

# IMPROVEMENT OF OMAN CONSUMER PRICE INDEX

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## **SEASONAL PRODUCTS TURKISH APPLICATION**

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# TOPICS

1. Definitions
2. Scope
3. Counter/all seasonal imputation
4. Class confined seasonal weights
5. Scope (product groups)
6. Comparability



## Definition of “Seasonal Products”

“Seasonal Products” mean those goods and services that are not available for purchase, or purchased in small or negligible volumes, for certain months in a typical annual cyclical pattern. The in-season period is meant to cover at least one month.

## Definitions

“An elementary product group” means a set of product-offers that are sampled in order to represent one or more consumption segments in the HICP.

“Product-offer” means a specified good or service that is offered for purchase at a stated price, in a specified outlet or by a specified provider, under specific terms of supply, and thus defines a unique entity at any one time.

## Legal Framework

COMMISSION REGULATION (EC) No 330/2009 of 22 April 2009 laying down detailed rules for the Implementation of Council Regulation (EC) No 2494/95 as regards minimum standards for the treatment of seasonal products in the Harmonized Indices Of Consumer Prices (HICP).

# Weighting

Article 2 of COMMISSION REGULATION (EC) No 2454/97 defines the “weighting reference period” of the HICP as the 12-month period of consumption or expenditure from which the weightings are estimated for the compilation of the latest HICP index figure;

Article 3 of COMMISSION REGULATION (EC) No 2454/97 defines that the member states should each month produce HICPs using weightings which reflect consumers’ expenditure patterns in a weighting reference period.

## Prices

Article 6 of COMMISSION REGULATION (EC) No 1749/96 stipulates: where, exceptionally, the target sample requires observations less frequently than monthly, estimated prices shall be used for those months where observed prices are not required.

## Main Provisions

Weightings at the level of COICOP/HICP divisions, groups and classes are required not to vary between months during the year. Nevertheless, weightings at a more detailed level of COICOP/HICP might be allowed to reflect a seasonally varying consumption pattern.



## Scope

The minimum standards shall apply to seasonal products within the following COICOP/HICP classes and groups:

- 01.1.6.1 Fresh fruits
- 01.1.7.1 Fresh vegetables
- 03.1.2 Garments (not baby-garments)
- 03.2.1 Footwear

Where appropriate, the minimum standards shall serve as a guidance also in relation to seasonal products within COICOP/HICP classes and groups other than listed above.

# Implementation of Commission Regulation

Commission Regulation (EC) No 330/2009 on the treatment of seasonal products

Seasonal products' means; goods and services that are available for purchase in some period of the year but are not available for purchase for certain periods in a typical annual cyclical.

Two methods:

- Strict annual weights method: Prices in out-of-season months are estimated
- Class-confined seasonal weights method: Weights are put to zero in out-of-season months and so prices for the products are not needed.

# Implementation of Commission Regulation

Strict annual weights method: Two estimation methods ensure a sufficient level of comparability

Counter-seasonal estimation:

- Recommended when the year clearly has two seasons where summer products replace winter products and vice versa and where in each month of the year there are sufficient seasonal products available.
- Use only the prices of seasonal products that are in-season to estimate the index for out-of-season products and disregard the products that are available all the year

# Implementation of Commission Regulation

## All-seasonal estimation

- Recommended when the seasonal pattern is not so clearly dichotomous or when the number of available seasonal products is small in part of the year and so counter-seasonal estimation is not feasible.

# Implementation of Commission Regulation

## All-seasonal estimation

- In the all-seasonal estimation method the index of out-of-season products is estimated using the price developments of all available products in the COICOP class, group or on a more detailed level such as for strata. For example, if all-seasonal estimation method is used in the case of summer fruit the price index of summer fruit during the winter months is estimated using data for all fruits available in winter

# Implementation of Commission Regulation

## Class-confined seasonal weights method

- The weights are variable with the aim to allow for zero weights for products that are out-of-season.
- When weights are zero no price data are needed for the index calculation.
- The weights of the in-season products are adjusted to ensure that the total weight of the COICOP class or group or on a more detailed level such as strata is constant through the year.

