

**Maria Forlicz**

Wrocław University of Economics

**Agata Strzelczyk**

Wrocław School of Banking

## **Structure of household expenditure in Poland and Ukraine within the years 2000-2009**

**Abstract.** The article is a synthetic comparison of the structure of household expenditure in Poland and Ukraine and an analysis of the dependencies found in the individual expenditure groups. The research conducted covered the years 2000-2009.

**Key words:** consumer, household, structure of expenditure, household expenditure

A household is the most important component of every economy, since the consumers are those that indirectly frame the stock exchange listings, create and eliminate goods, services and jobs<sup>1</sup>. The times when demand exceeded the supply multiple times are gone for ever. Nowadays, the knowledge of the current needs of a household as well as its preferences is becoming almost indispensable in all sectors of the economy. Observations of the market practices imply that the consumer demand monitoring should be conducted in a transboundary manner, and not merely within a local range. By that means, a product can actually be recognised in the markets other than the domestic one as well. From a company's perspective, not only are such activities a chance to gain further profits, but also an opportunity to diversify the revenue sources. As a research purpose of this article, the authors have assumed a comparison between the household expenditure incurred in two neighbouring countries, namely in Poland and Ukraine, and an analysis of the potential dependencies to be found in the comparable groups of consumer expenses.

<sup>1</sup> "There is only one boss: the customer, and he (or she) can fire everyone in the company from the chairman and down, simply by spending their money somewhere else", claimed Sam Walton, the Wal-Mart chain founder.

Table 1. Structure of the Ukrainian household expenditure within the years 2000-2009

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Household expenditure [UAH/household]	541.3	607	658.3	736.8	903.5	1229.4	1442.8	1722	2590.4	2754.1
Structure in %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
CONSUMER GOODS AND SERVICES	93.3	93.7	92.8	93.3	92.6	91.1	90.5	90	86.2	87.8
Food and non-alcoholic beverages	64.9	62.6	59.1	58.6	57.5	56.6	53.2	51.4	48.9	50
Alcoholic beverages, tobacco products and narcotics	3	2.8	2.6	2.8	2.8	2.9	2.6	2.6	2.2	3.2
Industrial products and services	25.4	28.3	31.1	31.9	32.3	31.6	34.7	36	35.1	34.6
Clothing and footwear	x	x	5.4	5.3	5.7	5.7	5.8	5.9	5.9	5.6
Household maintenance and energy supplies	x	x	10.5	10.4	9.7	8.5	9.6	10.9	9.1	9.4
Household accessories and domestic purposes	x	x	1.7	2.0	2.3	2.6	2.8	2.9	2.8	2.3
Health	x	x	3.0	2.8	2.8	2.5	2.5	2.5	2.7	3.1
Transport	x	x	3.0	3.3	3.0	3.0	3.7	3.4	4.0	3.8
Communication	x	x	1.3	1.5	1.8	2.1	2.6	2.6	2.3	2.5
Recreation and culture	x	x	1.9	2.3	2.4	2.6	2.4	2.4	2.5	1.8
Education	x	x	1.2	1.1	1.3	1.1	1.4	1.3	1.3	1.3
Restaurants and hotels	x	x	1.1	1.4	1.6	1.7	2.2	2.3	2.4	2.5
Other products and services	x	x	2.0	1.8	1.7	1.8	1.7	1.8	2.1	2.3
OTHER NON-CONSUMER SPENDING	6.7	6.3	7.2	6.7	7.4	8.9	9.5	10	13.8	12.2

Source: State Committee of Statistics: <http://www.ukrstat.gov.ua> [10<sup>th</sup> January 2011].

The study of the expenditure structure in the Polish and Ukrainian households was conducted based on the data from the years 2000-2009. The Ukrainian statistics<sup>2</sup> show the percentage of the household expenditure (in Ukrainian hryvnia) per a single household covered by the individual types of expenditures for consumer goods and services.

The Polish statistical data<sup>3</sup> are of a slightly different structure (overall household expenditures are provided in Polish zlotys per person along with the amounts spent on the individual consumer goods and services), however, after applying certain transformations, they could be developed into a form comparable with the Ukrainian information.

