

مركز الإحصاء
STATISTICS CENTRE



Consumer Price Index, **Fourth quarter, 2013**

(Base year 2007)

Detailed by:

- Expenditure groups
- Household welfare levels
- Household type

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Table of Contents

Introduction.....	3
Key Points	4
Consumer Price Index (CPI) for the Month of December, 2013 (2007=100).....	6
A. Percentage changes in the CPI	6
B. Average CPI for the twelve months of 2013 compared with the same period of 2012	7
C. Consumer price for the fourth quarter 2013	9
D. CPI of December 2013.....	10
1. Comparing the CPI of December 2013 with the CPI of December 2012.....	10
2. Comparing the CPI of December 2013 with the CPI of November 2013	11
E. CPI by household welfare level	12
1. Comparing the average CPI by household welfare level for the twelve months of 2013 with the same period of 2012	12
2. Comparing the average CPI by household welfare level for December 2013 with December 2012	13
3. Comparing the average CPI by household welfare level for December 2013 with November 2013.....	14
F. CPI by household type.....	15
1. Comparing the average CPI by household type for the twelve months of 2013 with the same period of 2012.....	15
2. Comparing the average CPI by household type for the month of December 2013 with December 2012	15
3. Comparing the average CPI by household type for the month of December 2013 with November 2013.....	16
CPI Methodology.....	18

Introduction

The Consumer Price Index (CPI) is an important statistical indicator for the purposes of planning and research in various disciplines. Statistics centres 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 (2007-2008), namely, Citizen, Non-Citizen and Share households.

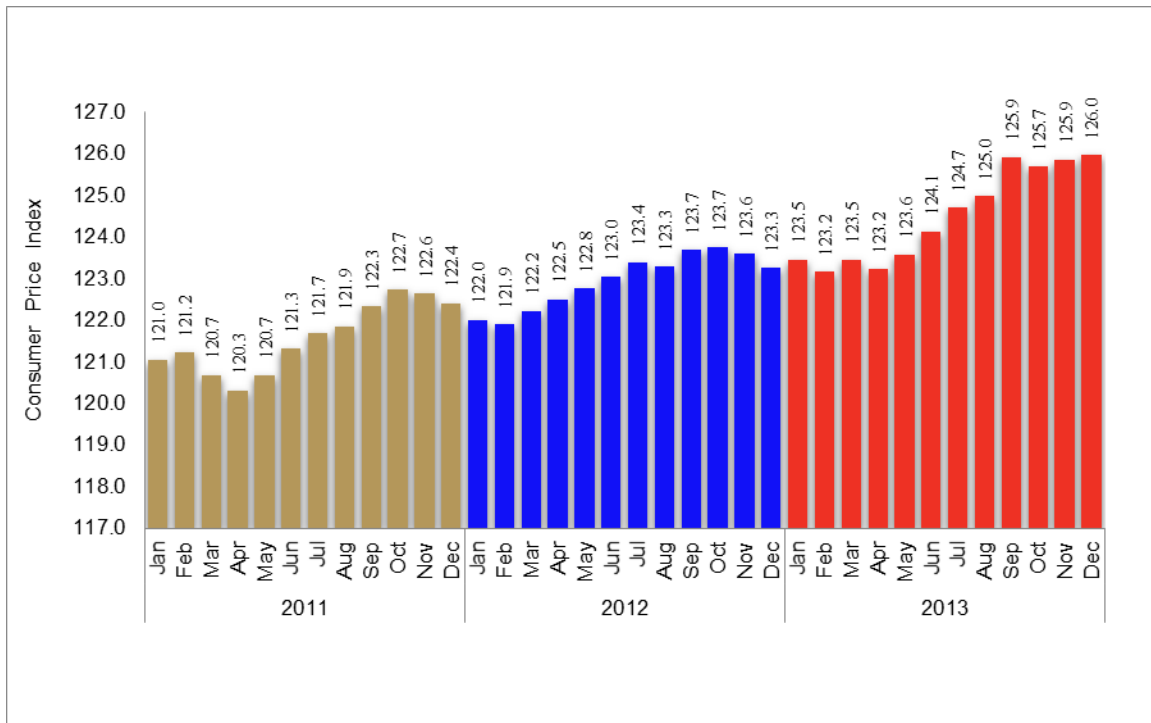
To represent all regions of the Emirate, the selected sample of items included in the Consumer Price Index basket uses actual data from the 2007/ 2008 Household Income and Expenditure Survey. The sample of outlets were selected in such a way to represent points of purchase for a large base of consumers 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 December 2013 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 annual inflation rate of consumer prices was 1.3% in 2013 compared with 2012, as shown by the increase in the CPI to 124.5 points during the twelve months of 2013, up from 122.9 points during the same period of 2012.
- The CPI increased by 2.2% in December 2013, compared with the same period of 2012, as shown by the increase in the CPI from 123.3 points in December 2012 to 126.0 points in December 2013.
- The CPI increased by 0.1% in December 2013 compared with November 2013.