# Seasonal Products in current Turkish CPI

Consumer Price Index in Turkey currently produced with variable weight structure. In Turkish CPI, products covered under the fresh fruit, vegetables, clothing and footwear are the seasonal products. For these products, the weights are variable during the in-season period and zero weights for the products that are out-of-season.

## Seasonal Products in current Turkish CPI

The source for the seasonal products is the HBS results and the weights are derived properly using the HBS data.

According to the HBS, first the months are decided as the in season period and then the weights for the products are given.



## Seasonal Products in current Turkish CPI

	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012	June 2012	July 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012	Dec 2012
Oranges	28.7	35.9	35.3	24.4	10.1					2.1	9.3	21.1
Grapes							8.2	18.7	23.9	21.7		
Pears	2.1	2.6	2.7				2.3	4.5	7.1	7.2	4.5	2.3
Quinces	1.7	1.7	1.2							1.2	2.5	2.5
Strawberries				15.2	28.5	8.0						
Apples	26.3	30.5	33.6	33.7	31.0	6.9	3.9	4.4	9.0	18.7	23.6	22.4
Plums						13.3	4.6	3.9	3.9			
Grapefruit	1.2	1.2	1.2	0.7	0.6						0.6	0.5
Water melon						28.2	34.8	25.8	13.8			
Melon							10.7	17.6	18.6	8.1		
Apricots						9.5	6.0	0.9				
Cherries						19.3	12.7	3.3				
Lemons	5.6	6.0	6.9	7.3	8.2	2.7	2.2	2.9	5.2	5.8	6.2	5.1
Tangerines	18.0	5.5	1.2							15.7	32.5	29.0
Bananas	14.2	15.1	17.8	18.6	21.8	4.8	3.4	3.9	7.4	11.6	13.6	13.4
Pomegranate	2.1	1.5								7.9	7.0	3.7
Peaches						7.5	11.3	14.0	10.9			

## Class-Confined Application

For fresh fruit the class-confined application, the periods of the classes;

- Period 1 : January-February-November-December
- Period 2 : March
- Period 3 : April-May
- Period 4 : June
- Period 5 : July-August
- Period 6 : September
- Period 7 : October

## Class-Confined Application

For fresh vegetables the class-confined application, the periods of the classes;

- Period 1 : January-February-March-  
October-November-December
- Period 2 : April-May-June
- Period 3 : July-August-September

## Class-Confined Application

For man and woman garments the class-confined application, the periods of the classes;

- Period 1 : January-February-March-  
October-November-December
- Period 2 : April-September
- Period 3 : May-June-July-August

## Class-Confined Application

For children garments the class-confined application, the periods of the classes;

- Period 1 : January-February-March-December
- Period 2 : April
- Period 3 : May-June-July
- Period 4 : August
- Period 5 : September
- Period 6 : October-November

## Class-Confined Application

For man-woman-children footwear the class-confined application, the periods of the classes;

- Period 1 : January-February-March- April-September-October-November-December
- Period 2 : May-June-July-August

# Class-Confined Application

	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012	June 2012	July 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012	Dec 2012
Oranges	22.0	22.0	28.1	21.1	21.1					9.3	22.0	22.0
Grapes							12.0	12.0	17.6	16.4		
Pears	4.1	4.1	4.2				3.8	3.8	5.8	5.8	4.1	4.1
Quinces	1.8	1.8	1.3							1.2	1.8	1.8
Strawberries				14.2	14.2	6.5						
Apples	27.0	27.0	31.5	33.6	33.6	16.8	13.0	13.0	16.3	20.9	27.0	27.0
Plums						8.9	4.0	4.0	4.0			
Grapefruit	0.7	0.7	0.9	0.7	0.7						0.7	0.7
Water melon						25.3	24.3	24.3	16.8			
Melon							10.8	10.8	13.4	8.0		
Apricots						6.2	2.9	2.9				
Cherries						12.6	6.4	6.4				
Lemons	7.1	7.1	7.8	9.1	9.1	5.3	4.5	4.5	6.1	6.3	7.1	7.1
Tangerines	17.7	17.7	7.9							13.6	17.7	17.7
Bananas	16.2	16.2	18.4	21.4	21.4	11.0	8.9	8.9	11.3	13.3	16.2	16.2
Pomegranate	3.4	3.4								5.3	3.4	3.4
Peaches						7.5	9.4	9.4	8.8			

