Impact of seasonal character of services on the price index calculation in Travel agencies, tour operators and other reservation services



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Introduction

- Developed through the project and conducted via a web application based on an existing application Started in Q4 2015, three quarters covered so far
- Still a pilot survey, not yet dissemination of data

Classification and sector desctription

Statistical population consists of all active enterprises classified in one of N79 Nace Rev.2 according to their main activity and it contains 782 units, registered in the Business Register of Croatia, (2014)

Share of population

Source: Statistical Business Register, 2014,



Sample design

Turnover coverage

Number of Nace code Turnover coverage enterprises >50 % 7911 81 Cut-off method used 7912 >90 % 12 >70 % 7990 102

Source: Statistical Business Register, 2014, CBS

Most of the enterprises are small in terms of employees; 90 % enterprises have < 50 employees, 10 % have > 50 employees

Data on web questionnaire

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

covered; classification from the web questionnaire is completely taken and related to CPA

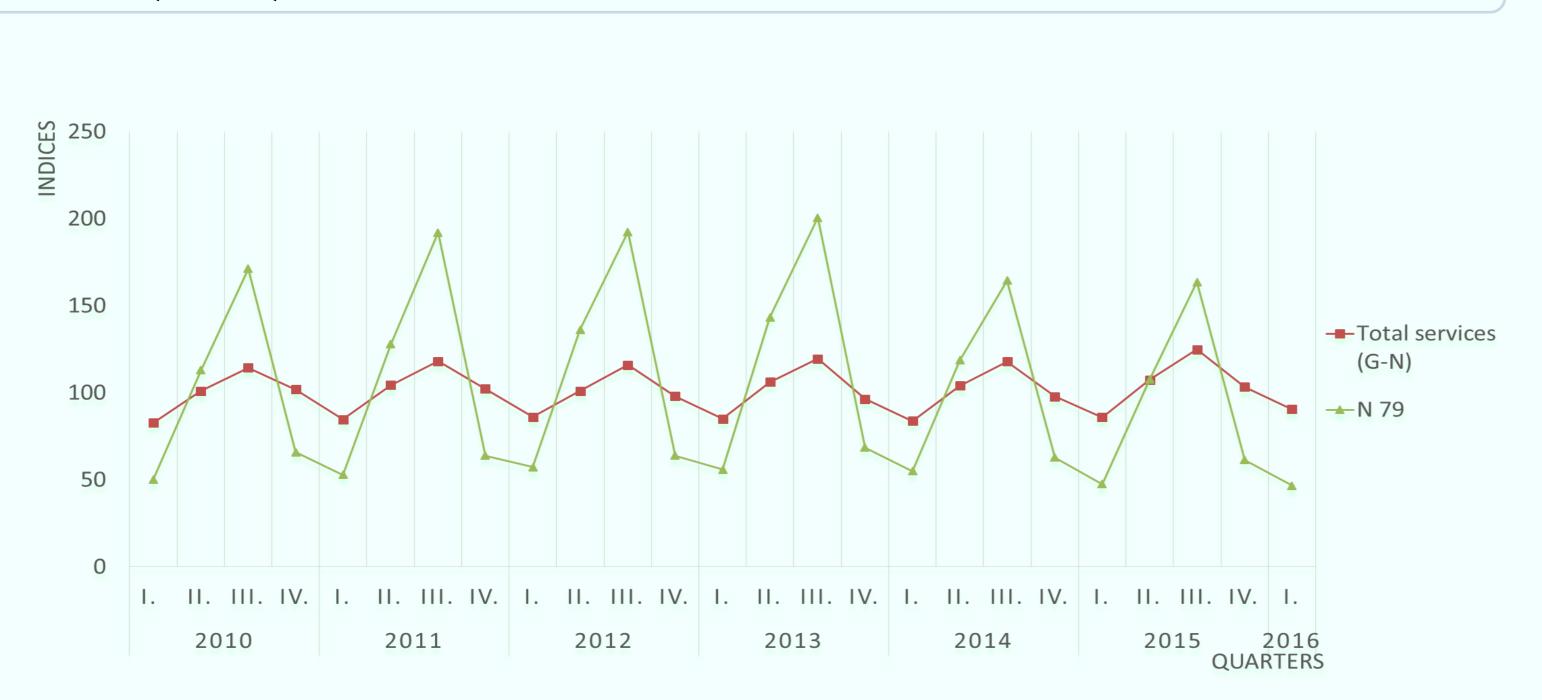
All service groups are well

Representative services for each of the service groups, as well as a detailed information on identified services, price formation and price in current and previous period are asked in the questionnaire every quarter