Figure (1): CPI for the months of 2011, 2012, 2013



Source: Statistics Centre- Abu Dhabi

- An overall rise of 1.3% in consumer prices during the twelve months of 2013 compared with the same period in 2012, has led to an increase of 1.6% 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 1.2% for households of the top quintile and middle welfare quintile.

- The rise in consumer prices for the twelve months of 2013 compared with the same period in 2012, pushed up consumer prices for citizen and non-citizen households by 1.2%, and 1.7% for share households.

- Consumer prices for Q4 2013 compared with Q3 2013 increased by 0.5%.

- From Q4 2012 to Q4 2013, average consumer prices rose by 1.9%.

Consumer Price Index (CPI) for the Month of December, 2013 (2007=100)

A. Percentage changes in the CPI

During the twelve months of 2013, the average consumer prices rose by 1.3% compared with the same period of 2012, with the CPI for the twelve months of 2013 at 124.5 points, compared with 122.9 points for the same period of 2012. This rise in prices reflects the net change in the consumer basket prices (resulting from upward and downward movement) during the two periods compared.

Figure (2) shows the annual inflation rates for the months of 2011, 2012 and 2013. These rates reflect the price movement of goods and services during the recent years.

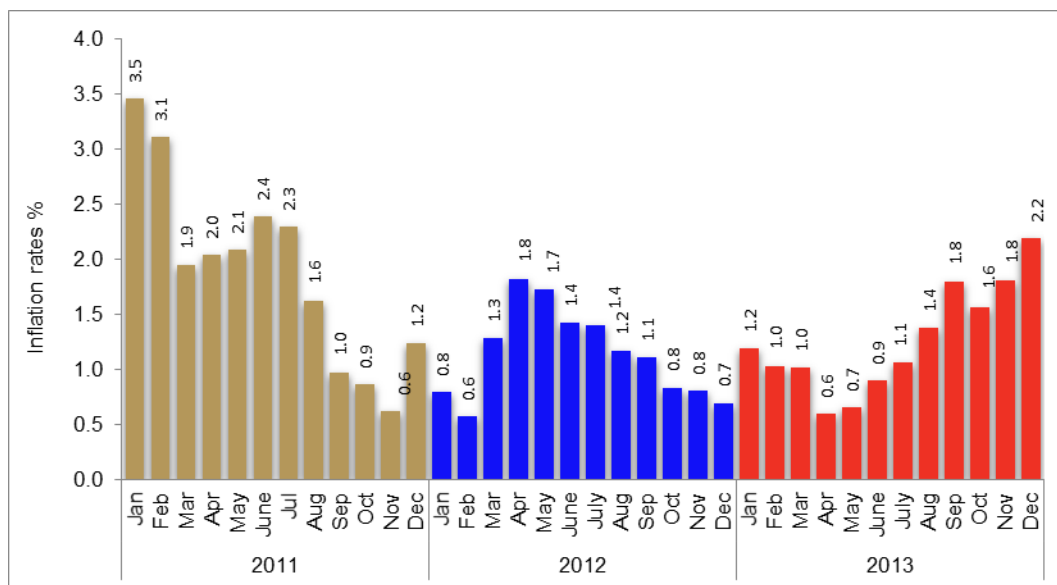
Table (1): Consumer price index

Year	Nov	Dec	Q3	Q4	Jan-Dec
CPI					
2012	123.6	123.3	123.4	123.5	122.9
2013	125.9	126.0	125.2	125.8	124.5
— % —					
Relative change	1.8	2.2	1.4	1.9	1.3