## Strict Annual Weight Application (All Season Estimation)

	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	June 2011	July 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011
Oranges	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Grapes	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Pears	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Quinces	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Strawberries	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Apples	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9
Plums	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Grapefruit	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Water melon	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Melon	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Apricots	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Cherries	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Lemons	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Tangarines	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
Bananas	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
Pomegranate	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Peaches	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0



# Strict Annual Weight Application (All Season Estimation)

		Jan	Feb	Mar	Apr		Jan	Feb	Mar	Apr		Jan	Feb	Mar	Apr	Dec 2011	
Oranges	Weight	14.0	14.0	14.0	14.0	Oranges	Index	89.8	95.4	103	117	Oranges	1257	1336	1442	1634	1.5
Grapes		0.0	0.0	0.0	0.0	Grapes		0	0	0	0	Grapes	0	0	0	0	
Pears		0.0	0.0	0.0	0.0	Pears		109	115	115	115	Pears	3	3	3	3	2.8
Quinces						Quinces		129	129	129	129	Quinces	96	96	96	96	2.1
Strawberries						Strawberries		0	0	0	0	Strawberries	0	0	0	0	
Apples		20.9	20.9	20.9	20.9	Apples		100	103	112	124	Apples	2100	2157	2339	2598	2.0
Plums		0.0	0.0	0.0	0.0	Plums		0	0	0	0	Plums	0	0	0	0	
Grapefruit						Grapefruit		0	0	0	0	Grapefruit	0	0	0	0	1.4
Water melon						Water melon		0	0	0	0	Water melon	0	0	0	0	
Melon						Melon		0	0	0	0	Melon	0	0	0	0	
Apricots						Apricots		0	0	0	0	Apricots	0	0	0	0	
Cherries		0.0	0.0	0.0	0.0	Cherries		0	0	0	0	Cherries	0	0	0	0	
Lemons		5.2	5.2	5.2	5.2	Lemons		98	96.4	93.2	97	Lemons	510	501	484	505	
Tangarines		8.1	8.1	8.1	0.0	Tangarines		119	163	194	0	Tangarines	960	1314	1561	0	1.6
Bananas		11.7	11.7	11.7	11.7	Bananas		102	111	114	121	Bananas	1190	1299	1329	1413	1.6
Pomegranate		1.6	1.6	0.0	0.0	Pomegranate		103	108	0	0	Pomegrana	167	176	0	0	3.4
Peaches		0.0	0.0	0.0	0.0	Peaches		0	0	0	0	Peaches	0	0	0	0	2.1
		65.9	65.9	64.3	56.3								6645	7275	7701	6697	
								3.0	2.3								

