

Price levels convergence of consumer expenditures in the European Union

Konvergence cenových hladin spotřebitelských výdajů v zemích Evropské unie

M. ŠEVELA

Mendel University of Agriculture and Forestry, Brno, Czech Republic

Abstract: The convergence of price levels is one of the important aspects of a real convergence and is often viewed as a criterion for the evaluation of preparedness. The convergence process of comparative price levels can run either through the exchange rate channel and/or that of nominal prices. The paper is focused on the assessment of comparative price levels and the rate of their convergence in the enlarged European Union within the period of 1999–2003. With the exception of Cyprus, the price levels in the new EU member countries were significantly lower. The greatest differences from the price level of EU countries existed in Poland, Slovakia and Baltic countries. The new member countries differ also in the rate of convergence. When combining their initial position and the rate of convergence, it can be concluded that all countries will be able to reach 80% of the comparative price level of the European Union till the year 2010. In Poland, the development is very unfavourable because its price level will reach only 55% provided that there will be no changes in its development.

Key words: European Union, EU-enlargement, comparative price level, consumption expenditures

Abstrakt: Konvergence cenových hladin je součástí reálné konvergence a může být chápána jako jedno z kritérií pro posuzování připravenosti k další integraci. Konvergence srovnatelných cenových hladin může probíhat prostřednictvím měnového a cenového kanálu. Příspěvek se zabývá posouzením poměru cenových hladin zemí Evropské unie a temp jejich konvergence v období let 1999 až 2003. Nové členské země Evropské unie mají s výjimkou Kypru podstatně nižší cenové hladiny. Největší rozdíly lze identifikovat u Polska, Slovenska a Pobaltských zemí. Zcela jiných výsledků dosahují tyto země v dynamice konvergence. Pokud hodnotíme míru a tempo konvergence, jsou všechny země schopny dosáhnout 80% úrovně EU cen v roce 2010. Jednoznačně nepříznivě se vyvíjí situace u Polska, které při zachování současných trendů dosáhne v roce 2010 jen 55% cenové hladiny států Evropské unie.

Klíčová slova: Evropská unie, rozšíření Evropské unie, srovnatelná cenová hladina, spotřebitelské výdaje

The post-war economic integration in Europe, which has continued for several decades, reflects in the rising homogeneity of participating countries and their economies. The establishment of the Single European Market in 1993 and the introduction of the common currency in several countries gave a new impetus to continue and accelerate the convergence processes. A real convergence of European economies naturally involves also the convergence of price levels. The cross-country differences in consumer prices are not diminishing only due to the integration processes. The decrease in differences is also supported by a rising

openness of the individual national economies and by the growth in mutual trade exchange. The last EU-enlargement in 2004 resulted in a significant rise in price level differences across the whole European Union. It seems to be obvious that the new member-countries with substantially lower price levels will converge faster than the old ones. However, it cannot be expected that all these differences will disappear due to the fact that there are many non-tradable goods in all markets. Their prices remain unequal in spite of the fact that they are getting closer due to the convergence of wages, costs, taxes, etc (European Communities 2003).

Supported by the Grant Agency of Czech Republic (Grant No. 402/04/1105).

The economic theory argues that according to the Law of One Price and some related rules, the prices of all traded commodities have to be the same among the freely trading countries. This law assumes that the trade is perfectly free and without any additional trading costs. The processes of trade liberalisation result in the European Union in this situation and, therefore, support this process of price equalisation. On the other hand, however, there are factors that prevent reaching this condition of free trade in the full extent. Increased transportation and transaction costs due to differences in language, attitudes, culture, etc. shall remain in spite of the fact that the EU countries will be able to succeed in the process of harmonization of taxes, technical requirements, institutional framework, and removal of all trade and non-trade barriers and/or reduction of powers of the local monopolies.

The prices of non-traded commodities will also converge. Accepting the Balassa-Samuelson hypothesis (1964), the convergence of price levels of traded commodities brings about the convergence of all prices. Assuming the equalisation of prices of traded commodities, the productivities and the wages have to be equal in these industry branches across the countries. The adapted wages force the wages and consequently productivities in all industries to the same level, including industries producing the non-traded commodities. Therefore, the convergence in wages supports the convergence in prices of non-traded goods (Lafrance 1999). This hypothesis is often criticised because it explains the convergence only on the base of wages *ceteris paribus*, i.e. abstracting from other factors of production and national particularities. Besides, it requires a direct relation between the wage rate on the one hand and factors of productivity, wage flexibility, etc. on the other (see also for example Riviera-Batiz, Oliva 2003). Theoretically (and on the base of results of empiric research), the convergence in prices of non-negotiable goods is slower and, as a result, higher permanent deviations remain (Bett and Devereux 1996; Engel 1993).

