capita

Welfare	Lowest	Highest	Average
Low	2,683.3	11,122.0	7,838.7
Low middle	11,125.8	16,887.4	14,069.6
Middle	16,896.2	23,716.1	20,260.2
Upper middle	23,732.4	34,606.9	28,685.6
Top	34,631.6	422,932.4	52,720.3

### 6. Classification used in the CPI by household type

According to this classification, households were divided into three types, citizen, non-citizen and share household:

- Citizen household: is one person or more from the UAE citizens, who live permanently in the Emirate of Abu Dhabi. They should have a head, while their members might be related to each other or not and they should share accommodation and food.
- Non- citizen household; is one person or more who are non UAE citizen. The members of the non-citizen household should share accommodation and food, while they might be related or not and they should have a head. The household is considered non- citizen if the head is non-citizen and wife is non-citizen, even if the wife has citizen children from a previous marriage.
- Share household: is a group of persons (more than two) regardless of their nationalities. It should have a head and their members might be related to each other or not. The members of the share household share accommodation but they normally do not share food.

## **7. 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.

## **8. 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 Emirates of Abu Dhabi. Price data are currently collected from 180 sources.

## **9. Collection of Price Data**

Price data collection is a crucial stage that requires lot 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:

- Implementation 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, starting from preparation of the goods and services basket till 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 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 data base with the previous one.

### **10. Publishing**

SCAD publishes the prices of consumer goods and service bulletin on a monthly basis, while CPI is published eight days after the end of the month, where it is then available to everyone. SCAD is also publish annual CPI results that include inflation rates. CPI can also be provided on CDs upon request.

### **11. 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 time periods, the base period and the comparison period. For example, if the price of 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, then multiply the result by (100) and then subtract 100.

## **Appendix**

Appendix (1) includes the CPI of August 2011 and 2012, in addition to the CPI of July 2012 and the rate of change in the CPI of these periods by main groups and some subgroups.

Appendix (2) includes the average CPI for the periods (January- August) for the years 2011 and 2012 and the rate of change by main groups and some subgroups.

Appendices from (3) till (18) include

- CPI of August 2012, August 2011 and July 2012
- CPI of the period (January- August) for the years 2011 and 2012 by household welfare and household type
- The rate of change by main groups and some subgroups for these periods