**Jan (I)**  
=6645/65.9=101

**Feb (I)**  
=7275/65.9=110

**Mar (I)**  
=7701/64.3=120

**Apr (I)**  
=7697/56.3=119

**Jan (%)**  
=101/100\*100-100  
=%0,8

**Feb (%)**  
=110/101\*100-100  
=%9,48

**Mar (%)**  
=120/110\*100-100  
=%8,54

**Apr (%)**  
=119/120\*100-100  
=%-0,6

# Strict Annual Weight Application (All Season Estimation)

	Jan 2011	Feb 2011	Mar 2011	Apr 2011	May 2011	June 2011	July 2011	Aug 2011	Sep 2011	Oct 2011	Nov 2011	Dec 2011
Oranges	1.3	1.3	1.5	1.7	2.1	1.6	1.5	1.4	1.2	2.5	2.0	1.5
Grapes	2.0	2.2	2.4	2.4	3.2	3.0	2.4	2.3	2.8	2.8	2.2	2.2
Pears	3.0	3.2	3.4	2.7	3.7	3.5	3.4	2.9	2.9	2.9	2.9	2.9
Quinces	1.9	2.2	2.9	2.1	2.9	2.7	2.4	2.2	2.2	2.2	2.2	2.2
Strawberries	2.1	2.3	2.5	3.1	3.2	3.1	3.6	3.2	2.9	3.2	3.1	2.9
Apples	1.7	1.7	1.9	2.1	2.4	3.1	3.0	3.2	3.2	3.2	3.1	2.9
Plums	1.8	2.0	2.2	2.2	4.5	2.9	2.4	3.2	3.2	3.2	3.1	2.9
Grapefruit	1.2	1.2	1.2	1.3	1.6	1.3	1.2	3.2	3.2	3.2	3.1	2.9
Water melon	0.6	0.7	0.8	0.8	1.0	0.9	0.5	0.7	0.5	0.7	0.6	0.6
Melon	1.0	1.1	1.2	1.2	1.7	1.5	1.2	1.2	1.0	1.0	1.1	1.0
Apricots	2.1	2.3	2.5	2.5	3.4	2.7	2.8	2.8	2.4	2.7	2.6	2.5
Cherries	2.9	3.2	3.5	3.5	14.6	4.7	4.1	7.8	6.9	7.7	7.3	7.0
Lemons	1.5	1.5	1.5	1.5	1.8	1.9	2.2	2.6	2.7	2.0	1.8	1.6
Tangarines	1.5	2.1	2.4	1.7	2.3	2.2	1.9	1.8	1.6	1.8	1.7	1.6
Bananas	3.1	3.4	3.5	3.7	3.8	3.7	3.3	3.3	3.3	3.4	3.4	3.4
Pomegranate	2.4	2.5	2.3	2.2	3.0	2.8	2.5	2.4	2.1	1.9	1.8	2.1
Peaches	2.0	2.2	2.4	2.4	3.3	3.0	2.3	2.3	2.1	2.4	2.3	2.2