The need of equalisation of price levels is directly contradictory with the nominal convergence. In general, there are two possible ways of convergence in comparative price levels. Let us focus on economies with a lower price level as they are represented by the new EU-members. These economies are typically smaller and they are characterised by a greater distance from the common price level. This common price level is constituted mainly by the large countries that have converged, moreover, in the earlier development. For the sake of simplicity, it can be assumed that the new EU-members will approach the

level of these countries and not vice versa (Cechetti 1999; Ševela 2004).

Firstly, the gap in price levels can be diminished by the rise in prices in less developed economies (i.e. with lower prices). Within the framework of this process of price levels equalisation, countries with significantly lower price levels must show considerably higher rates of inflation than the others. This means that they cannot meet the inflation requirement of the Maastricht Treaty, which settled the maximum allowed differences above the average of inflation rates of the three best European countries.

Secondly, the price level convergence can run through the exchange rate channel. The appreciation of national currencies resulted in a comparative price level expressed in the Purchasing Power Standard. The nominal appreciation influences all prices within each national economy to the same extent while the former channel is the selective one, i.e. the prices can rise differently for particular commodities. Let us assume that the dissimilar rates of convergence between negotiable and non-negotiable commodities have already equalised the prices of negotiable goods, while the prices of non-negotiable ones are still different. Under these conditions, the nominal appreciation will finally lead to a rise in prices of only non-negotiable commodities because the real prices of negotiable commodities are already fixed at the common level in accordance with the Law of One Price. Expressed in national currencies, the nominal prices of negotiable commodities will decrease due to exchange rate appreciation. Combining both channels, the second one could be considered as the selective one (Kenen 1969; Sinn 2002).

However, the convergence of price levels through the exchange rate channel is also inconsistent with the Maastricht criteria. The candidates of the European Monetary Union are obliged to keep the stability of their exchange rates within the framework of the modified European Monetary System and this almost excludes the significant the appreciation of the national currency. The real convergence is the natural result of extending the mutual trade and other relations. The Maastricht criteria, used as tools of either hard or soft approach, represent only an artificial goal that could properly demonstrate the similarity of economies. or only the endeavour of countries to adapt their economies.

What is more important? A real or a nominal similarity? The answer to this question is not easy and/or unambiguous. It seems that these two goals cannot be reached at once within a few next years. The higher the differences in inflation rates and in changes in exchange rates, the faster the convergence of price

levels. Insisting on the nominal convergence could result in a slowdown in the real convergence. This means that the real convergence should be reached as the first because the preferring of the nominal one could prolong the real convergence.

The differences in price levels existing among the individual EU economies are obvious even among the so-called “core” countries and it can be said that significantly higher ones can be expected as compared with the new EU members. If a country enters the EMU and fixes its exchange rate, it can lose the exchange rate channel for its price level convergence. The remaining gap has to be then eliminated by an appropriate change in domestic prices. Since most of the catching-up countries have a lower price level, the convergence is identical with a rise in prices. Relying only on the growth of domestic prices of cheaper commodities, the consumers do not experience the decrease in price of those goods that have been already price-equalised as had been already mentioned in case of the convergence through the exchange rate channel. In the end, the price adaptation under a fixed exchange rate is therefore more painful from the consumer’s viewpoint than the adaptation through the appreciation of the national currency. From the viewpoint of consumers, the appreciation of the exchange rate helps to reduce the mark-up of prices (PricewaterhouseCoopers 2002, 2004).

The paper is focused at an appraisal of differences in consumer’s prices of the most important groups of consumer expenditures among the individual EU countries. Its aim is to assess the status and dynamics of the price level convergence during last five years. The results of this price level convergence are discussed with a special attention to the new EU members and to the development of their consumption prices within the period 1999–2003. The existence and the extent of this price convergence are tested using the sigma convergence measure. The forecast of price convergence duration is carried on the base of an assumption that the price convergence will develop at the same rate as during the last five years.