Source: Statistics Centre - Abu Dhabi

Relative change is based on the unrounded CPI

Figure (2): Annual inflation rates for the months of 2011, 2012 and 2013



Source: Statistics Centre – Abu Dhabi

B. Average CPI for the twelve months of 2013 compared with the same period of 2012

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 twelve months of 2013 compared with the same period of 2012. 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 twelve months of 2013

Main Expenditure Groups	Weight	Relative change — % —	Contribution
Food and non-alcoholic beverages	16.1	1.8	25.9
Alcoholic beverages and tobacco	0.3	7.7	1.6
Clothing and footwear	9.8	2.7	16.8
Housing, water, electricity, gas and other fuels	37.9	-0.1	-3.0
Furnishings, household equipment and routine household maintenance	4.8	2.6	10.2
Health	0.8	1.1	0.7
Transport	9.7	2.8	21.0
Communication	7.7	-0.1	-0.5
Recreation and culture	2.4	-0.1	-0.2
Education	2.6	3.3	9.1
Restaurants and hotels	3.4	4.8	15.6
Miscellaneous goods and services	4.6	0.8	2.8
Total	100	-	100

Source: Statistics Centre - Abu Dhabi

The above table shows the "Food and non-alcoholic beverages" group which accounted for the largest rise in the index during the twelve months 2013 compared with the same period of 2012, contributing 25.9% to the change. The rises in the "Food and non-alcoholic beverages" group came as a result of increases in the prices of most subgroups included in this group. The price of "Vegetables" by 9.1%, "Coffee, tea and cocoa" subgroups rose by 6.4%, "Food products n.e.c." subgroups rose by 4.2%, "Fish and seafood" by 3.7% and "Fruit" rose by 2.4%

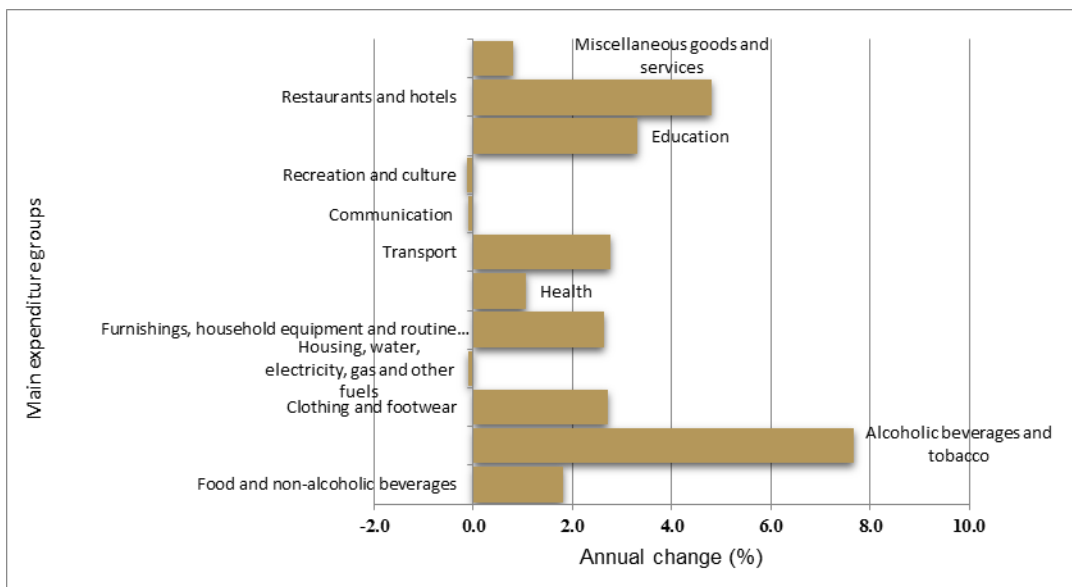
The second highest contributor to the overall increase in the CPI over the twelve months of 2013 was the "Transport" group, accounting for 21% of the increase. This resulted from an increase of 2.8% in the prices of this group.

The prices of "Clothing and footwear" rose by 2.7% during the twelve months of 2013 compared with the same period of 2012. This group contributed 16.8% of the total increase achieved by all groups.

The "Restaurants and hotels" group accounted for 15.6% of the overall increase occurring during the twelve months of 2013 compared with the same period of 2012.

The "Education" group accounted for 3.3% of the overall increase occurring during the first twelve months of 2013 compared with the same period of 2012. This group contributed 9.1% of the total increase achieved by all groups.