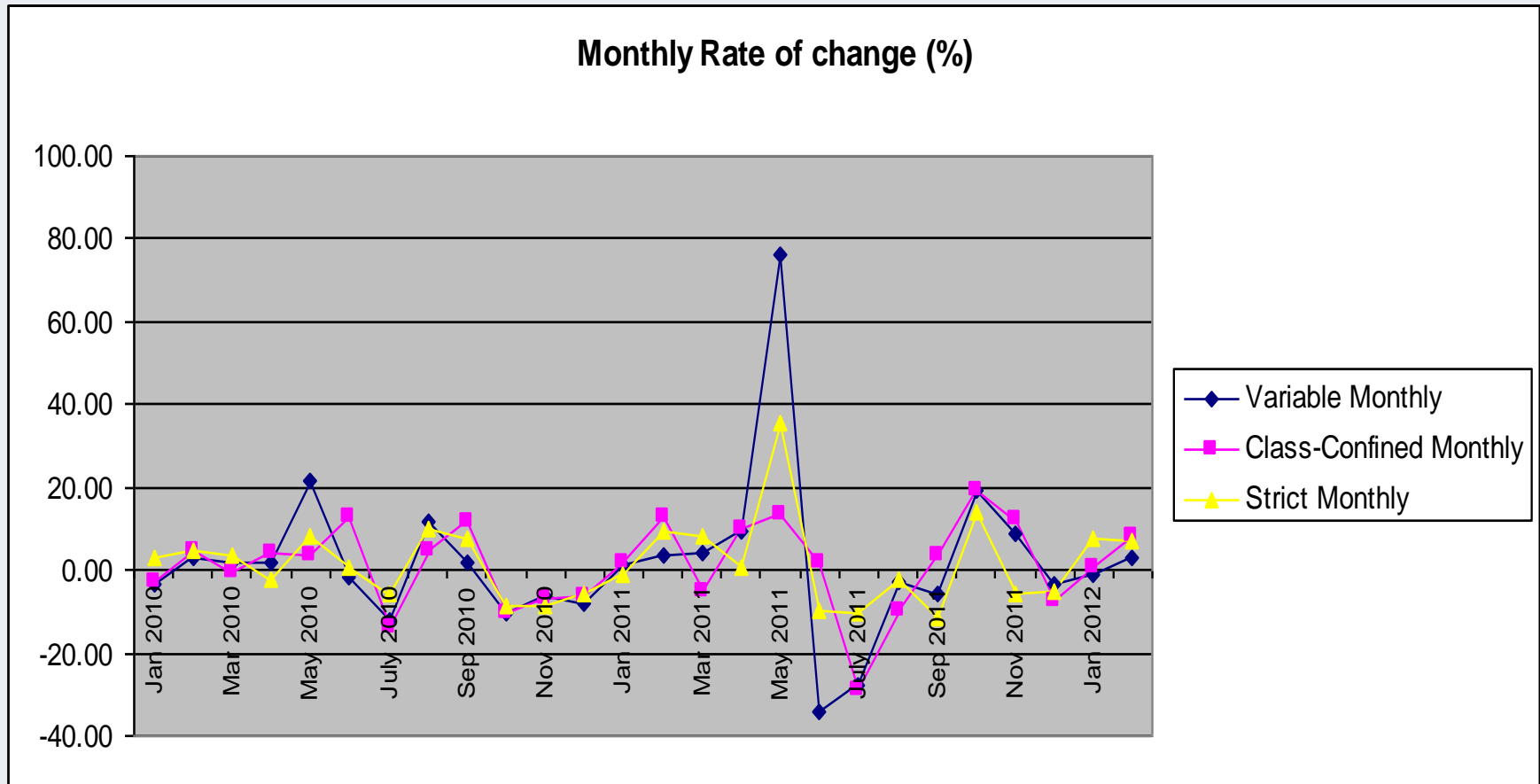
$$2.9 = 3.2(1 + (-12\%))$$

$$3.2 = \frac{3.6 + 3.1 + 3.2 + 3.1}{4}$$

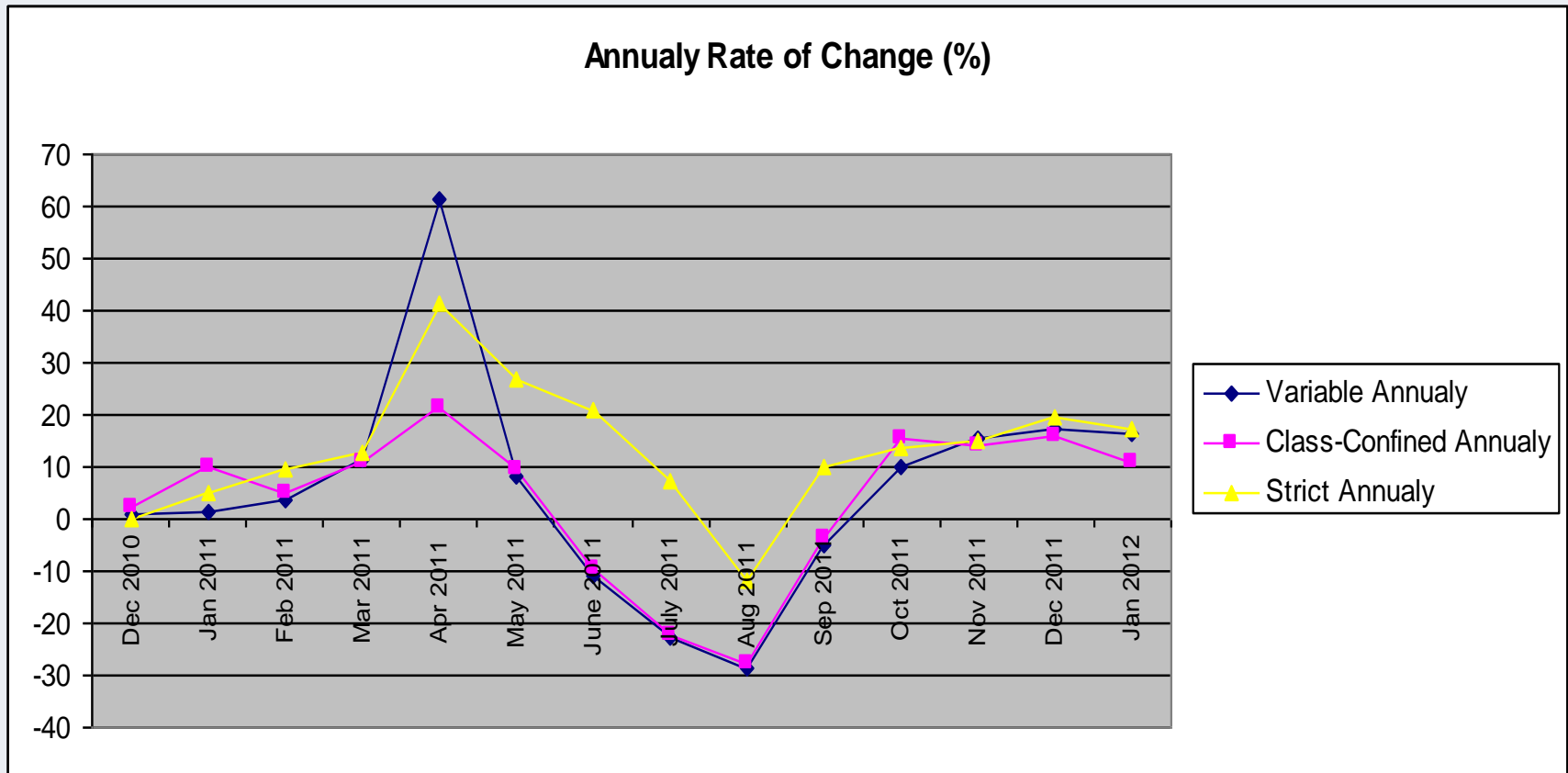
# Number of Seasonal Products in Turkish CPI

01.161	Fresh Fruit	17
01.171	Fresh Vegetables	26
03.121	Men's Clothing	24
03.122	Women's Clothing	24
03.123	Children's Clothing	21
03.2	Footwear	13