The existence of Seasonal services poses some significant challenges in production of a quarterly SPPI for N79

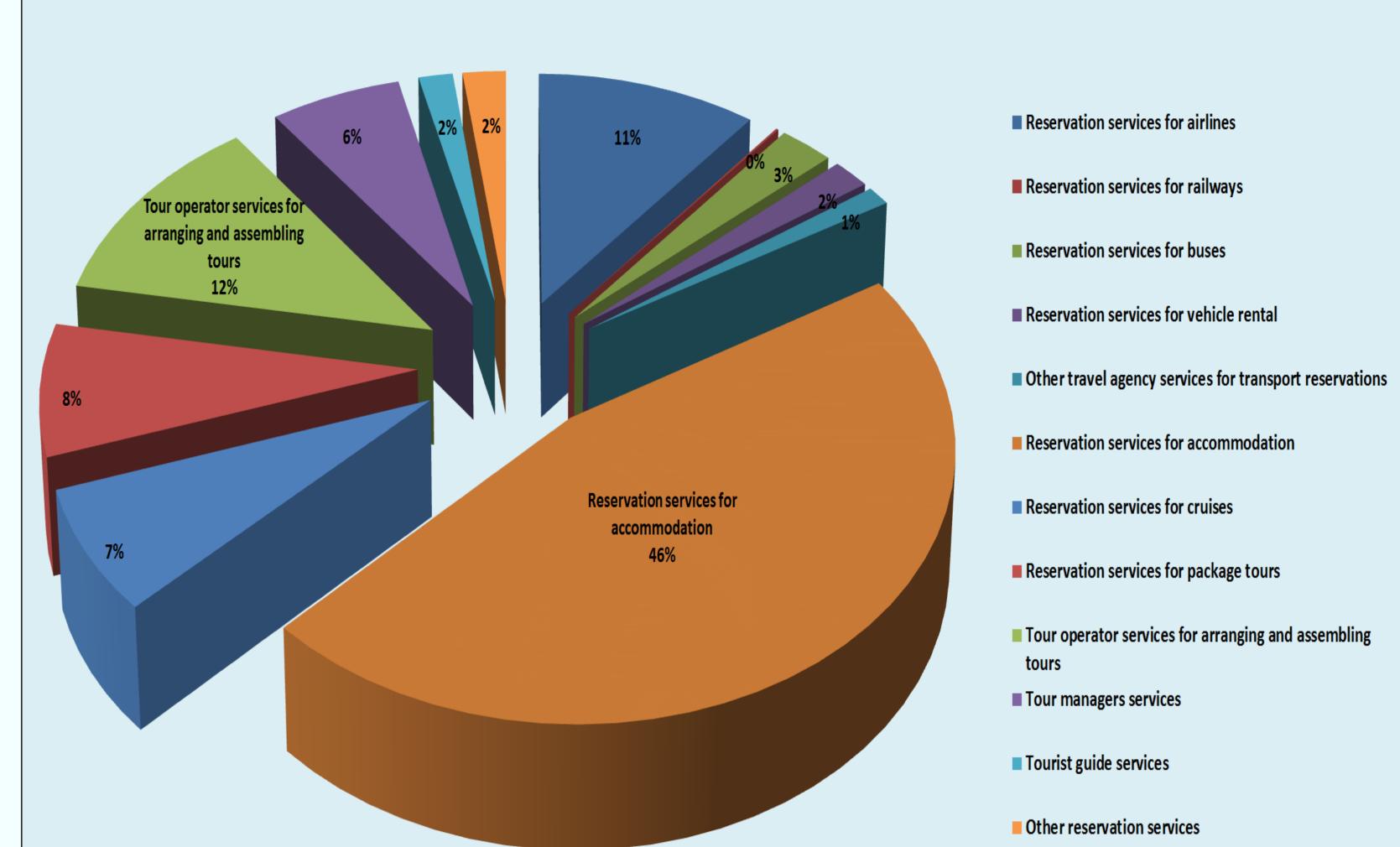
(2010=100), The gross turnover indices of the services sector and N79

In the Q2 and Q3 turnover of the services sector and especially of N79 were significantly higher than in the Q1 and Q4



In Croatia many travel agencies are open only during the summer season, while some service providers are active and in other periods as well, but these services are often not typical and are carried out "just to survive", until they reache the summer season.