Figure (2): Annual change in CPI for the main groups (twelve months of 2013 compared with the same period of 2012)



Source: Statistics Centre - Abu Dhabi

C. Consumer price for the fourth quarter 2013

Table 1: Weights, relative change and contribution of expenditure groups to the overall change in CPI, Q4 2013 compared with Q4 2012.

Main Expenditure Groups	Weight	Relative change in group CPI's	Contribution to percentage point change in CPI
		— % —	
Food and non-alcoholic beverages	16.1	3.8	36.5
Alcoholic beverages and tobacco	0.3	2.7	0.4
Clothing and footwear	9.8	3.6	15.3
Housing, water, electricity, gas and other fuels	37.9	0.9	18.1
Furnishings, household equipment and routine household maintenance	4.8	2.5	6.8
Health	0.8	0.1	0.0
Transport	9.7	1.9	10.0
Communication	7.7	-0.2	-0.7
Recreation and culture	2.4	-0.7	-0.8
Education	2.6	3.9	7.3
Restaurants and hotels	3.4	3.3	7.5
Miscellaneous goods and services	4.6	-0.2	-0.5
Total	100	-	100

Source: Statistics Centre - Abu Dhabi
Relative change is based on the unrounded CPI

- The average rise in consumer prices for the fourth quarter of 2013 was 1.9%, compared with the same period of 2012.
- The "Food and non-alcoholic beverages" group accounted for 36.5% of the increase in the CPI, with prices for this group increasing by 3.8%.

- The next highest group contributor to the overall year-to-date increase in the CPI for the fourth quarter of 2013 was "Housing, water, electricity, gas and other fuels" which accounted for 18.1% of the percentage point rise in the index. This was due to increases in the prices of most of the subgroups included in this group, with prices for this group increasing by 0.9%.
- The "Clothing and footwear" group accounted for 15.3% of the increase in the CPI, with prices for this group increasing by 3.6%.
- The "Transport" group accounted for 10% of the increase in the CPI, with prices for this group increasing by 1.9%.
- The CPI for Q4 2013 compared with Q3 2013 increased by 0.5 per cent. The most significant individual increase came from prices for "Housing, water, electricity, gas and other fuels" which increased by 0.6%.

D. CPI of December 2013

1. Comparing the CPI of December 2013 with the CPI of December 2012

The average consumer prices increased by 2.2% in December 2013 compared with December 2012, with the CPI at 126.0 points in December 2013, up from 123.3 points in December 2012. This increase in prices was 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 December 2013 compared with December 2012, were the "Food and non-alcoholic beverages" with 4.6%, and "T Education" with 3.9%, "Restaurants and hotels" and "Furnishings, household equipment and routine household maintenance" group with a 3.7% increase, followed by "Clothing and footwear" with 3.3% and "Housing, water, electricity, gas and other fuels" with 1.5%.

Table (3): Main expenditure group by Weights, relative change and contribution, December 2013 compared with December 2012

