

Adoption of the euro and catering industry prices: The case of Slovenia

SERGEJ GRIČAR

University of Primorska

Faculty of Management, Koper, Slovenia

sergej.gricar@gmail.com

ŠTEFAN BOJNEC

University of Primorska

Faculty of Management, Koper, Slovenia

stefan.bojnec@fm-kp.si

Abstract

This paper focuses on the Euro adoption in Slovenia and its transmission to catering industry prices. The empirical approach uses three different methodologies: the principal component analysis, factor analysis and regression analysis on the monthly statistical data collected during the period from 2000 to 2007. In the regression analysis the dependent variable is used as the differential between the catering industry price index and the consumer price index. The regression analysis confirmed that the catering industry price index and the differential of the catering industry price index and the consumer price index, respectively, are positively associated with wages, tourist arrivals, and with the Euro adoption, respectively. The two common components are identified by using the principal component analysis: first, the general level of prices and wages in the catering industry and second, the Euro price adoption and later Euro price stabilization, and demand for catering industry services. We also used factor analysis to check the robustness of the principal component method results.

Key words: Euro adoption, catering industry prices, wages, Slovenia

1 Introduction

Slovenia is a small Central European country, located between Eastern and Western Europe, with a population slightly over 2 million. Key milestones for the Slovenian economy are when Slovenia seceded from the former socialist Yugoslavia and became an independent country in 1991, when Slovenia became a European Union (EU) member in 2004, and in 2007 when the Euro was adopted as its currency.

The previous studies (Surti, 2008; IMAD, 2007; Bojnec & Gričar, 2010) have confirmed that the Euro adoption might have a short-run initial impact on the upward catering industry price rounding, but due to a greater international price transparency and competition in the catering industry and tourist markets it is less likely to expect a substantial long-term catering industry price increases for a similar quality of catering industry products and services. This has motivated our research for the case of Slovenia, which introduced the Euro on 1st January 2007. We aim to quantify factors that are associated with price developments in the catering industry. We use price indices from the Statistical Office of the Republic of Slovenia (SORS, 2008). As has been shown by previous research (Hoblin et al., 2006; Gaioti & Lippi, 2005; Leu, 1998) for some other European countries, the abolishment of the national currencies by the Euro introduction has brought a greater price transparency, which represents an advantage for tourism development (Shackleford, 1998). We expect that the Euro adoption in Slovenia had only an initial impact on the price increases in the catering industry. Therefore, three hypotheses (H) are tested in this paper. H1 and H2 are related to the supply-side determinants:

H1: Among possible factors for a short-term catering industry price increase is the Euro adoption with a short term rounding of the catering industry prices for products and services.

H2: Among possible cost-push factors for catering industry price increases might be the transmission of increases in the catering industry input prices such as the cost of some intermediary inputs and

increases in factor inputs such as wages in the catering industry.

The demand-side determinants are tested in the set H3:

H3: Among possible determinants for catering industry prices are increases in the demand for tourist services.

Increases in the demand for tourist services can be due to different reasons, and particularly as a result of the Euro adoption (e.g. Nemec-Rudež & Bojnec, 2008).

The remaining part of the paper is structured as follows. In Section 2 we present the methodology and data used. Section 3 presents empirical results, while the final section 4 presents the main conclusions.

2 Methodology and data

The methodology applied is based on the time-series data analyses. We employ the following main empirical methodological approaches:

First, we analyse main summary statistics and linear trends for the basic data that are used in the empirical time series data analyses.

Second, we employ the principal component method, which is one of popular methods of multivariate factor analysis (e.g. Kachigan, 1991). The principal component method is the simplest of the true eigenvector-based multivariate analyses. Often, its use can be thought of as revealing the internal structure of the data in a way which best explains the variance in the data. If a multivariate dataset is visualised as a set of coordinates in a high-dimensional data space, the principal component method can supply the user with a lower-dimensional picture from several time series data analyses. This is done by using only the first few principal components so that the dimensionality of the transformed data is reduced in order to establish a smaller number of new common components, which will be used in regression analysis.