<sup>2</sup> Based on the data published by the State Committee of Statistics: <http://www.ukrstat.gov.ua> [10<sup>th</sup> January 2011].

<sup>3</sup> "Household budget surveys in 2009", [http://www.stat.gov.pl/gus/5840\\_3467\\_ENG\\_HTML.htm](http://www.stat.gov.pl/gus/5840_3467_ENG_HTML.htm) [10<sup>th</sup> January 2011].

Table 2. Structure of the Polish household expenditure within the years 2000-2009

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Household expenditure [PLN/person]	<b>599.49</b>	<b>609.72</b>	<b>624.99</b>	<b>677.81</b>	<b>694.7</b>	<b>690.3</b>	<b>744.81</b>	<b>809.95</b>	<b>904.27</b>	<b>956.68</b>
Structure in %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
CONSUMER GOODS AND SERVICES	96.4	96.1	95.9	95.7	95.8	95.7	95.7	95.8	95.7	95.5
Food and non-alcoholic beverages	<b>30.8</b>	<b>31.0</b>	<b>29.5</b>	<b>27.8</b>	<b>28.1</b>	<b>28.1</b>	<b>27.1</b>	<b>26.6</b>	<b>25.6</b>	<b>25.1</b>
Alcoholic beverages, tobacco products and narcotics	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>2.8</b>	<b>2.7</b>	<b>2.7</b>	<b>2.7</b>	<b>2.7</b>	<b>2.6</b>	<b>2.7</b>
Industrial products and services	<b>62.5</b>	<b>62.1</b>	<b>63.3</b>	<b>65.1</b>	<b>65.0</b>	<b>64.9</b>	<b>65.9</b>	<b>66.4</b>	<b>67.5</b>	<b>67.7</b>
Clothing and footwear	5.5	5.3	5.2	5.1	4.9	5.1	5.4	5.7	5.5	5.2
Household maintenance and energy supplies	17.9	18.8	19.9	21.0	20.3	19.7	19.7	18.4	18.9	19.7
Household accessories and domestic purposes	5.9	4.9	5.0	5.0	4.9	5.0	5.1	5.5	5.5	5.4
Health	4.4	4.5	4.5	4.9	5.0	5.0	4.9	4.9	4.8	5.0
Transport	9.9	8.8	8.5	8.6	9.1	8.9	8.8	9.3	10.1	9.7
Communication	3.5	4.3	4.5	4.7	4.7	5.3	5.2	5.0	4.8	4.5
Recreation and culture	6.7	6.5	6.4	6.6	6.8	6.8	7.1	7.6	7.9	8.0
Education	1.4	1.5	1.6	1.5	1.5	1.3	1.4	1.4	1.2	1.2
Restaurants and hotels	1.4	1.4	1.6	1.7	1.8	1.9	2.0	1.9	2.0	2.2
Other products and services	4.9	5.1	5.0	5.0	5.0	5.0	5.1	5.3	5.2	5.3
Pocket money	0.8	1.0	1.0	0.9	1.0	1.0	1.2	1.3	1.6	1.6
OTHER NON-CONSUMER SPENDING	3.6	3.9	4.1	4.3	4.2	4.3	4.3	4.2	4.3	4.5

Source: authors' own study based on: "Household budget surveys in 2009", [http://www.stat.gov.pl/gus/5840\\_3467\\_ENG\\_HTML.htm](http://www.stat.gov.pl/gus/5840_3467_ENG_HTML.htm) [10<sup>th</sup> January 2011].

Having analysed the level and changes in the consumer expenditure as a part of the overall household expenditure in both countries (Fig. 1), one can primarily notice that in Poland, the consumer spending percentage share in the overall expenditure remained nearly unchanged within the last few years, and it fluctuated around the level of ca. 96%. On the other hand, one could observe a decrease trend of the consumer spending share in overall expenditure in Ukraine from the level of ca. 93% in 2000 to ca. 86% in 2008, with a slight increase up to 88% in 2009. However, within the whole period analysed, the share of consumer spending in the overall expenditure in Poland was higher than in Ukraine. It seems there is no dependence between the consumer spending share in the overall expenditure in Poland and Ukraine (based on the annual relative changes in the level of share, the coefficient of correlation between the consumer spending share and the overall expenditure in Poland and Ukraine was calculated to equal  $-0.3131$  on the p-value of  $0.4119$ ).