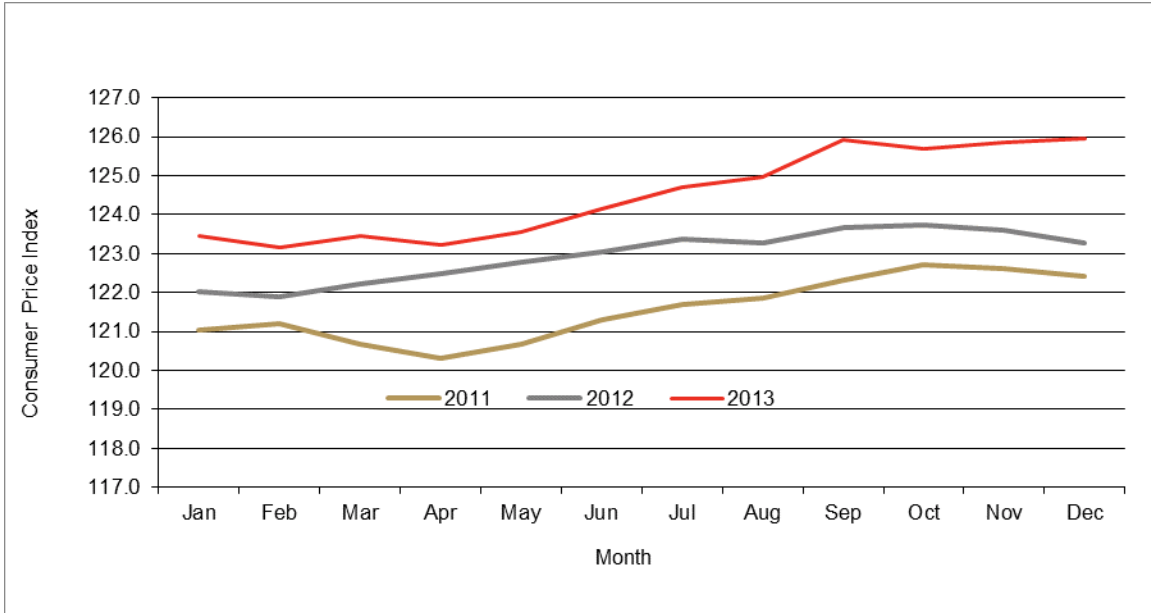
Main Expenditure Groups	Weight	Relative change	Contribution
		— % —	
Food and non-alcoholic beverages	16.1	4.6	37.2
Alcoholic beverages and tobacco	0.3	0.0	0.0
Clothing and footwear	9.8	3.3	11.8
Housing, water, electricity, gas and other fuels	37.9	1.5	26.6
Furnishings, household equipment and routine household maintenance	4.8	3.7	8.3
Health	0.8	-0.7	-0.2
Transport	9.7	1.2	5.3
Communication	7.7	-0.2	-0.6
Recreation and culture	2.4	-1.0	-1.0
Education	2.6	3.9	6.2
Restaurants and hotels	3.4	3.7	7.1
Miscellaneous goods and services	4.6	-0.3	-0.7
Total	100	-	100

Source: Statistics Centre - Abu Dhabi

2. Comparing the CPI of December 2013 with the CPI of November 2013

The average consumer prices increased by 0.1% in December 2013 compared with November 2013. This overall increase in prices between the two months reflects the net movement (increases and decreases) of consumer prices during the periods compared.

Figure (4): Consumer price index for the months of 2011, 2012 and 2013



Source: Statistics Centre - Abu Dhabi

E. CPI by household welfare level

1. Comparing the average CPI by household welfare level for the twelve months of 2013 with the same period of 2012

The rise of 1.3% in consumer prices during the twelve months of 2013 compared with the same period in 2012, resulted in an increase of 1.6% in consumer prices for households of the bottom and top welfare quintile for the same period of comparison. The corresponding rise for other welfare levels was 1.2%. Table (4) shows the average CPI values and percentage change, detailed by household welfare level for the twelve months of 2012 and 2013.

Table (4): Average CPI values by household welfare level for the twelve months of 2012 and 2013

Period	Bottom Level	Bottom-Middle Level	Middle Level	Top-Middle Level	Top Level	All households
— CPI —						
2012	123.5	124.2	123.9	123.3	121.9	122.9
2013	125.5	126.0	125.5	124.9	123.4	124.5
— % —						
Relative Change	1.6	1.4	1.2	1.2	1.2	1.3

Source: Statistics Centre - Abu Dhabi

2. Comparing the average CPI by household welfare level for December 2013 with December 2012

The rise in consumer prices in December 2013 by 2.2% compared with December 2012 showed a rise in consumer prices for households in the bottom welfare quintile by 2.6% and top welfare quintile by 2.0%, while prices increased by 2.3% households in the middle quintile.

Table (5): Average CPI values by household welfare level for the months of December 2012 and December 2013

Period	Bottom Level	Bottom-Middle Level	Middle Level	Top-Middle Level	Top Level	All households
— CPI —						
Dec-12	123.8	124.5	124.2	123.6	122.3	123.3
Dec-13	127.0	127.5	127.0	126.4	124.7	126.0
— % —						
Relative Change	2.6	2.4	2.3	2.2	2.0	2.2