DATA AND METHODS

All data used in the article were obtained from the Eurostat databases; all indicators used are available at the Internet address <http://europa.eu.int/comm/eurostat/newcronos>. The relative shares of consumer expenditures were calculated using their absolute values published in the form of the breakdown of final consumption expenditures of households by consumption purpose (COICOP 2-digit) expressed

in the form of constant prices of the year 1995. The consumer’s price indexes were also borrowed from this database. The price indexes were published as the comparative price levels and with respect to average price levels of all 25 EU-members according to the ESA 95 aggregates. They were defined as the ratios of Power Purchasing Parities for the private final consumption to appropriate exchange rate (for details, see the OECD methodology). Changes presented in Tables 1 and 2 were computed as simple differences between the results of years 2003 and 1995. Positive values correspond to a rise in appropriate variables during the period under study.

The results of the convergence process were evaluated using the sigma convergence approach. Instead of variance in the data series, the coefficient of variation was used in the same sense. The coefficient of variation enabled to compare the variability of data series with different means. It was also intended to profit from the beta convergence measure but it was concluded that there was no need to use this method. The sigma convergence approach proved the existence of convergence for all commodities and for that reason, the weaker beta convergence indicator has to prove the convergence, as well. In the last table, it is demonstrated the expected time to reach the price level of all 25 EU countries for each expenditure group and each new EU member separately. It is assumed that, in the average, the rate of convergence will be the same as it was in the recent five years. The appropriate time was calculated using the method of compound interest. The time was expressed in years and the year 2003 was used as the starting point.

RESULTS AND DISCUSSION

In the European Union, the consumers are differently sensitive to price levels of the individual commodity groups. Each type of consumer expenditures plays a different role in the consumption basket as well as the relation of its price level to the overall comparative price level of the final consumption of households. The shares of each expenditure in the total expenditures of households are illustrated in Table 1, which presents their relative shares in the year 2003 together with absolute changes in these shares for the twenty five EU members and also separately for the former and the new EU countries. All shares were calculated as weighted means of the national shares. Individual weights are proportional to the population of each member state.

In Table 1, two kinds of information are presented. Firstly, it is possible to identify the most significant

groups of commodities in consumer's expenditures those price levels influence the total price level in the greatest extent. These are expenditures on food and housing followed by spending on transport and recreation. Focusing on these types of expenditures and their price level, we can explain the overall differences in consumption levels. It is of interest that the share of expenditures for food is almost twice as high in the new EU-members as in the old ones.

Secondly, the dynamics of shares change the weights of each commodity group in consumer's expenditures and thus their influence onto aggregate price level. Since the shares of all groups of consumption expenditures were almost unchanged in the European fifteen (with the exception of expenditures for housing, transportation and communication), it cannot be expected that the structural change caused significant changes in the total price level. On the other hand, however, there were some significant changes in new member states. Expenditures for food decreased by 4% while those for transport and communication increased by circa 2.5%. These changes were significant and are reflected in the composition of consumer basket used for the calculation of price levels. In general, the price levels of transport and communication were more similar than expenditures for food. This means that it can be supposed that in the new member countries, the aforementioned structural changes in consumption could influence the total price levels much more near than in old EU countries. Changes in consumption expenditures of the analysed countries and their convergence were discussed in detail in our earlier paper (Ševela 2004).

The total comparative price level and price levels of consumption expenditures in two-digit breakdown are presented in Table 2. The price levels are expressed in relation to price levels of all twenty five

EU economies for each commodity group and the current year. In this table, absolute changes in this index within the period 1999–2003 are presented below each comparative price level index of the year 2003. In the last column, exchange rates and mainly their absolute changes during the last five years expressed as the number of national currency units per one Euro are presented. The comparative price levels for individual groups of countries were calculated using the weighted means. This means that in ten new member countries, the comparative price levels of were highly influenced by results of Poland, while the Cyprus and Malta played a minor role.