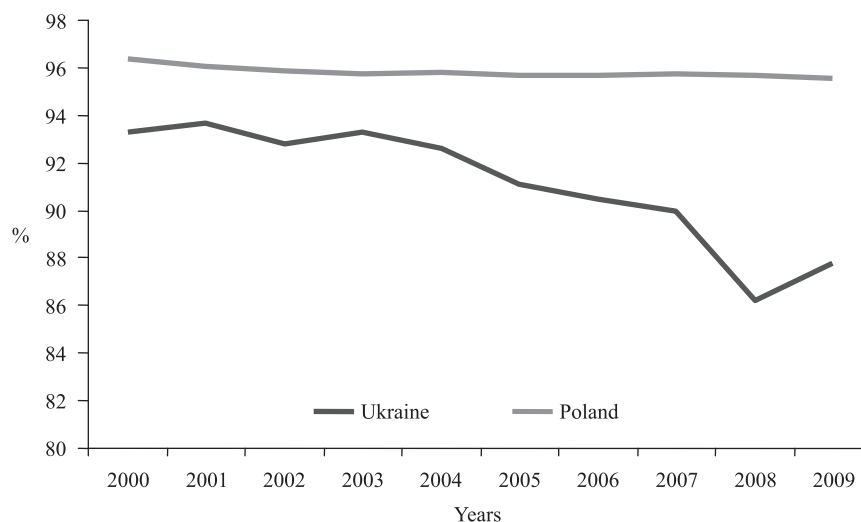


Fig. 1. Spending on consumer goods and services as a percentage of the overall household expenditure

Source: authors' own study based on: "Household budget surveys in 2009", [http://www.stat.gov.pl/gus/5840\\_3467\\_ENG\\_HTML.htm](http://www.stat.gov.pl/gus/5840_3467_ENG_HTML.htm); <http://www.ukrstat.gov.ua> [10<sup>th</sup> January 2011].

The statistical data maintained by both the Ukrainian as well as the Polish state statistical offices pertaining to the expenditure on consumer goods and services have been broken down into the following categories:

- food and non-alcoholic beverages,
- alcoholic beverages, tobacco products (and narcotics, according to the Polish statistics)
- industrial products and services.

The expenditures on industrial products and services have been divided into:

- clothing and footwear,
- household maintenance and energy supplies,
- household accessories and domestic purposes,
- health,
- transport,
- communication,
- recreation and culture,
- education,
- restaurants and hotels,
- other products and services,
- pocket money (included in the Polish statistics only).

In the following sections of the article, the authors have discussed the trends observed for the share of the said expenditures in the overall expenditure (consumer and non-consumer spending).

Firstly, the expenses incurred on food and non-alcoholic beverages will be analysed, since to a considerable extent they evidence the actual welfare of the given country. The higher a country is developed, the smaller portion of the overall expenditure the food expenses are. Fig. 2 depicts the trend of changes in the share of the expenditures on food and non-alcoholic beverage in the years analysed, and trend lines have been added to estimate the rate and direction of those changes. It is clearly noticeable that the level of expenditures analysed still remains higher in Ukraine than in Poland, however, the directional parameters of the trend line imply that the share of these expenditures drops more rapidly in Ukraine than in Poland ( $-1.7309$  vs.  $-0.6403$ ). This implies that Ukraine is catching up with Poland to a certain degree. As for the overall consumer spending, also for the food expenditures, the coefficient of correlation between the relative changes of their share in the overall expenditures have been calculated to obtain the result of  $0.2486$  on the  $p$ -value of  $0.519$ . Based on those premises and a visual assessment of the scatter graph, one may claim that in the countries of interest there are no dependencies between the share of expenditures on food and non-alcoholic beverages.