SPPI pilot survey share of Travel agencies, tour operators and other reservation services turnover by group of services, 2015



SPPI compilation

A standard data processing procedure of SPPI compilation for all SPPI in Croatia via a web application

Compilation of ratio (individual price index for a service of service group for enterprise). The base period is the <u>last quarter of</u> previous year

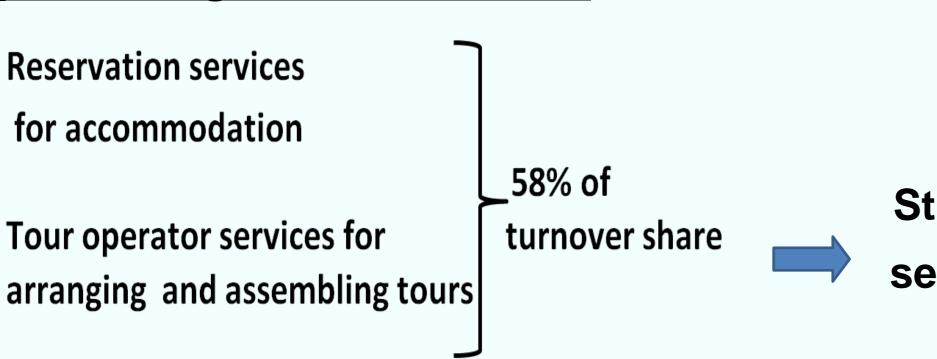
Calculation of a simple (unweighted) price index for services within the same service group at company level using Jevons formula (unweighted geometric average).

Calculation of a price index for service groups using price indices of service groups by companies (as elementary aggregates) and weighing them by the share of turnover of this group in company turnover for this activity.

Calculation of the price index for an activity as a whole using price indices of service groups and corresponding weights calculated as a sum of turnover for group services of companies

Challenge in

producing of SPPI for N79



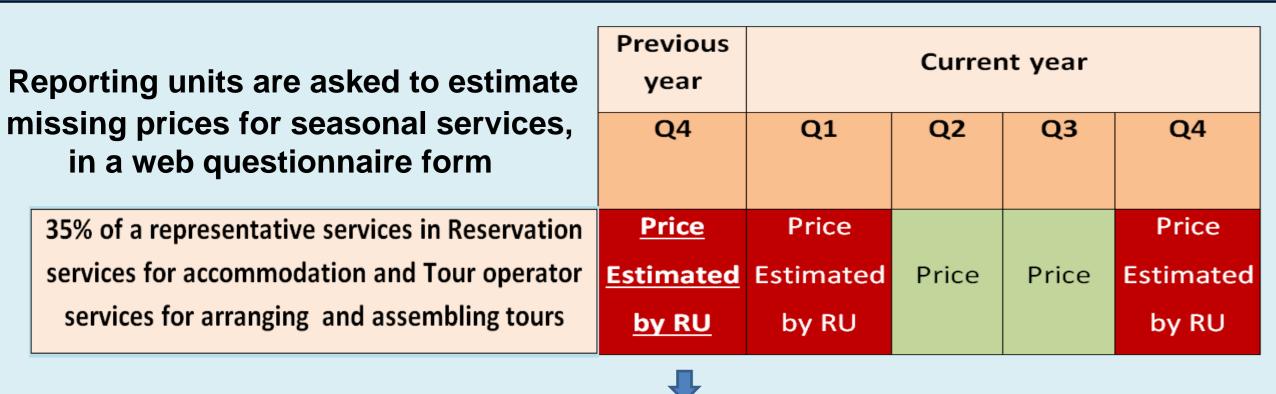
Strongly seasonal services in Croatia

SPPI survey 35% of a representative services in Reservation services for accommodation and Tour operator services for arranging and assembling tours



No base period

Estimation of prices for out-of-season services



Standard data processing procedure of SPPI compilation

SPPI

for N79

Results and Conclusions

- > The existence of seasonal products poses some significant challenges for production of a quarterly SPPI for N79
- > It was recognized that there is no completely satisfactory way of dealing with the absence of seasonal service prices in some periods as well in the base period
- > Decision was made that the best solution would be to ask the reporting units to estimate and impute the missing price in web questionnaire form (If the representative service had been provided in a particular period, what the price would have been?)

The total turnover in the N79 in 2015 was only 4% of all turnover in the services sector. Why is this seasonal issue important?

- ▶ It is a first SPPI in Croatia with strongly seasonal services
- In the near future, CBS will start developing an SPPI for the Accommodation services which are also highly seasonal services in Croatia
- > The total turnover in Accommodation services in 2015 was 14% of all turnover in the services sector

ISSUES FOR CONSIDERATION

- According to the standard data processing procedure of 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?
- Is the estimations of 35% too many?