

**Meeting of the Group of Experts on Consumer Price Indices  
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Workshop 7 - Seasonal products  
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**Recompiling 2010 data and the measure of impact of  
Regulation 330/2009 on Italian HICP**

**What is the “typical price observed” to estimate the price of  
first out of season month**

**Federico Polidoro, National Institute of Statistics of Italy  
([polidoro@istat.it](mailto:polidoro@istat.it))**

# Outline of the presentation

- 1. European Regulation**
- 2. European Regulation in Italian HICP**
- 3. Impact of EU Regulation on Italian HICP**
- 4. What is a typical price for the first out of season month**

# European Regulation

## The context

Before the adoption of the regulation different practices for the treatment of seasonal products in the Member States

The risky consequences of the different practices in estimating inflation rates at European level, in particular in the short-term for the product groups directly concerned.

## The new standards

Commission Regulation (EC) No 330/2009 of 22 April 2009 establishes minimum standards for the treatment of seasonal products in order to improve the comparability, reliability and relevance of the Harmonised Indices of Consumer Prices (HICPs).

This Regulation took effect in all Member States with the index of January 2011 (art. 6)

# European Regulation

**Seasonal products:** those goods and services that are available for purchase in some period of the year but are not available for purchase, or purchased in small or negligible volumes, for certain periods in a typical annual cyclical pattern.

Typically, these products can be found in the COICOP classes: **fish, fruit, vegetables, clothing and footwear.**

(Where deemed appropriate, the standards also serve as guidance for seasonal products in other COICOP classes or groups)

In any given month, seasonal products shall be deemed to be either in-season or out-of-season. In-season periods may vary from one year to another (art. 4)

According to Article 6 of Regulation (EC) No 1749/96 where target samples do not require monthly observation of actual prices throughout the year estimated prices should be used instead.

# European Regulation

Regulation 330/2009 allows for the application of two calculation methods:

- *class-confined seasonal weights method*
- *strict annual weights method*

Empirical investigations have shown that the two methods can be expected to deliver comparable results at the level of the all items HICP.

## **Class-confined seasonal weights method**

The weights are variable with the aim to allow for zero weights for products that are out-of-season (and for which prices cannot be observed). 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.

## **Strict annual weights method**

It means a price index using weightings that do not differ between months within the same year at all levels of index calculation.

# European Regulation

The regulation provides standards for the estimation methods of prices in out-of-season months. It provides two different methods:

- counter-seasonal estimation
- all seasonal estimation

In the first month of the out-of-season period, the estimated price is equal to a **typical** price observed in the previous in-season period;

From the second month, the estimated price is equal to the estimated price for the preceding month, adjusted by the change in observed prices on average:

over all seasonal products that are in-season  
in the same subdivision of COICOP/HICP



counter- seasonal  
estimation

over all available products  
in the same subdivision of COICOP/HICP



all-seasonal  
estimation

# European Regulation

**Counter-seasonal estimation** is 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 to base the estimation procedure on.

**All-seasonal estimation** is recommended when the seasonal pattern is not so clearly dichotomous or when the number of available seasonal products is small in parts of the year and so counter-seasonal estimation is not feasible.

# European Regulation in Italian HICP

- ✓ Article 3 of EC Regulation is applied to the COICOP/IPCA groups and classes of products Fish, Fruit, Vegetables, Clothing and Footwear. In Italy, the **fresh fish group** of products is an exception: for the time being, according to the EC Regulation, quantitative evidences **do not show seasonal behaviour** in the products belonging to this group;
- ✓ Istat has introduced, at national level, a **calendar** displaying, for the entire year, for any month, when a seasonal product is in-season, and consequently its data have to be collected, or it is out-of-season, and consequently its data have not to be collected;
- ✓ IPCA, NIC and FOI indices are **strict annual weights indices**
- ✓ the reasons of **not choosing class-confined seasonal weights** method due to the constraints in the matrix of each group weights (group weights constant each month, different months – same products – same weights, constant ratio between the weights of couple of products);
- ✓ **Counter seasonal approach** to estimate out of season products



# European Regulation in Italian HICP

- for clothing and footwear in the first month of the out-of-season period, the estimated price is equal to the last full purchase price observed (without taking into account temporary reduction of prices), and, from the second month, the estimated price is equal to the estimated price for the preceding month, adjusted by the change in observed prices on average over all seasonal products that are in-season in the same segment of consumption/sub-class/class/group
- for fresh fruit and fresh vegetables starting from the first month of the out of season period, the estimated price is equal to the price for the preceding month, adjusted by the change in observed prices on average over all seasonal products that are in-season in the same segment of consumption/sub-class