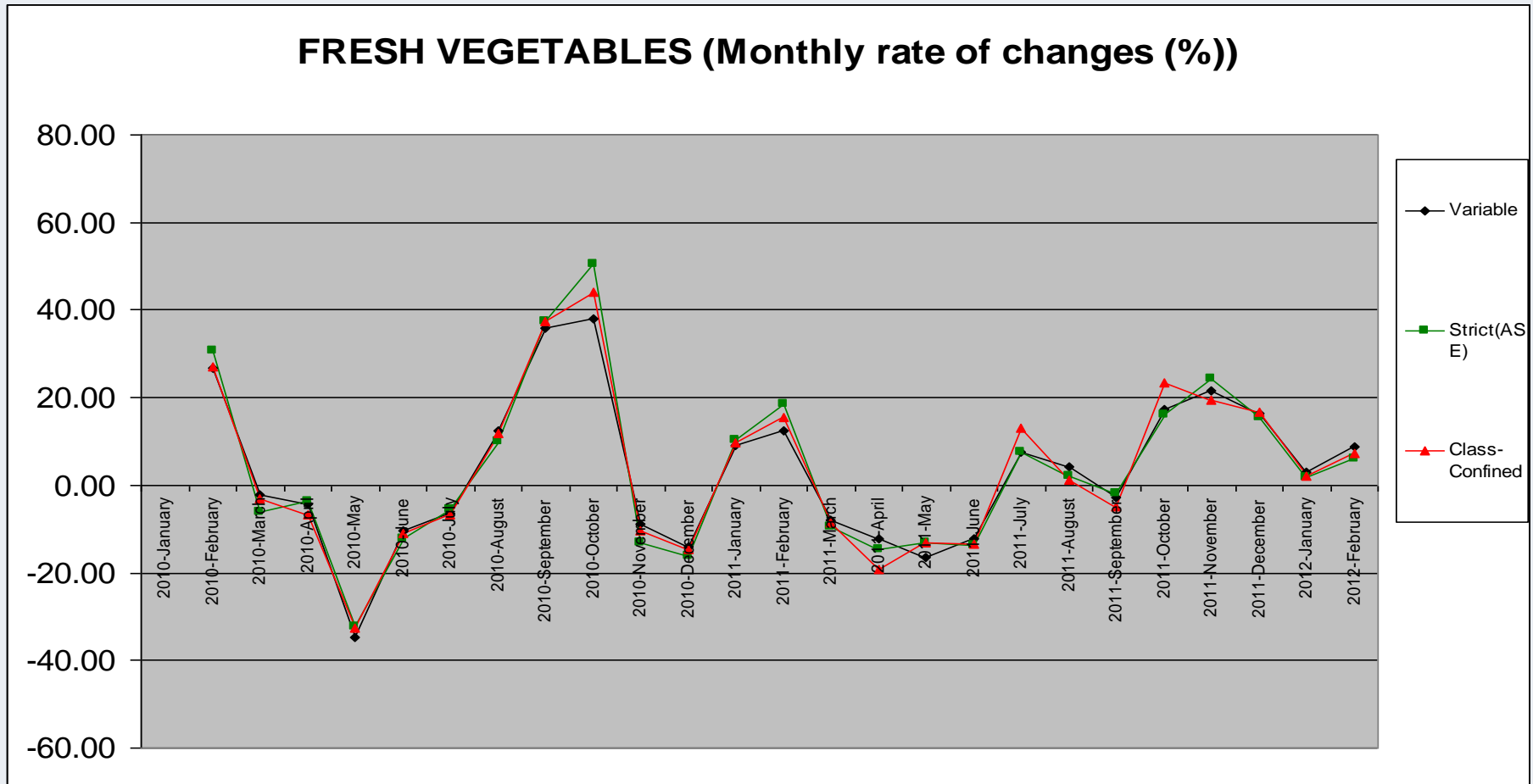
# Monthly Rate of Change (%) in Fresh Fruit