The indices for the fifteen EU members are above one hundred indicating that prices are higher in these economies in comparison with the enlarged European Union. The deviations have to be small due to the substantive weight of these countries in the enlarged European Union. When studying these differences, it is possible to identify commodity groups with the smallest deviations in price levels. These represent commodities whose prices converge easily in the international environment. This ability is usually explained by easy international tradability of commodities. The clothing and communication are typical representatives of such commodities. On the contrary, the greatest deviations were found out in education and housing expenditures, i.e. those that are typically non-negotiable. Alcohol expenditures showed a similar deviation but in this case the reason was obviously a significantly higher taxation of alcohol drinks in the fifteen old EU countries. The dynamics of comparative prices was very low; the absolute changes are below one per cent during the last five years except for health care.

In new member-countries, the comparative price levels are considerably lower (i.e. nearly by 50%) than

Table 1. Shares of consumption expenditures in 1999–2003 (per cent)

		Food	Alcohol	Clothing	Housing	Furnishing	Health care	Transport	Communication	Recreation	Education	Restaurants
EU-25	2003	13.5	3.2	7.0	18.6	6.8	3.5	13.0	3.7	10.1	0.8	8.5
	change	-0.7	-0.3	-0.2	-1.1	-0.2	0.2	-0.9	0.9	0.4	-0.2	-0.3
EU-15	2003	13.0	3.1	7.0	18.7	6.8	3.5	13.0	3.7	10.1	0.8	8.5
	change	-0.5	-0.2	-0.2	-1.2	-0.3	0.2	-1.0	0.8	0.3	-0.2	-0.4
ACC-10	2003	22.8	5.9	6.5	16.1	6.7	2.9	11.9	3.8	9.0	0.4	7.9
	change	-4.0	-0.6	-0.5	-0.5	1.0	1.0	2.5	2.4	1.7	0.3	2.7

Source: Eurostat, author's computations

the EU average. The differences among comparative price levels of the individual commodity groups are also greater. As expected, the lowest differences exist among the best negotiable commodities (clothing and communication) while much higher ones are characteristic for housing, health care and education. Similar results were obtained also when evaluating the adaptation dynamics. In case of clothing and communication, the convergence rate was the fastest.

As far as individual countries were concerned, the obtained results copied the development of all acceding countries in average with smaller or higher differences according to national specifics mainly in price

regulation, state enterprise or other type of monopoly. Again, the best negotiable commodities demonstrated the highest rate of convergence. The greatest differences remained above all in housing, health care and education expenditures and the services, as a rule, were difficult to trade in the international markets. While the shares of health care and education expenditures in the total consumption were very small, the housing expenditures played an important constitutive role in total price level.

The convergence process on the level of comparative prices can run in two different ways, viz. that, which is identical with changes in nominal prices and that