Source: Statistics Centre - Abu Dhabi

3. Comparing the average CPI by household welfare level for December 2013 with November 2013

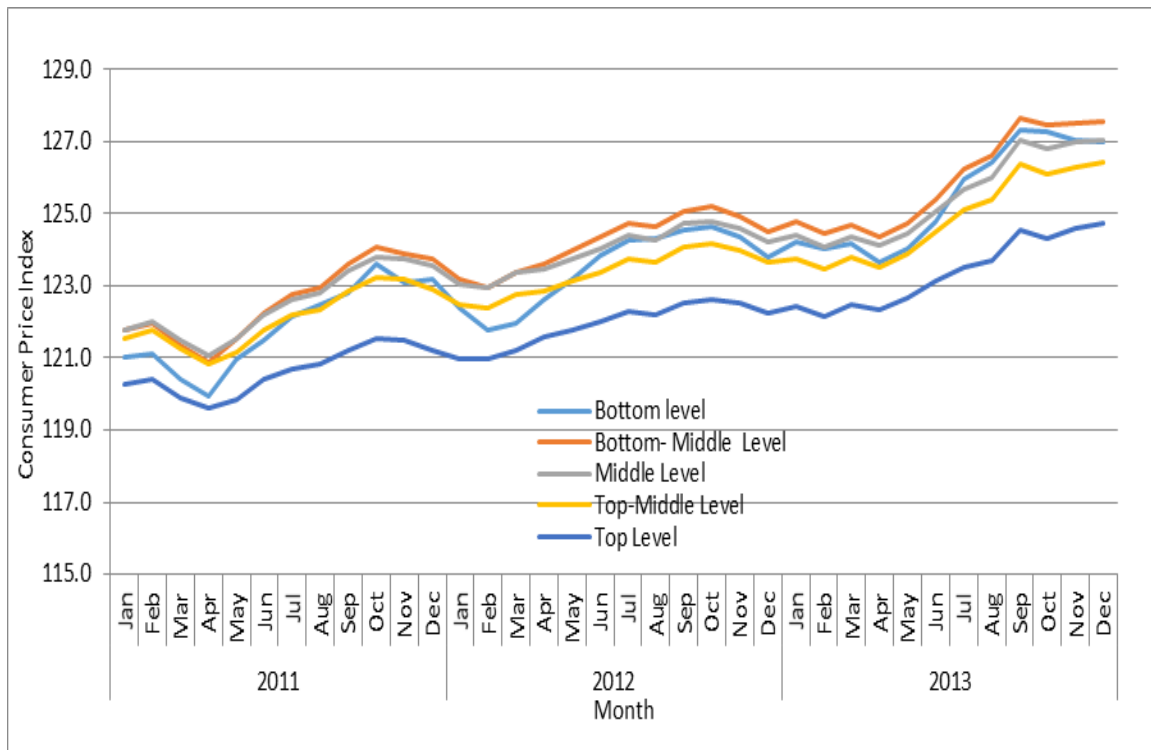
In December 2013 consumer prices increased by 0.1% compared with November 2013. This was due to an increase of 0.1% in consumer prices for households in the top welfare quintile.

Table (6): Average CPI values by household welfare level for the months of December 2013 and November 2013

Period	Bottom level	Bottom-Middle Level	Middle Level	Top-Middle Level	Top Level	All households
— CPI —						
Nov-13	127.0	127.5	127.0	126.3	124.6	125.9
Dec-13	127.0	127.5	127.0	126.4	124.7	126.0
— % —						
Relative Change	0.0	0.0	0.0	0.1	0.1	0.1

Source: Statistics Centre - Abu Dhabi

Figure (5): Monthly CPI movements by household welfare levels from January 2010 to December 2013.



Source: Statistics Centre - Abu Dhabi

F. CPI by household type

1. Comparing the average CPI by household type for the twelve months of 2013 with the same period of 2012

The 1.3% rise in consumer prices for the twelve months of 2013 compared with the same period of 2012, pushed up consumer prices for citizen and non-citizen households by 1.2%, and share households by 1.7%.

Table (7): Average CPI values for the twelve months of 2012 and 2013 by household type

Period	Citizen	Non-Citizen	Share	All households
— CPI —				
2012	122.5	123.5	123.3	122.9
2013	124.0	125.0	125.4	124.5
— % —				
Relative Change	1.2	1.2	1.7	1.3

Source: Statistics Centre - Abu Dhabi

2. Comparing the average CPI by household type for the month of December 2013 with December 2012

The 2.2% rise in consumer prices in December 2013 compared with December 2012 was due to a 2.2% rise in consumer prices for citizen households, a 2.1% rise for non-citizen households, while prices for share households increased by 2.6%.