The principal component method is closely related to the factor analysis. The factor analysis typically

incorporates more domain specific assumptions about the underlying structure and solves eigenvectors of a slightly different matrix. We check the robustness of the principal component method with the factor analysis, where the unweighted least squares method was used.

Third, for further empirical testing we use multiple regression analysis. Regression analysis includes many techniques for modelling and analysing several time series variables, when the focus is on the relationship between a dependent variable and more independent variables. The regression analysis is used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships. In restricted circumstances, regression analysis can be used to infer causal relationships between the independent and dependent variables. However this can lead to illusions or false relationships, so caution is advisable (Gričar & Bojnec, 2012).

A large body of techniques for carrying out regression analysis has been developed. Familiar methods such as linear trend regression, which is used in this paper, and ordinary least squares regression are parametric. The regression function is defined in terms of a finite number of unknown parameters that are estimated from the data. The statistical significance of the obtained regression and empirical results are important for the regression coefficient. The acceptable statistical

significance for the regression coefficient is less than or equal to 5% ($\alpha \leq 0.05$) (Bojnec & Gričar, 2010).

In the regression analysis we use an index of prices for the catering industry services (CIPI) as the dependent variable. The CIPI represents the prices in the catering industry in all circumstances – food, beverage, and overnight stays. In the regression analysis we use several independent variables. The first independent variable is an index of gross wages in the catering industry (GWCII). This variable measures personal income for the employees in the catering industry. The second independent variable is an index of arrivals of domestic and foreign tourists (Tourists), which explains the number of tourist arrivals to Slovenia's tourist destinations over a period of time. Our third explanatory variable is an index of prices for food and non-alcoholic beverages (FAPI). This variable measures the input costs for the catering industry subjects (companies). The general price index in Slovenia is the consumer price index (CPI), which measures domestic inflation. For this survey background we also explain two dummy variables D1 and D2. Dummy variable D1 captures the Euro adoption period, which equals to one for the period December 2006 – February 2007, and zero otherwise; dummy variable D2, which captures the Euro post-adoption price stabilization period, which equals to one for the period March 2007 – December 2007, and zero otherwise. All these variables are also used in the principal component analysis.

Table 1: Descriptive statistics for scale variables, January 2000=100

| Descriptive Statistics | CPI | FAPI | CIPI | Tourists | GWCII |
|------------------------|--------|--------|--------|----------|--------|
| Mean | 127.79 | 120.81 | 130.87 | 182.78 | 133.47 |
| Median | 130.55 | 123.45 | 131.95 | 159.40 | 136.15 |
| N | 96 | 96 | 96 | 96 | 96 |
| Minimum | 100.00 | 99.70 | 100.00 | 99.30 | 99.80 |
| Maximum | 149.50 | 145.30 | 165.50 | 147.40 | 170.00 |
| Skewness | -0.495 | -0.399 | -0.059 | 1.003 | -0.148 |
| Kurtosis | -0.833 | 0.021 | -1.058 | -0.043 | -0.643 |

Source: SORS, 2008 and own calculations.

Note: CPI – consumer price index; FAPI – food and non-alcoholic beverages price index; CIPI – catering industry price index; Tourists – arrivals of domestic and foreign tourists; GWCII – index of gross wages in the catering industry, and N – number of observations.

3 Empirical results

3.1 Linear trend analysis and descriptive statistics

Except for the linear trend analysis, where original monthly data are used, the monthly data with January 2000 as the base period (January 2000=100) for the period January 2000 – December 2007 are used in the empirical analyses. The SORS (2008) collects data for different catering industry service prices, which are a part of the monthly CPI and the CIPI.