Table 2. Comparative price level indices and exchange rates in 1999–2003

		Price level	Food	Alcohol	Clothing	Housing	Furnishing	Health care	Transport	Communi- cation	Recreation	Education	Restaurants	Exchange rate
EU-15	2003	104.4	105.4	106.8	100.7	108.8	102.2	106.3	102.0	100.3	103.1	112.6	102.0	
	change	-0.3	-0.5	0.1	-1.0	-0.4	0.2	-1.9	0.0	-0.6	-0.4	-0.9	-0.1	
ACC-10	2003	52.0	59.0	60.1	83.7	39.0	62.9	39.6	66.6	103.5	59.9	32.9	58.1	
	change	5.1	3.6	0.4	16.9	5.4	1.6	8.2	4.7	13.4	6.8	6.3	3.2	
Cyprus	2003	91.8	102	126.1	103.3	74.1	95.9	100.9	91.6	53.8	99.1	99.8	115.4	0.5841
	change	8.5	4.9	26.8	1.8	26.1	-1.9	6.1	5.6	-19.2	-1.5	7.2	20.3	0.0052
Czech Republic	2003	53.4	60.3	62.2	102.7	40.8	65.8	40.1	65.5	85.2	54.7	34.6	48.9	31.846
	change	9.2	7.0	12.4	34.4	9.2	-1.0	10.1	8.1	22.0	9.3	8.6	5.6	-5.038
Estonia	2003	57.0	66.8	61.0	92.6	52.3	69.2	41.7	64.5	81.7	64.6	27.5	72.3	15.647
	change	5.0	-4.3	-2.3	18.9	5.7	2.6	11.5	3.1	9.7	6.2	4.8	13.1	0.000
Hungary	2003	55.9	64.2	61.7	84.4	40.1	63.1	40.9	78.0	87.6	60.7	38.1	56.4	253.62
	change	10.7	8.2	15.4	24.7	7.2	-0.2	13.9	9.9	12.1	13.3	14.1	10.7	0.85
Latvia	2003	48.5	61.7	54.5	83.7	39.3	64.1	31.5	60.5	105.7	54.8	24.4	61.8	0.6407
	change	3.8	-1.8	-4.0	17.9	10.6	-3.9	6.3	-3.9	-6.3	4.4	5.2	-3.6	0.0151
Lithuania	2003	48.2	57.7	56.8	87.7	33.0	64.4	30.5	65.8	144.4	55.0	21.9	63.3	3.2700
	change	6.9	1.6	-1.9	22.0	6.3	3.6	5.4	8.2	62.0	8.0	2.3	19.2	-1.1400
Malta	2003	67.8	84.0	106.2	91.6	42.8	85.2	60.7	73.9	126	81.7	60.4	75.3	0.4261
	change	2.1	0.9	6.8	14.3	-2.1	1.5	2.2	-1.1	8.1	5.5	4.8	2.4	0.0003
Poland	2003	49.4	54.2	57.8	76.9	36.4	60.4	38.4	63.8	113.2	60.9	30.3	60.9	4.9600
	change	2.2	2.3	-8.6	9.2	2.1	2.5	6.9	1.9	6.6	5.1	4.5	-0.3	0.2200
Slovenia	2003	75.0	90.5	67.2	93.9	71.9	70.7	67.9	80.9	63.4	85.9	72.9	69.7	233.85
	change	1.7	-3.6	1.4	5.9	1.6	1.3	4.3	7.9	9.0	0.1	3.6	1.2	39.38
Slovakia	2003	48.1	59.0	58.5	82.9	35.2	62.9	33.7	62.0	97.7	48.4	24.1	37.6	41.489
	change	7.5	5.8	12.7	25.3	13.4	4.4	5.6	8.7	32.5	5.6	2.2	-2.1	-2.634

Source: Author's computation based on DSI data sets

of exchange rates. In case of lower price levels, the appreciation of national currencies can support the rate of the convergence process. The importance of the exchange rate is illustrated in the last column of Table 2. The significant appreciations took place only in the Czech Republic, Lithuania and Slovakia. This means that only in these countries both channels of convergence of comparative price levels were used. On the other hand, however, the depreciation of national currency, which took place within the last five years in Slovenia, had a contra-productive effect.

The aggregated data describing the situation and the dynamics of price level convergence are presented in Table 3. The applied indicator of similarity measure (the sigma-convergence approach) was based on the variation of individual measures. A direct comparison of variability can lead to spurious conclusions because the absolute values of variables are significantly different among the individual groups of countries. Due to this fact, the coefficients of variation were used instead of simple variations to analyse these differences. The values of variation coefficients for years 1999 and 2003 are presented in Table 3.

These data indicate that there are two different groups of countries in the European Union. These two groups have more homogenous prices than the European Union as a whole. The coefficients of variation for fifteen "old" and ten new EU members separately are lower than those for all twenty five EU members together. With the exception of education, housing and alcohol expenses, the price levels in fifteen old EU members are very similar and the corresponding coefficients of variation ranged about 15% or less in 2003. The calculated coefficients of variation proved again that the highest convergence was typical for easily negotiable commodities, i.e. for

clothing, communication and household furnishing expenditures.

The group of new EU members was more heterogeneous. The highest variability was found out in prices of those commodities, the prices of which were significantly influenced by governmental interventions (i.e. expenses for education, health care, housing and alcohol). On the other hand, the tradability in the international markets makes prices of clothing almost indifferent.

Developmental trends in convergence of prices were not explicit even in the old fifteen EU countries. During the last five years, divergent trends appeared in prices of food, housing and transportation. In case of communication prices, it is possible to identify a highly positive impact of price liberalisation on the price levelling. In the group of new member countries convergent trends also prevail and are even stronger. A significant divergence occurred in prices of alcohol and communications and can be ascribed attributed partly to differences in governmental interventions into these branches and partly to reforms already implemented in some of these countries.