# Impact of EU Regulation on Italian HICP

Article 6 of Regulation 1921/2001 about revision of HICP establishes that “changes in definitions, methods, or practices resulting from the HICP regulatory framework shall take effect with the index for January each year in all Member States concerned;

3. the impact of any such changes shall be assessed for the 12 months starting with the index for January in which the changes take effect;

4. if the changes are likely to affect the average annual rate of change of the all-items index over the twelve month period following the change by at least one tenth of a percentage point then the impact on the all-items index shall be estimated for each of the 12 months;

5. where in addition any COICOP/HICP division, group or class index is likely to be affected respectively by at least three, four or five tenths of a percentage point calculated as in Article 6(4), the impact on the index series concerned shall be estimated for each of the 12 months”

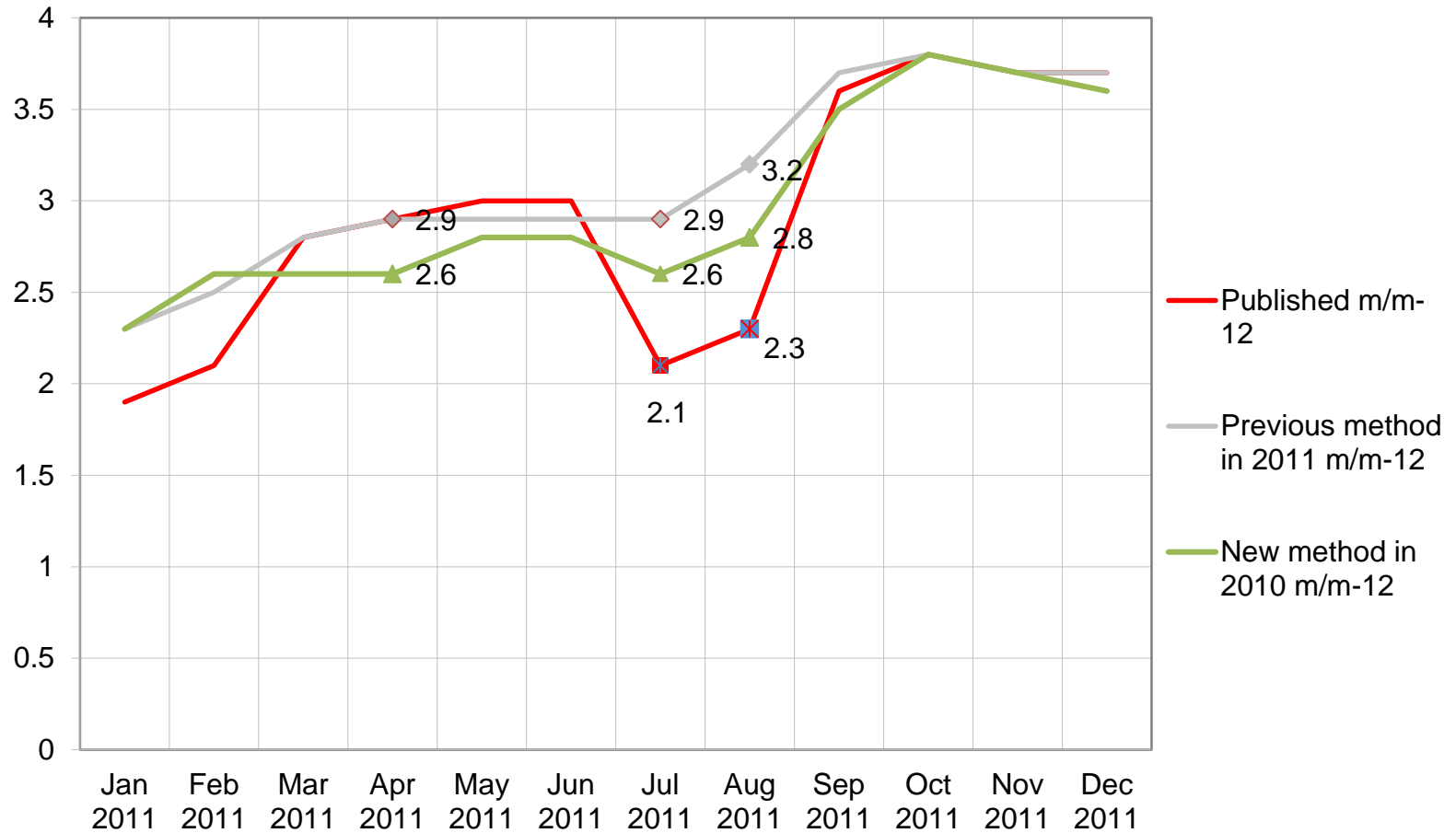
# Impact of EU Regulation on Italian HICP