In Table 1 we present mean and median values, the number of observations, minimum and maximum values for scale time-series variables, where January 2000=100. The mean index value for the variable tourists is the highest and smallest for FAPI. The variable for Tourists is also highly volatile. This is confirmed by the large spread between the minimum and maximum values of the variable Tourists. The number of observations for all variables is 96.

The bottom part of Table 1 presents the distribution of indices in order to be more familiar with the characteristics of the data. At the same time, we checked whether the distribution of indices in relation to height, which are similar to a normal distribution. Based on skewness and kurtosis of distribution of variables and according to their height, they suggest that in most cases it is a quite asymmetric distribution. Yet, only slightly in height, indices for the FAPI and GWCI distribution are still most closely to approximate a normal distribution.

We use a linear trend analysis to identify the CPI increases that are caused by the Euro adoption. Figure 1 presents the CPI during the time of the Euro adoption in Slovenia. We have estimated the regression function: $CPI=100.30+0.66*T$, where T is time for the four month period from January 2007 to April 2007.

Due to the very small number of observations which are used in this analysis, the regression function shows that the CPI was growing in this period. However, this should be interpreted with care from a statistical point of view. On the average, the monthly CPI in this

period suggests a modest increase during the crucial months when the Euro was introduced as the currency in Slovenia.

For the linear trend for CPI which is shown in Figure 1, in Table 2 we represent the descriptive statistics for variable CPI on the original data. The mean of the CPI during the analysed period is 100.43. That confirms that domestic inflation was 0.43% per month when 96 observations were taken. There was also a deflation period, which was recognised by the fourteen frequencies during the observed period. However, inflation which was more than 1.0%, is found out by thirteen observations and leads to 10.4 cumulative percent.

Fig. 1: Trend in the level of consumer prices (CPI) in time of the Euro adoption in Slovenia from January 2007 to April 2007

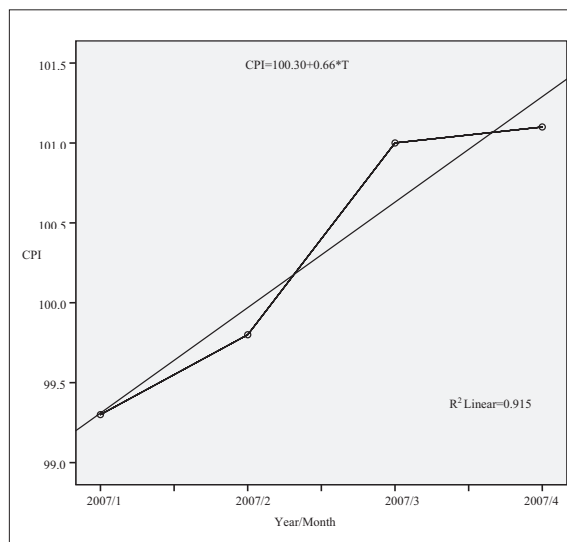


Table 2: Descriptive statistics for variable CPI, original data

| Descriptive Statistics | CPI |
|------------------------|--------|
| Mean | 100.43 |
| Median | 100.40 |
| N | 96 |
| Minimum | 99.20 |
| Maximum | 101.60 |

Source: SORS, 2008 and own calculations.

Note: CPI – consumer price index; N – number of observations.

3.2 Indices of prices, wages, and tourists arrivals

The summary statistics for the main time-series data used for the period from January 2000 to December 2007 are presented in Table 3. As we can see, the greatest increases among the analyzed variables are seen for the index of gross wages in the catering industry (GWCII) and for the catering industry price index (CIPI), and a bit less for the CPI, and except for the year 2007, also for the food and non-alcoholic beverages price index (FAPI).

Table 3: Indices of prices, wages, and tourists arrivals, January 2000=100

| Year/Month | CPI | FAPI | CIPI | Tourists | GWCII |
|---------------|-------|-------|-------|----------|-------|
| 2000/January | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 2004/December | 134.5 | 123.0 | 138.2 | 121.8 | 155.0 |
| 2007/December | 149.5 | 145.3 | 165.5 | 147.4 | 170.0 |

Source: SORS, 2008 and own calculations.