Generally speaking, as far as the household expenses incurred on alcoholic drinks and tobacco products are concerned, their share in the overall expenditure is approximately identical in Poland and Ukraine, and since 2000 it has been

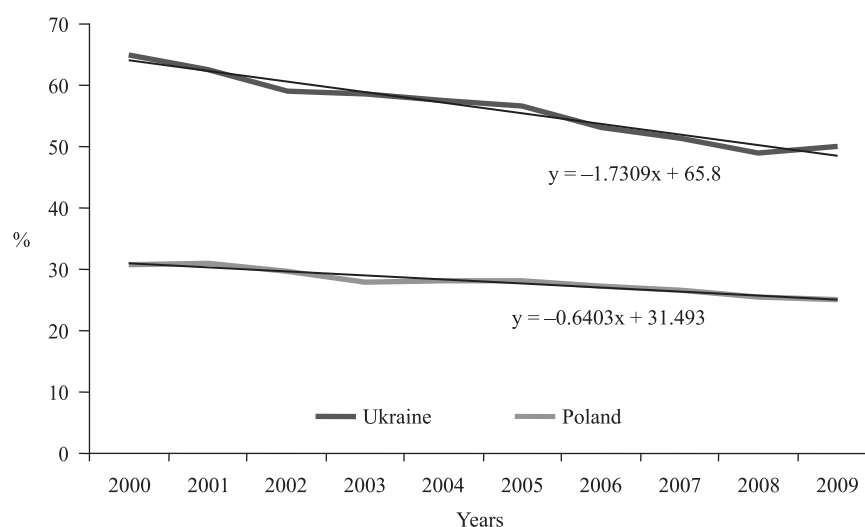


Fig. 2. Spending on food and non-alcoholic beverages as a percentage of the overall household expenditure

Source: as in Fig. 1.

fluctuating around 2.8% (Fig. 3). However, until 2008, one could observe a slight decrease trend and a slight increase in the share of those expenditures in 2009, probably due to the international economic depression. One may also hazard a guess that there is in fact a correlation between the share of those expenditures in the overall expenditure in Poland and Ukraine. The correlation coefficient for the relative changes of share, unfortunately calculated for 9 observations only, equals ca. 0.53 on the p-value of 0.145.

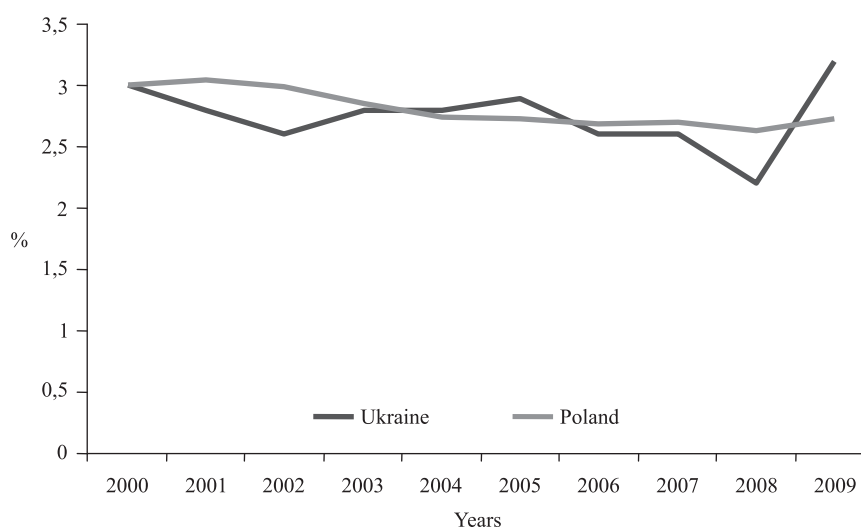


Fig. 3. Spending on alcoholic beverages and tobacco products as a percentage of the overall household expenditure

Source: as in Fig. 1.

Within the last decade, the average expenditures on industrial products and services have increased their share in the overall expenditure both in Poland and Ukraine (Fig. 4). In Ukraine, they have grown by nearly 1% (0.9855% to be more precise) in the share in overall expenditure every year, whereas in Poland – by more than 0.5% per annum (exactly 0.6188%). In spite of all, the share of the expenditure on industrial products and services in the overall expenditure in Ukraine is still lower than in Poland. Furthermore, in the years 2008 and 2009 in Ukraine, a decrease was reported in the share of those expenses in the overall expenditure.

The trend observed in the share of the individual components of expenditures the industrial products and services as a percentage of the overall household expenditure within the years 2002-2009 has been depicted in Fig. 5-13.