Table (8): Average CPI values during December 2012 and December 2013 by household type

Period	Citizen	Non-Citizen	Share	All households
— CPI —				
December 2012	122.7	123.8	123.7	123.3
December 2013	125.4	126.5	127.0	126.0
— % —				
Relative Change	2.2	2.1	2.6	2.2

Source: Statistics Centre - Abu Dhabi

3. Comparing the average CPI by household type for the month of December 2013 with November 2013

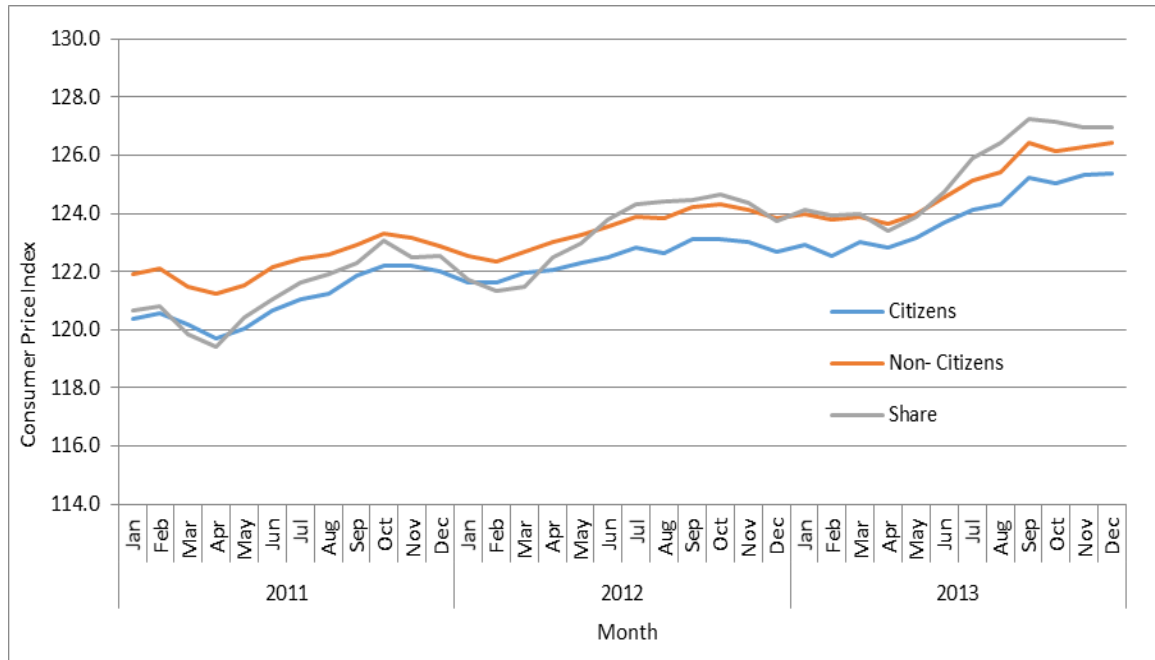
The 0.1% increase in consumer prices in December 2013 compared with November 2013 was due to a 0.1% increase in consumer prices for non-citizen during the same period.

Table (9): Average CPI values during December 2013 and November 2013 by household type

Period	Citizen	Non-Citizen	Share	All households
— CPI —				
November 2013	125.3	126.3	127.0	125.9
December 2013	125.4	126.5	127.0	126.0
— % —				
Relative Change	0.0	0.1	0.0	0.1

Source: Statistics Centre - Abu Dhabi

Figure (6): Monthly CPI movements by household type for the period January 2010 to December 2013.



Source: Statistics Centre - Abu Dhabi

Next release:

The CPI for January 2014 will be released on 10 February 2014. 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 Income and Expenditure 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 Income and Expenditure 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 importance¹ 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.

¹ 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

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
	Total	100.0
1	Food and non-alcoholic beverages	16.1
2	Alcoholic beverages and tobacco	0.3
3	Clothing and footwear	9.8
4	Housing, water, electricity, gas and other fuels	37.9
5	Furnishings, household equipment and routine household maintenance	4.8
6	Health	0.8
7	Transport	9.7
8	Communication	7.7
9	Recreation and culture	2.4
10	Education	2.6
11	Restaurants and hotels	3.4
12	Miscellaneous goods and services	4.6

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.

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 is to collect prices from the emirate of Abu Dhabi, including Abu Dhabi, Al Ain and Gharbia regions.

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 ten 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.