Note: CPI – consumer price index; FAPI – food and non-alcoholic beverages price index; CIPI – catering industry price index; Tourists – arrivals of domestic and foreign tourists; GWCII – index of gross wages in the catering industry.

3.3 Principal component analysis

The principal component analysis confirms two of the most important common components, which explain more than 75% of the variance for the analyzed model with some changes in weights by variables (Bojnc & Gričar, 2010).

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy statistic is greater than 0.5. This implies the appropriateness of using multivariate factor analysis. To estimate the factor weights by using the principal component analyses, we use different rotation methods (Table 4).

The weights by variables are rather stable when the different rotation methods are applied, except for the changes in the sign of weights by variables for D1, D2 and Tourists. The first common component captures the general level of prices and wages in the catering industry. The second common component is bipolar with the higher positive weight for the dummy variable D1, the negative weight for the dummy variable D2 and for the variable which measures the demand of tourists for services in the catering industry. The

Table 4: Component matrices

| Estimated factor weights of variables for the catering industry price index in Slovenia, January 2000 - December 2007 (monthly data) | | | | | | |
|--|-------------------------|--------|---|--------|---|--------|
| Principal component analysis | | | | | | |
| Variables | Without factor rotation | | Maximum likelihood – Oblimin with Kaiser normalisation | | Maximum likelihood – Varimax with Kaiser normalisation | |
| | Components | | Components | | Components | |
| | 1 | 2 | 1 | 2 | 1 | 2 |
| CPI | 0.976 | 0.056 | 0.976 | -0.043 | 0.978 | 0.020 |
| CIPI | 0.984 | 0.065 | 0.984 | -0.034 | 0.986 | 0.011 |
| FAPI | 0.961 | 0.038 | 0.961 | -0.059 | 0.961 | 0.036 |
| GWCII | 0.968 | 0.088 | 0.968 | -0.010 | 0.972 | -0.013 |
| Tourists | 0.316 | -0.613 | 0.315 | -0.642 | 0.268 | 0.636 |
| D1 | 0.199 | 0.814 | 0.201 | 0.790 | 0.261 | -0.796 |
| D2 | 0.627 | -0.332 | 0.626 | -0.393 | 0.600 | 0.379 |

Note: CPI – consumer price index; CIPI – catering industry price index; FAPI – food and non-alcoholic beverages price index; GWCII – index of gross wages in the catering industry, Tourists – arrivals of domestic and foreign tourists as a measure of demand of domestic and foreign tourists; D1 – dummy variable for the Euro adoption (D1 = 1 between December 2006 and February 2007, and zero otherwise); D2 – dummy variable for the Euro price stabilization (D2 = 1 between March 2007 and December 2007, and zero otherwise).

Table 5: Factor matrices

| Estimated factor weights of variables for the catering industry price index in Slovenia, January 2000 - December 2007 (monthly data) | | | | | | |
|--|--------------------------|--------|--|--------|--|--------|
| Variables | Unweighted least squares | | | | | |
| | Without factor rotation | | Maximum likelihood – Oblimin with Kaiser normalisation | | Maximum likelihood – Varimax with Kaiser normalisation | |
| | Factor | | Factor | | Factor | |
| | 1 | 2 | 1 | 2 | 1 | 2 |
| CPI | 0.976 | 0.054 | 0.976 | -0.044 | 0.977 | 0.020 |
| CIPi | 0.986 | 0.069 | 0.986 | -0.030 | 0.988 | 0.006 |
| FAPi | 0.962 | 0.036 | 0.962 | -0.060 | 0.962 | 0.037 |
| GWCIi | 0.968 | 0.087 | 0.968 | -0.011 | 0.972 | -0.013 |
| Tourists | 0.313 | -0.615 | 0.312 | -0.643 | 0.266 | 0.637 |
| D ₁ | 0.199 | 0.813 | 0.201 | 0.789 | 0.261 | -0.795 |
| D ₂ | 0.628 | -0.333 | 0.627 | -0.394 | 0.600 | 0.379 |