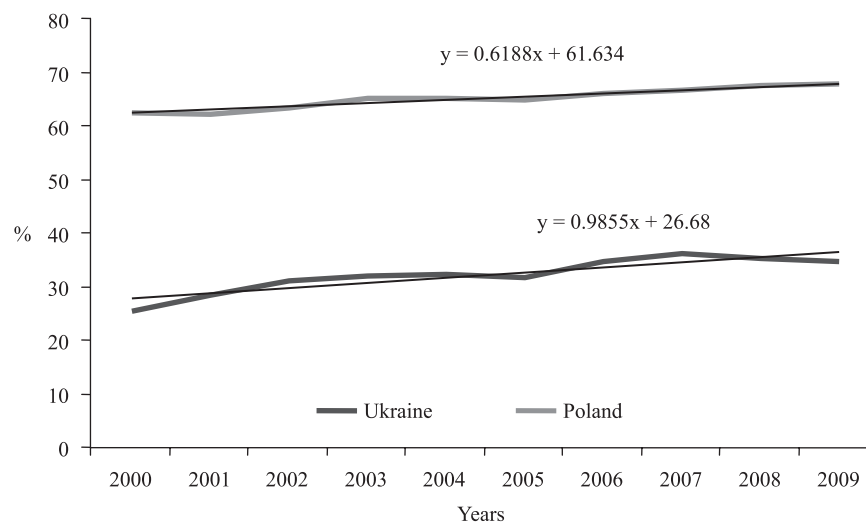


Fig. 4. Spending on industrial goods and services as a percentage of the overall household expenditure

Source: as in Fig. 1.

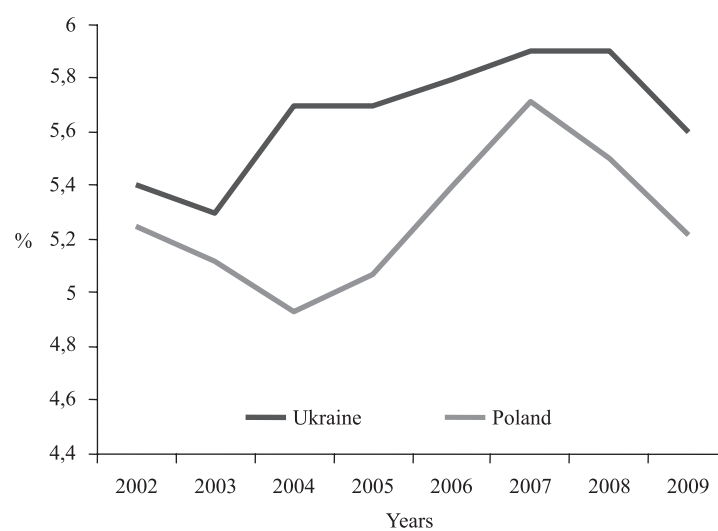


Fig. 5. Spending on clothing and footwear as a percentage of the overall household expenditure

Source: as in Fig. 1.

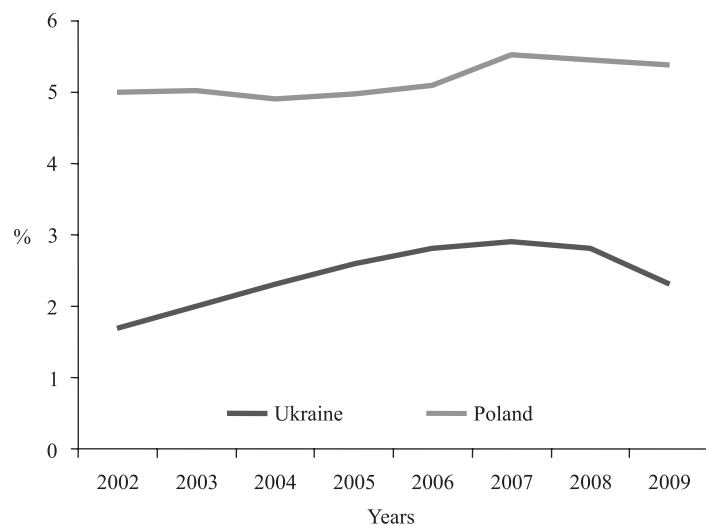


Fig. 6. Spending on household equipment and maintenance as a percentage of the overall household expenditure

Source: as in Fig. 1.