- ✓ In 2011 the impact of EU Regulation 330/2009 was estimated recompiling monthly 2011 HICPs for food and non alcoholic beverages, for clothing and footwear and for the general index, adopting the old approach to the treatment of seasonal products and then calculating the annual rates of change between 2011 and 2010 “old method”
- ✓ More complicate to estimate the impact recompiling 2010 HICPs for food and non alcoholic beverages, for clothing and footwear and for the general index, for the depth of the changes coming from the implementation of the Regulation
- ✓ In the last few month this recompilation was carried out and the annual rates of change between 2011 and 2010 (recompiled with the “new method”) have been calculated

# Impact of EU Regulation on Italian HICP

Harmonized Index of Consumer Prices (base 2005 = 100). COICOP breakdown: 00 - **OVERALL** HICP

Percentage changes on the same month of the previous year



# Impact of EU Regulation on Italian HICP

Harmonized Index of Consumer Prices (base 2005 = 100). COICOP breakdown: 00 - **OVERALL HICP**, 01 - **FOOD AND NON-ALCOHOLIC BEVERAGES**, 03 **CLOTHING AND FOOTWEAR DIVISION**

Percentage changes on annual basis

	Published y/y-1 (A)	Previous method in 2011 m/m-12 (B)	New method in 2010 m/m-12 (C)	Differences (A-B)	Differences (A- C)
Jan 2011	1.9	2.3	2.3	-0.4	-0.4
Feb 2011	2.1	2.5	2.6	-0.4	-0.5
Mar 2011	2.8	2.8	2.6	0	0.2
Apr 2011	2.9	2.9	2.6	0	0.3
May 2011	3	2.9	2.8	0.1	0.2
Jun 2011	3	2.9	2.8	0.1	0.2
Jul 2011	2.1	2.9	2.6	-0.8	-0.5
Aug 2011	2.3	3.2	2.8	-0.9	-0.5
Sep 2011	3.6	3.7	3.5	-0.1	0.1
Oct 2011	3.8	3.8	3.8	0	0
Nov 2011	3.7	3.7	3.7	0	0
Dec 2011	3.7	3.7	3.6	0	0.1
	Published 2011/2010 (A)	Previous method in 2011 2011/2010 (B)	New method in 2010 2011/2010 (C)	Differences (A-B)	Differences (A- C)
2011/2010	2.9	3.1	3	-0.2	-0.1
2011/2010 COICOP 01	2.6	2.7	1.9	-0.1	+0.7
2011/2010 COICOP 03	-0.4	1.8	1.4	-2.2	-1.8

# What is a typical price for the first out of season month

For both counter seasonal and all seasonal estimation of the unavailable price for the first month when a seasonal product is out of season a «typical price» is suggested

To reply to the question of what is the best choice concerning the “typical price”, it seems to be correct to ask what are the expected properties of a typical price in the first of an out of season product

A simulation has been carried out with some artificial data sets that represent three different hypothesis in a case when there are only two products belonging to same COICOP aggregate and showing symmetric seasonality:

- a) Seasonal pattern is stable (the same prices across the years)
- b) Seasonal pattern variable (price descending across the years)
- c) Seasonal pattern variable (price increasing across the years)

# What is a typical price for the first out of season month

What are the expected or desired properties of the “typical price” in this case study (taken for grant that from the second month ahead the estimation rules established by Regulation 330/2009 work) ?

It was assumed as reference indicator the average annual rate of change

a) Seasonal pattern is stable (the same prices across the years).

Annual rate of change of both the products equal to 0

b) Seasonal pattern variable (price descending across the years)

Annual rates of change of the two products are the same (negative)

c) Seasonal pattern variable (price increasing across the years)

Annual rates of change of the two products are the same (positive)

# What is a typical price for the first out of season month

Three different possible “typical prices” have been evaluated: i) carrying forward the last observed (or estimated price), ii) arithmetic mean of the prices observed when the product was in season, iii) imputation of the first out of season price adjusting the last observed or estimated price by the rate of change of the price of the in season product

a) Seasonal pattern is stable (the same prices across the years).

Carry forward or imputation

b) Seasonal pattern variable (price descending across the years)

Imputation

c) Seasonal pattern variable (price increasing across the years)

Imputation



**What is a typical price for the first out of season month**

**Thank you for the attention**