Note: CPI – consumer price index; CIPi – catering industry price index; FAPi – food and non-alcoholic beverages price index; GWCIi – index of gross wages in the catering industry; Tourists – arrivals of domestic and foreign tourists as a measure of demand of domestic and foreign tourists; D₁ – dummy variable for the Euro adoption (D₁ = 1 between December 2006 and February 2007, and zero otherwise); D₂ – dummy variable for the Euro price stabilization (D₂ = 1 between March 2007 and December 2007, and zero otherwise).

second common component captures the Euro price adoption, and later Euro price stabilization. In this second common component a higher weight is also found for the variable that measures the demand of tourists for services in the catering industry.

Estimates of factor weights are by using the unweighted least squares method, irrespective of the rotation method, more or less of stable signs and weights (Table 5). Given that the weights on the first common component variables are almost the same (Table 5) as the method of principal component analysis (Table 4), we can conclude that the first component is as a general component. We named it as the general level of prices and wages in the catering industry. The second component is bipolar, but it shows a strong positive weight on the variable D₁ and negative weights to the variables D₂ and Tourists. We called it the Euro adoption, price stability in the Euro period and tourist demand.

3.3 Multiple regression analysis

Multiple regression analysis is applied to investigate the association between the dependent variable CIPi

and the specified explanatory variables. We expect that the CIPi is positively associated with the Euro adoption and with the increases in tourist demand, respectively. We also expect that the costs of labour (wages) and costs of other inputs are overshooting the catering industry prices. We expect positive association between the CIPi and the explanatory variables in the linear regression equation:

$$CIPi_t = a + b_1 * FAPi + b_2 * GWCIi + b_3 * Tourists + b_4 * D_1 + b_5 * D_2 + u_t$$

where u_t is a stochastic element.

Moreover, we also expect that the specified explanatory variables overshoot catering industry prices (CIPi) vis-à-vis consumer prices (CPI):

$$CIPi - CPI = c + c_1 * FAPi + c_2 * GWCIi + c_3 * Tourists + c_4 * D_1 + c_5 * D_2 + u_t.$$

In addition, we specify the regression equation with two additional variables, which are obtained from the two main principal components analysis. These are two additional synthetic variables that are included

in the analysis with the regression coefficients R_{k1} and R_{k2} .

Table 6 presents the regression results. The value for F-test is greater than the theoretical value for F distribution at the degree of freedom $m_1=k$ and $m_2=n-k-1$ at the degree of risk $\alpha=0.005$.

Under the specification of the regression function, the association that is pertained to FAPI, GWCII, Tourists, and dummy variable D1 is significant. Regression analysis indicates that the rise in the catering industry prices was determined by the rise in the prices of food and non-alcoholic beverages as inputs in the catering industry as well as by the rise in gross wages in the catering industry as labour costs in the catering industry. The prices in the catering industry are also related to the developments in the tourist markets by the demands of domestic and foreign tourists (Bojnc & Gričar, 2010).

We have also found that the partial regression coefficients that pertain to FAPI, GWCII, Tourists, and dummy variable D1 in the multiple regression function (1) are also statistically significant. The adjusted determination coefficient indicates that 95.0% of the variance in CIPI is explained by the linear association with FAPI, GWCI, Tourists, and dummy variable D1.