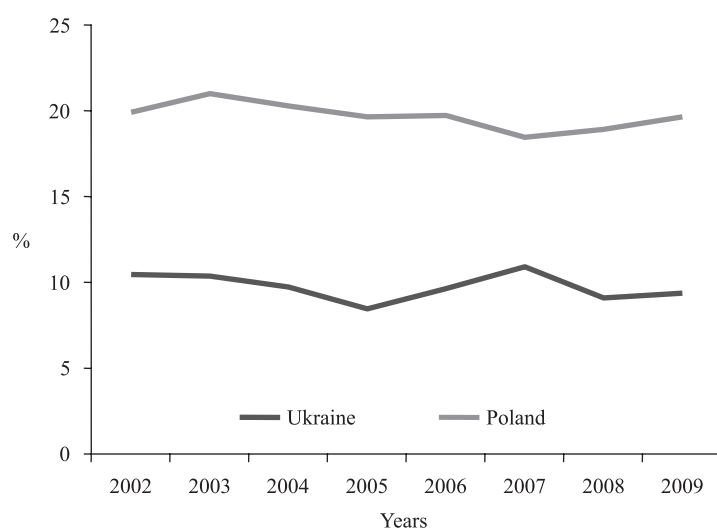


Fig. 7. Spending on domestic purposes and energy supplies as a percentage of the overall household expenditure

Source: as in Fig. 1.



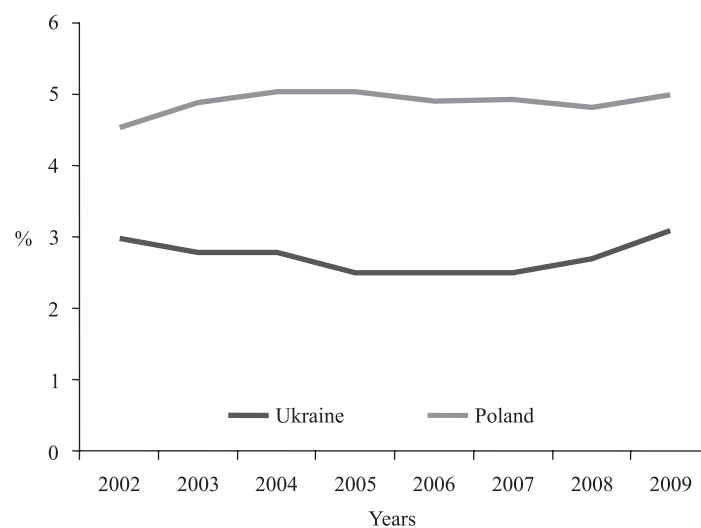


Fig. 8. Spending on health as a percentage of the overall household expenditure

Source: as in Fig. 1.

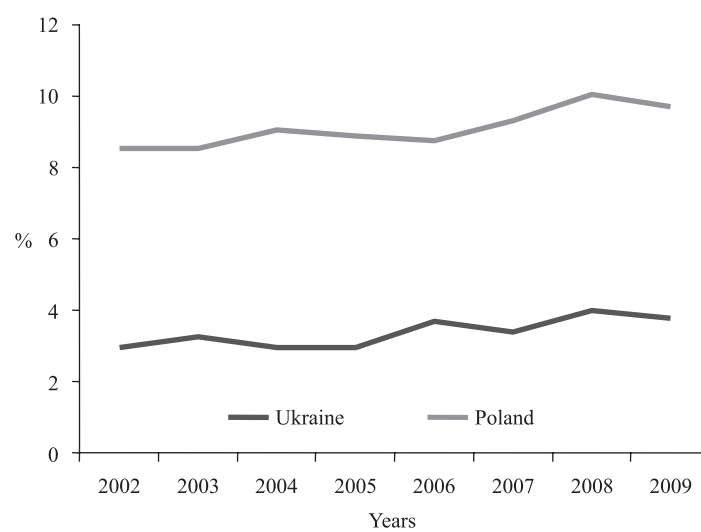


Fig. 9. Spending on transport as a percentage of the overall household expenditure

Source: as in Fig. 1.