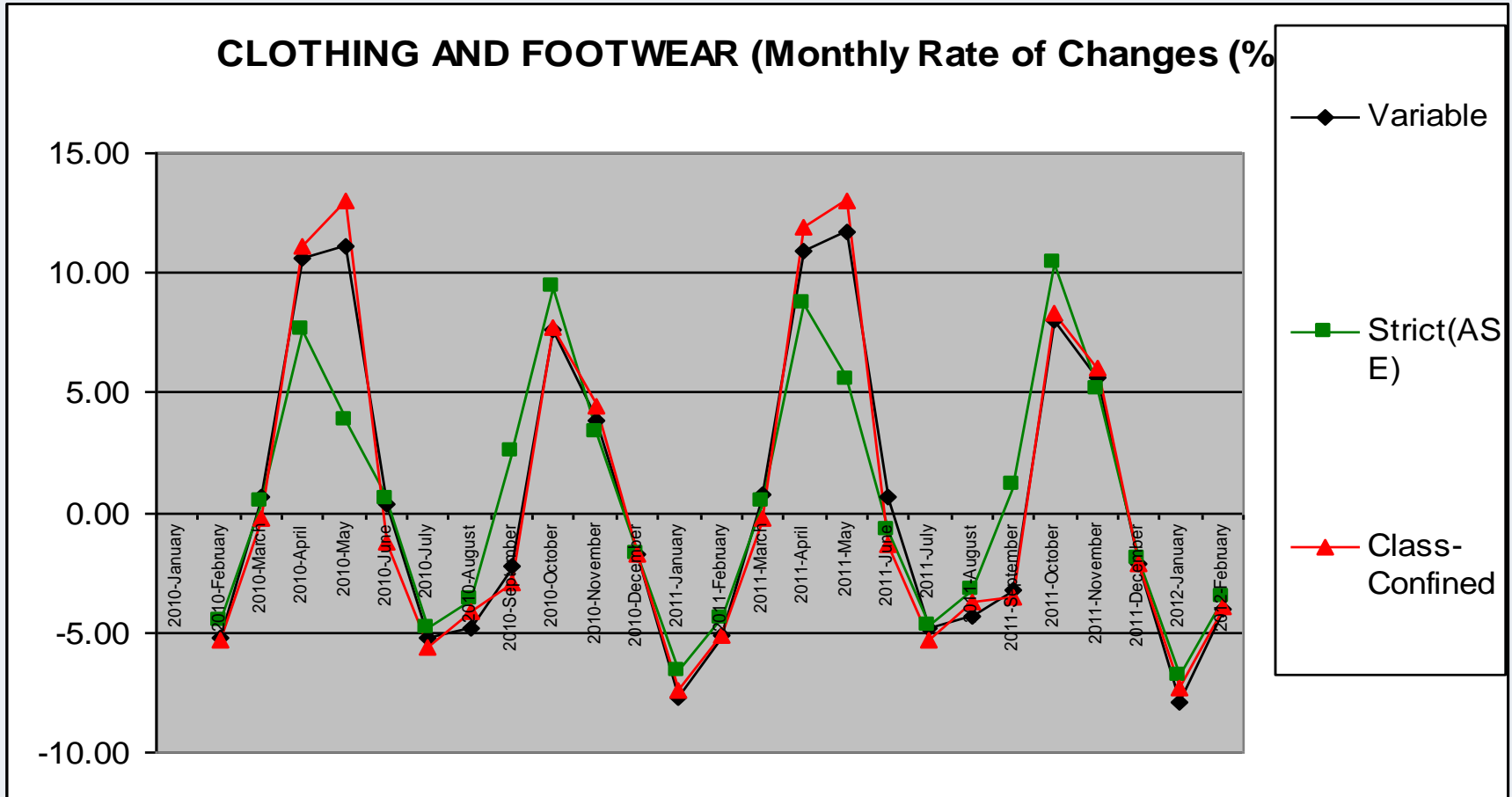
# Annual Rate of Change (%) in Fresh Fruit



# Monthly Rate of Change (%) in Fresh Vegetables



# Monthly Rate of Change (%) in Clothing and Footwear



# Implementation Plan

- Studying of COMMISSION REGULATION (EC) No 330/2009 and guidelines for measuring price indices for seasonal products,
- Formation of a list of seasonal products, (Level of purchased volumes in HBA, number of observed prices)
- Determination of in-season and out-of season periods for seasonal products,
- Decision concerning a typical price for the first out-of-season month



# Implementation Plan

- Decision concerning a method to be used for the estimation of price from the second out-of-season month each product
- In the first put-of-season month, the estimated price is equal to the average price in the previous in-season period
- From the second out-of-season month, the estimated price index for out-of-season products will be used.
- Preparation of software for routine price index calculation,

# Implementation Plan

- Testing of the software, calculation of experimental price indices applying all methods for price estimation,
- Analysis of the results,
- Calculation of CPI according to minimum standards laid down in COMMISSION REGULATION (EC) no 330/2009,
- Documentation of the procedure for the production of price indices for seasonal products,

*Thank you very much.....*