Vork (1998) argues on the basis of regression analysis that in the case of Estonia, the increased demand and increased labour costs are the main factors that are increasing the prices in non-tradable sectors. Hotels and restaurants are included in this group of sectors. He also found a high correlation of the regulated prices with the prices in non-tradable sectors, and the transmission of regulated prices on wage increases. The wage increases and wages payments in the next two quarters have caused the increase in demand for the products and services from the non-tradable sector. Vork (1998) concludes that Estonian inflation is determined by non-tradable sectors with the high significance of regulated prices on non-tradable sectors. Fabiani et al. (2005) found that the costs of labour and of intermediary inputs are the main driving forces for price increases on the basis of the survey analyses.

Table 6: Regression functions for the catering industry prices

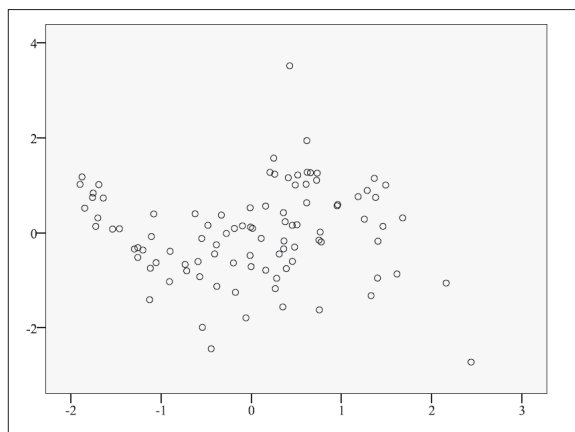
| Dependent variable: | CIPI | CIPI-CPI |
|---------------------|------------------------|------------------------|
| | (1) | (2) |
| Constant | -21.588 (-3.268)*** | -17.993 (-4.845)*** |
| FAPI | 0.391 (3.642)*** | -0.158 (-2.616)*** |
| GWCII | 0.755 (11.837)*** | 0.284 (7.929)*** |
| Tourists | 0.022 (3.559)*** | 0.008 (2.198)*** |
| D1 | 7.023 (2.812)*** | 7.485 (5.332)*** |
| D2 | 2.237 (1.338) | 6.688 (7.115)*** |
| R ² | 0.950 | 0.836 |
| F test | 365.812 | 97.791 |

Note: CPI – consumer price index; CIPI – catering industry price index; FAPI – food and non-alcoholic beverages price index; GWCII – index of gross wages in the catering industry, Tourists – domestic and foreign tourist arrivals, D1 – dummy variable for the Euro adoption ($D1 = 1$ between December 2006 and February 2007, and zero otherwise); D2 – dummy variable for the Euro price stabilization ($D2 = 1$ between March 2007 and December 2007, and zero otherwise); R² – adjusted determination coefficient; *** significant at 1%; t – statistics in the parentheses. Headings of columns: (1) and (2) – multiple regression functions; N=96.

The results suggest that there are some common factors, but also some country specific factors that are important for understanding inflation and particularly for understanding price movements in the catering industry sector. World-wide known tourist destinations are largely integrated into the world economy as a tradable sector, but with several direct in indirect causalities with the local economy, which to a different degree is integrated into the world economy.

In the multiple regressions function (2) the dependent variable is used as the differential between the CIPI and the CPI. In this way we want to estimate whether there has been the overshooting in the CIPI increases over the CPI increases. Moreover, we want to empirically quantify the variables that might contribute to the fastest CIPI increases vis-à-vis the CPI increases. The comparisons of the regression functions indicate that the FAPI has a positive association with the CIPI in the regression (1), while the FAPI has a negative impact on

Fig. 2: Plot charts of the residuals, dependent variable CIPI



Note: axis of ordinates – standardized residuals; axis of abscissas – standardized parameter values of CIPI.