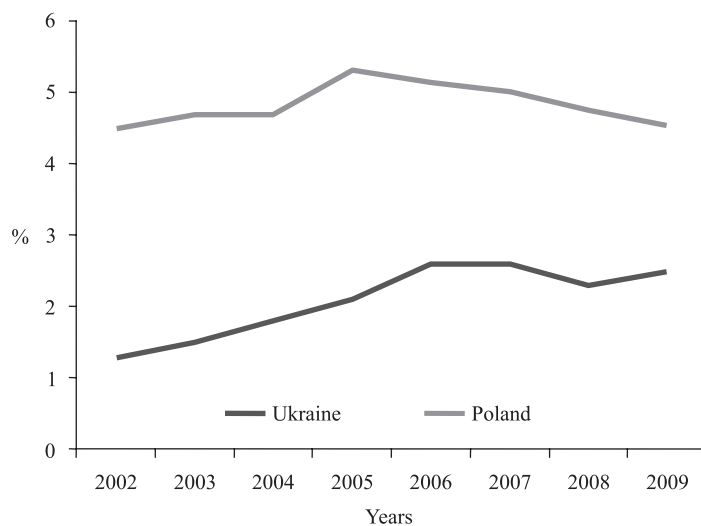


Fig. 10. Spending on communication as a percentage of the overall household expenditure

Source: as in Fig. 1.

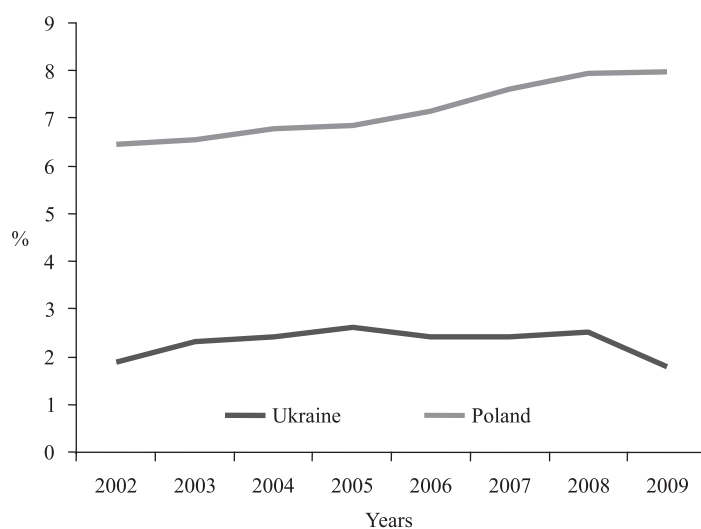


Fig. 11. Spending on recreation and culture as a percentage of the overall household expenditure

Source: as in Fig. 1.

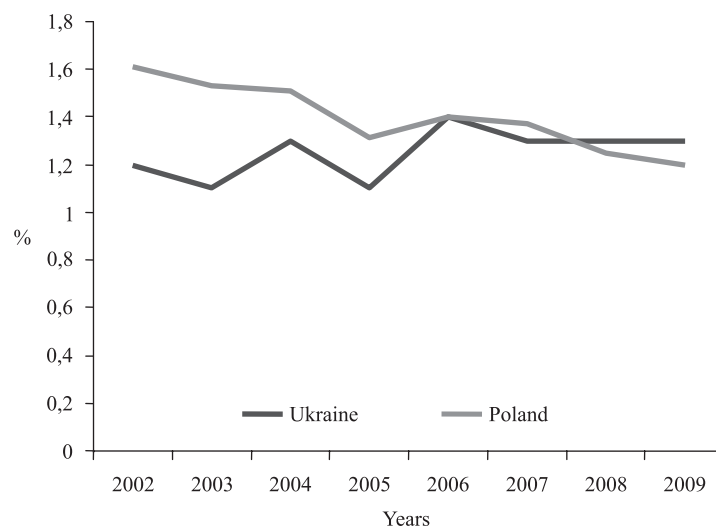


Fig. 12. Spending on education as a percentage of the overall household expenditure  
Source: as in Fig. 1.