Although the results of new EU members as a whole are satisfactory, essential differences can be found when evaluating the individual countries. In 2003, their comparative price levels and, above all, the rate of convergence rise questions concerning the problem of reaching a reasonable price level within an adequate time horizon, i.e. preferably before joining the European Monetary Union. The projections of time intervals (years) required to reach the European price level are presented in Table 4. For the year 2003, the comparative price levels and the rate of convergence within the last five years were used to calculate the expected time intervals durations by means of a

Table 3. Coefficients of variation in price level indices

		Price level	Food	Alcohol	Clothing	Housing	Furnishing	Health care	Transport	Communication	Recreation	Education
EU-25	1999	34.6	26.9	39.7	20.2	51.9	22.8	48.3	26.4	29.8	30.8	53.9
	2003	31.0	26.5	38.5	10.5	47.6	22.3	42.1	24.7	19.3	27.1	50.0
EU-15	1999	14.5	11.4	30.0	10.0	24.8	12.4	19.1	14.6	25.6	12.5	20.3
	2003	14.0	13.4	30.2	8.0	26.3	11.1	18.1	15.7	10.7	12.7	20.3
ACC-10	1999	26.4	24.5	28.2	17.6	35.0	17.0	53.5	14.3	25.6	30.7	64.7
	2003	23.1	22.0	32.5	9.0	30.3	15.5	43.0	13.6	27.3	23.6	56.7

Source: Author's computation based on the Eurostat data sets

Table 4. Projected duration of reaching the EU price level (years)

	Price level	Food	Alcohol	Clothing	Housing	Furnishing	Health care	Transport	Communication	Recreation	Education	Restaurants
Cyprus	4.4	-2.0	-4.9	-9.2	3.5	-10.7	-0.7	7.0	-10.2	-3.0	0.1	-3.7
Czech Republic	16.6	20.5	10.7	-0.3	17.5	-138.7	15.7	16.0	2.7	16.2	18.6	29.4
Estonia	30.6	-32.3	-66.8	1.7	28.1	48.1	13.6	44.5	8.0	21.7	33.7	8.1
Hungary	13.7	16.2	8.4	2.4	23.1	-727.5	10.8	9.2	4.5	10.1	10.4	13.6
Latvia	44.3	-84.0	-42.8	3.7	14.9	-37.6	25.9	-40.2	4.8	35.9	29.4	-42.5
Lithuania	23.6	97.8	-86.0	2.3	26.2	38.2	30.5	15.7	-3.3	19.0	68.4	6.3
Malta	61.8	80.9	-4.5	2.6	-88.6	45.1	67.6	-102.4	-17.4	14.5	30.4	43.8
Poland	77.4	70.6	-19.8	10.3	85.0	59.6	24.2	74.3	-10.3	28.4	37.1	-504.6
Slovenia	62.7	-12.8	94.4	4.8	73.3	93.4	29.6	10.3	14.9	652.4	31.2	103.9
Slovakia	21.6	25.5	11.0	2.6	10.9	32.0	29.9	15.8	0.3	29.5	74.3	-90.0

Source: Author's computation based on the Eurostat data sets

procedure, which were similar to the computation of compound interests. In Table 4, the positive values represent the number of years that are needed for the adaptation to the starting EU price level of the year 2003. The negative figures indicate the rate of divergence rate.

It is definitely not necessary that the prices in the EU countries would completely converge but the smaller differences could be certainly positive. The results of Cyprus (Tabs 2 and 4) indicate that the price convergence has been already finished. The Czech Republic, Hungary, Slovakia and Lithuania will probably approach the EU price level within the time horizon of one or two decades. In 2003, their comparative price levels ranged from 48% to 55%. Should this rate of convergence continue, they can reach about 80% of this level in 2010 when the enlargement of the European Monetary Union is preliminary planned to take place.

Poland, Slovenia and Malta show the slowest rates of convergence. The comparative price levels in Slovenia and Malta are already about 70% of the EU prices, so that in spite of this slower rate of convergence these new member countries will also approach to the 80% price level in 2010. Quite different is the position of and the development in Poland. In 2003, the Polish comparative price level reached the level of nearly 50%, so that it can be expected that if the rate of convergence the Polish price levels will remain unchanged, this country will be at the level lower than 55% in the year 2010. As compared to other candidates

of the European Monetary Union, this result seems to be inadequate. The Polish price levels are the worst result nearly in all categories of consumption expenditures; of them, the food and housing prices are the most important due to their greatest impact on the level of the aggregate prices.