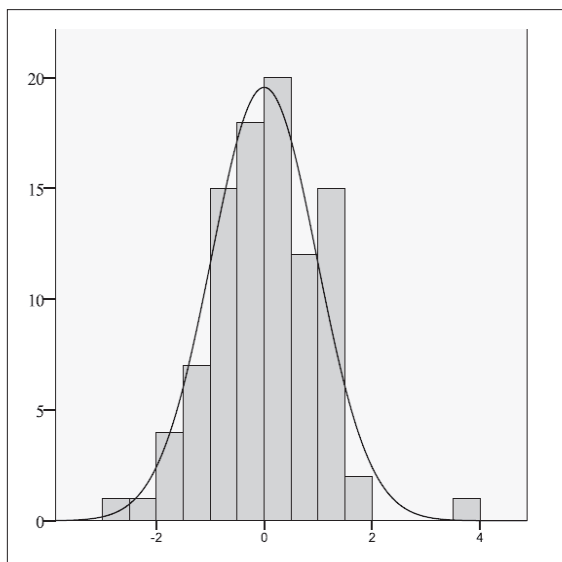
the differential between the CIPI and the CPI in the regression (2). The CIPI and the differential of the CIPI and the CPI, respectively, are positively associated with the GWCI, tourist arrivals, and with the Euro adoption (dummy variable D_1), respectively. The dummy variable D_2 indicates also a positive association with both the CIPI and the differential of the CIPI and the CPI, respectively, suggesting that after the Euro adoption there has also been an increase in the CIPI. The positive association of the CIPI and the differential of the CIPI and the CPI respectively are confirmed for the regression coefficient, which is pertained to the GWCI.

To check the assumptions of the linear regression model, we focus on two simple graphical methods. First, we show the distribution of standardized residues with residue analysis estimated regression function (Figure 2), which was adapted with the normal distribution shown by histograms (Figure 3). The chart shows dependence of the standardized residual from the standard estimates of the dependent variable. Items are distributed in a horizontal band, which means that the homoscedasticity is not violated.

4 Conclusion

Catering industry prices in Slovenia increased in the initial stage of the Euro adoption. This finding is

Fig. 3: Histogram, dependent variable CIPI



Note: axis of ordinates – frequency; axis of abscissas – standardized residual values.

similar to some other European tourist destinations with the Euro as a currency. In addition to the rounding of prices a month prior and on the critical days after the Euro adoption, we have analyzed supply-side and demand-side factors that have contributed to the initial Euro price increases and later to the Euro price stabilization by using principal components and regression analyses.

The estimated weights in the common principal components and factors are similar and stable on the rotations which are used with the principal component analysis and factor analyses. The first common principal component is significant by the general price level and wages in the catering industry. The second common principal component is rather bipolar as it shows at the same time high positive weights for the dummy variable D_1 for the Euro adoption, but negative weight for the dummy variable D_2 for the Euro post-adoption price stabilization, including the impact of demand of tourists for products and services in the catering industry. Principal component analysis is the preferred analysis to the multivariate analyses (Gričar & Bojnec, 2012). The robustness of results was tested by the unweighted least squares method. This is

the common method of factor analysis. These results confirmed the set H₁, as the Euro adoption has only a temporary, short-term pressures on price increases during the period of its adoption.

Multiple regression analysis confirms that the catering industry prices are statistically significantly associated with wages as the costs of labour in the catering industry. The results are mixed for the impact of the prices of food and non-alcoholic beverages as intermediary input costs. They are found to have a positive impact on the catering industry prices, but a negative association is found for the association with the differential between the catering industry prices and all consumer prices. Therefore, the set H₂ is only partly confirmed.

The dummy variables D₁ for the Euro adoption and D₂ for the post-Euro price increases, and demands by

tourists are positively and statistically significantly associated with catering industry prices as well with the differential of catering industry prices and consumer prices. These results confirmed set H₁ and set H₃.

The analysis of time-series with a trend suggests that simple extensions of available methods could be usefully applied to empirical data. In summary, more research is also needed for the analysis of systems of (seasonal) time-series, to exceed possible the spurious regression problems using some additional approaches such as cointegration and Vector Error Correction models. For these, an empirical approach is recommended in order to use a longer time-series, which also includes the time of economic downturn.

