



CROATIAN BUREAU OF STATISTICS

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Poster Session: Impact of Seasonal Character of Services on Price Index Calculation in Travel agencies, tour operator reservation service and related activities

The Survey on Travel agencies, tour operator reservation service and related activities was developed within a project and conducted via a web application based on an existing application. We had started with a pilot survey in the fourth quarter of 2015 which means that we covered three quarters so far. It is still a pilot survey and not yet disseminated.

A sample for the pilot survey was created as a cut-off method and it consisted of 102 units.

In the first quarter of a year, reporting units are asked to fill in a questionnaire providing data on turnover generated in a previous year and a breakdown of the turnover by groups of services they provide.

In each quarter reporting units are asked to fill in a questionnaire providing data on representative services for each service group as well as a detailed information on identified services, price formation and price in a current and previous period.

For all SPPI in Croatia via a web application there is a standard data processing procedure of SPPI compilation. The base period is a base of the price ratio at an elementary level of aggregation and for SPPIs, it is the **last quarter of a previous year**.

The existence of seasonal services poses some significant challenges in production of quarterly SPPIs for Travel agencies, tour operator reservation service and related activities.

Many travel agencies in Croatia are open only during the summer season, while some service providers are active in other periods as well, but these services are often not typical and are carried out just to keep the body and soul together until the next summer season.

Challenge in producing SPPIs for N79

According to the SPPI pilot survey, a share of N79, by group of services in 2015, Reservation services for accommodation and Tour operator services for arranging and assembling tours reached 58% of the turnover. In Croatia, these services are strongly seasonal and 35% of them are provided only in the second and third quarter, so there are no prices in the base period (the last quarter of a previous year).

What is currently being done

Reporting units are asked to estimate missing prices for seasonal services and enter the results into a web questionnaire.

It was recognized that there is no a completely satisfactory way of dealing with the absence of seasonal service prices in some periods as well in in the base period. It was decided that the best solution would be to ask reporting units to estimate and enter those estimated missing prices into the web questionnaire. (If the representative service had been provided in a particular period, what the price would have been?)

Results and conclusions

Why is this seasonal issue important?

The total turnover in division 79, section N, in 2015 was only 4% of all turnover in the services sector but:

- It is a first SPPI in Croatia with strictly seasonal services
- In the near future, the Croatian Bureau of Statistics will start developing an SPPI for accommodation services, which are also mostly seasonal services in Croatia
- The total turnover in accommodation services in 2015 was 14% of all turnover in the services sector.

ISSUE FOR CONSIDERATION

- According to the standard data processing procedure of the SPPI compilation in Croatia, is the estimation of missing prices by reporting units the best way of dealing with the absence of seasonal service prices?

FEEDBACK FROM VG PARTICIPANTS AND CONCLUSIONS

- For quarters when the product is not available in the marketplace, the last available price could be carried forward and used in the index.

This method could tend to add to the amount of seasonal movements in the indices, particularly when there is high general inflation. For this reason, using an imputation method for the missing prices is better than simply carrying forward the last available price.

- A way of dealing with these strongly seasonal services could be to change the focus from short-term quarter-to-quarter price indices to year-over-year price comparisons because there is a good chance that seasonal services that appear in third quarter, for example, will also appear in subsequent third quarters, so that the overlap of products will be maximized in these year-over-year quarterly indices.

It has been recognized that making year-over-year comparisons provides the simplest method for making comparisons but due to standard data processing procedure of SPPI compilation in Croatia, this method is not applicable.

- Price movements of 65% of Reservation services for accommodation and Tour operator services for arranging and assembling tours, which were provided in all quarters of the year, could be used with expert judgment for imputation of 35% of missing prices.

Instead of simply carrying forward the last available price of a seasonal services that are not sold during a particular quarter, it is possible to use this alternative imputation method to fill in the missing prices .