CONCLUSION

The analysis of price levels of consumer expenditures showed that the adaptation process toward the high level of mutual convergence has to continue for at least two decades in 21st century. The converging trend is unambiguous in the case of the new EU members, while the analysis of the core EU countries resulted in presence of divergent signs for the food and housing expenditures. The new EU member countries converge from significantly different initial positions not only in shares of expenditures but also in comparative price levels. In these countries, the convergence process is running simultaneously through more channels. The exchange rate channel is used in a greater extent only by the Czech Republic, Lithuania and Slovakia. These countries also proved the highest speed of the price level convergence. The other countries rely mainly on changes in domestic prices, i.e. the inflation channel.

We can conclude that from the viewpoint of price convergence, all new EU members are capable to reach the price levels approximating to the average

price level of other countries of the European Union during the first decade of 21st century except Poland. The results of Polish economy indicate that without any essential change in the rate of price convergence, it will not be possible to succeed in closing this price gap. The Polish economy is the biggest one and, therefore, also the most important among the new EU members. In spite of this, however, it seems that it is also the worst prepared one as far as the level of consumption prices is concerned. We can only hope that the low grade of Polish readiness in this partial aspect – price level convergence – does not threaten the stability and dynamics of the whole region.

REFERENCES

- Balassa B. (1964): The purchasing Power Parity Doctrine: A Re-appraisal. *Journal of Political Economy*, 72: 584–596.
- Bett C., Devereux M. (1996): The Exchange Rate in the Model of Pricing to Market. *European Economic Review*, 40: 1007–1021.
- Cecchetti S.G., Mark N.C., Sonora R. (1999): Price level converge among United States cities: Lesson for European Central Bank. Washington, NBER research paper no. 37, 27 p.
- DSI. Internet Data Shop [on-line]. [cit. 22.3.2005]. Accessible at the address: <<http://195.145.59.167/ISAPI/D6Demo.Dll/Chapters?ID=5F0B86>>
- Engel C. (1993): Real exchange rates relative prices: An empirical investigation. *Journal of Monetary Economics*, 32: 35–50.
- European Communities (2003): Household budget surveys in the EU. Luxembourg, Office for Official Publication of European Communities, 218 p.; ISBN 92-894-5435-0.
- Eurostat. Free Data 90958 [on-line]. [cit. 22.3.2005]. Accessible at <<http://europa.eu.int/comm/eurostat/newcronos/queen/display.do>>
- Kenen P.B. (1969): The theory of optimum currency areas: An eclectic view. In: Mundel R.A., Swoboda A.K. (eds.): *Monetary Problems of the International Economy*, pp. 41–60. Chicago: University of Chicago Press.
- Lafrance R., St-Amant P. (1999): Optimal currency areas: A review of the recent literature. Bank of Canada, Working Paper 99-16, 26 p.; ISBN 0-662-28180-2.
- PricewaterhouseCoopers. (2002): Comparative consumer prices in the Eurozone&consumer price inflation in the changeover period [on-line]. [cit. 22.4.2005] 114 p. Accessible at <<http://www.pwcglobal.com/extweb/industry.nsf>>
- PricewaterhouseCoopers. (2004). Retail&Consumer – Winning strategies in Russia and Central&Eastern Europe [on-line]. [cit. 22.4.2005] 114 p. Accessible at <<http://www.pwcglobal.com/extweb/ncpress-releases.nsf>>
- Riviera-Batiz L., Oliva M. (2003): *International Trade: Theory, Strategies and Evidence*. OUP, 712 p.; ISBN 0-19-829711-4.
- Sinn H.W. (2002): EU enlargement and the future of the welfare state. *Scottish Journal of Political Economy*, 49 (Feb): 84–98.
- Ševela M. (2004): Convergence of household expenditures of the EU-members and acceding countries in years 1995-2002. *Agricultural Economic – Czech*, 50 (7): 301–307.

Arrived on 19th September 2005

Contact address:

Marcel Ševela, Mendel University of Agriculture and Forestry, Zemědělská 1, 613 00 Brno, Czech Republic
tel.: +420 545 132 503, email: sevela@mendelu.cz