Prevzem evra in cene v gostinstvu: primer Slovenije

Povzetek

Prispevek analizira uvedbo evra v Sloveniji in povezavo uvedbe evra s cenami v gostinstvu. Empirični pristop z metodo glavnih komponent, s faktorsko analizo in z regresijsko analizo nam na mesečnih statističnih podatkih v obdobju 2000–2007 poda pomembne ugotovitve razvoja cen v gostinstvu. Z regresijsko analizo, kjer kot odvisno spremenljivko uporabimo razliko indeksa cen v gostinstvu z indeksom cen življenjskih potrebščin, prikažemo, da je razlika pozitivno povezana s plačami, številom turistov in z uvedbo evra. Z metodo glavnih komponent sta bili ugotovljeni dve skupni komponenti: prvič, splošna raven cen in plače v gostinstvu, in drugič uvedba evra in kasnejše stabiliziranje cen v evrih in povpraševanje po gostinskih storitvah. Faktorska analiza je bila uporabljena, da smo preverili stabilnost rezultatov metode glavnih komponent.

Ključne besede: uvedba evra, cene v gostinstvu, plače, Slovenija

References

- Bojnec, Š., & Gričar, S. (2010). Euro adoption and prices in catering industry in Slovenia. In V. Kandžija, & A. Kumar (Eds.), *Economic integration, competition and cooperation, Scientific conference 2009, Opatija* (pp. 265–273). Rijeka: University of Rijeka.
- Fabiani, S., Druant, M., Hernando, I., Kwapił, C., Landau, B., Loupias, C., Martins, F., Mathae, T. Y., Sabbatini, R., Stahl, H., & Stokman, A. C. J. (2005). *The pricing behavior of firms in the Euro area: new survey evidence*. Retrieved May 15, 2008, from <http://www.ecb.int/pub/pdf/scpwps/ecbwp535.pdf>
- Gaioti, E., & Lippi, F. (2005). *Pricing behaviour and the Euro cash changeover: evidence from a panel of restaurants*. Retrieved July 25, 2008, from <http://129.3.20.41/eps/mac/papers/0501/0501029.pdf>
- Gričar, S., & Bojnec, Š. (2012). Price developments in the hospitality industry in Slovenia. Forthcoming in *Economic research*.
- Hoblin, B., Ravenna, F., & Tambalotti, A. (2006). Menu costs at work: restaurant prices and the introduction of the Euro. *The Quarterly Journal of Economics*, 121, 1103–1131.
- IMAD. (2007). Institute of Macroeconomic Analysis and Development. Retrieved July 25, 2008, from <http://www.umar.gov.si/>
- Kachigan, S. K. (1991). *Multivariate statistical analysis: a conceptual introduction*. Second Edition. New York: Radius Press.
- Leu, W. (1998). *The Euro - a new and powerful identity for destination Europe. The Euro and Tourism*. Madrid: World Tourism Organization.
- Nemec Rudež, H., & Bojnec, Š. (2008). Impacts of the Euro on the Slovenian tourism industry. *Managing Global Transitions. International Research Journal*, 6(4), 445–460.
- Shackleford, P. (1998). *Analysis by WTO of the importance of the Euro area in European and World Tourism. The Euro and Tourism*. Madrid: World Tourism Organization.
- SORS. (2008). Statistical Office of the Republic of Slovenia. Retrieved April 14, 2008, from <http://www.stat.si/>
- Surti, J. (2008). *What drives inflation in Slovenia?* Ljubljana: Banka Slovenije, Contemporary Macroeconomics Issues-Challenges and Policies. Retrieved August 16, 2008, from <http://bsi.si/publikacijein-raziskave.asp?mapaId=235>
- Vork, A. (1998). *The price increases in non-tradable goods sector determine the Estonian inflation. An econometric analysis*. Retrieved July 20, 2008, from <http://infutik.mtk.ut.ee/~avork.ri/files/me/cft98.pdf>