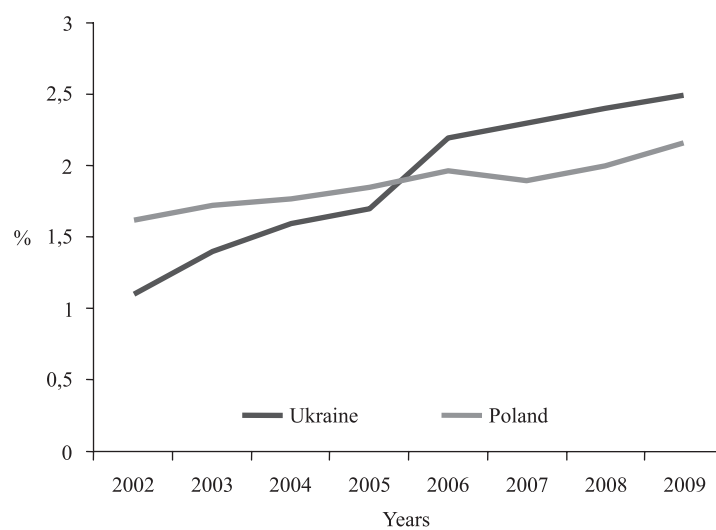


Fig. 13. Spending on restaurants and hotels as a percentage of the overall household expenditure

Source: as in Fig. 1.

As one may observe in Ukraine compared to Poland, most of the household budget has been allocated on clothing and footwear, and since 2006, also on eating in restaurants and accommodation in hotels. It is also interesting to analyse the trends in the education expenditures. Not so long ago, they were higher in Poland than in Ukraine, but they kept systematically falling to reach a level on which Ukraine now leads in this expenditure class, although the difference is inconsiderable, i.e. 0.1%. In the majority of other expenditure classes, one can notice that the curves of share in the overall expenditure in both countries are gradually coming together or there is a parallelism of changes. Exceptions to this rule are the expenditures on recreation and culture for which the discrepancy between Poland and Ukraine has been growing.

To sum up the above considerations, it should be stressed that merely in two categories, namely alcoholic beverages and tobacco products as well as education, the percentage share of expenditures in the household budgets in both countries are comparable. Under all other categories, the discrepancies observed are quite considerable. The Ukrainian households are characterised by a higher share of spending on restaurants and hotels than the Polish ones. Furthermore, a Ukrainian consumer spends proportionally more of the latter's income on the necessities such as food, clothing and footwear. On the other hand, the Polish households spend relatively more on higher order commodities, such as health, industrial products and services as well as recreation and culture.

In order to anticipate the changes in the structure of household expenditure in Poland and Ukraine, one must bear in mind the relevant differences in the income elasticity of demand for goods ( $E$ ), since standard goods are characterised by positive income elasticity of demand ( $E > 0$ ), however, for the goods such as necessities  $-0 < E < 1$ , whereas for luxury goods  $-E > 1$ . For the lower order commodities, the income elasticity of demand is negative ( $E < 0$ ). The foregoing implies that as the incomes increase, the share of the higher order (luxury) commodities rises, since "a rise of income of 1% increases the magnitude of demand (and the total expenses) for such commodities by more than 1%"<sup>4</sup>. For the category of necessities and lower order commodities, the said dependence is reversed: as the incomes increase, the share of such goods decreases, since "an income increase of 1% increases the demand by less than 1%" (for necessities) or "the demand for them drops on the same prices"<sup>5</sup> (lower order commodities). Therefore, the observations made, supported by the conclusions drawn from other publications, imply that as the level of disposable income increases both in Poland and Ukraine, the percentage share of household expenditure on the necessities will decrease, whereas the share of expenditure incurred on higher order commodities can be expected to grow.

<sup>4</sup> D. Begg, S. Fischer, R. Dornbusch R., *Ekonomia*, Państwowe Wydawnictwo Ekonomiczne, Warszawa 1993, p. 129.

<sup>5</sup> Ibidem.

## **Literature**

Begg D., Fischer S., Dornbusch R., *Ekonomia*, Państwowe Wydawnictwo Ekonomiczne, Warszawa 1993.

<http://www.stat.gov.pl>.

<http://www.ukrstat.gov.ua>.