

The Analysis of the Efficiency of Trade Costs Management in Serbia

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ABSTRACT

In conditions of prolonged economic crisis, trade profitability can be only to a certain extent improved by an increase in selling prices. Opportunities are by far better with cost reduction. For this purpose, it is necessary to manage costs more efficiently, primarily to have adequate system of their control. Based on original empirical data this paper analyzes efficiency of total costs - the cost of goods sold and operating expenses (i.e. determinants of their size and structure are envisaged) of trade in Serbia. In this context we analyze the size of margin of trade in Serbia, with a special focus on the trade of other countries, especially the developed market economies. The conclusion is that they are high (except labor costs) in relation to the cost of trade of other countries. Due to this, their decline (in particular, the cost of goods sold) can significantly increase the profitability of the trade in Serbia in the future. Among other things, there is an important role of increased use of the concept of the so-called "green economy" (which may contribute to the reduction of operating costs up to 30%).

KEYWORDS: *cost of goods sold, operating costs, margin, efficiency, "green economy".*

JEL CLASSIFICATION: *F65, L81, M40*

INTRODUCTION

The main objective of this paper is based on original empirical data, thoroughly investigate factors that influence the effectiveness of cost management (i.e. their size and structure) of trade in Serbia. The impact of labor productivity, turnover of fixed assets and inventory turnover on the effectiveness (economy) of trade business in Serbia are particularly analyzed. In order to complete the assessment, the efficiency of the trade business in Serbia is compared with some other countries, especially the developed market economies. In accordance with the obtained results, appropriate measures are proposed for its improvement in the future, with special emphasis on "green economy".

Extensive *literature* in the West deals with the analysis of the dynamics of the size and structure of costs and margins, i.e. efficiency of trade business. In this respect, literature in Serbia do not lag behind (Lai, et al. 2010; Levy, 2007; Berman, 2010; Lukic, 2011a,b; Lukic, 2012; Lukic, 2013, b, c, d, e; Lukic, 2014; Lovreta, 2011, 2013). Theoretical, methodological and practical knowledge in this paper serve as a fundamental basis for thorough empirical research of factors that affect the efficiency of trade cost management in Serbia.

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The primary *hypothesis* of the problems researched in this paper is that the rational use of resources significantly affects the efficiency (economy) of trade business in Serbia, which was confirmed on the empirical basis. As part of this, related hypotheses are tested, such as the impact of the application of the Toyota business principles, information technology and, in particular, the "green economy" on business efficiency of trade in Serbia.

Research *methodology* of the given hypothesis is primarily based on an international comparative and statistical analysis (descriptive statistics, correlation).

The main sources of data for testing these hypotheses are relevant literature, the annual financial statements of the Serbian Business Registers Agency, as well as internet sources.

1. GLOBAL CHARACTERISTICS OF THE SIZE AND STRUCTURE OF COSTS AND MARGIN IN TRADE OF SELECTED COUNTRIES

In order to analyze the effectiveness of cost management in trade in Serbia we will present the global characteristics of the size and structure of costs and margins of trade in selected countries. In relation to other economic activities, especially manufacturing, the cost structure of trade is specific. The biggest share of the total trade costs refers to the *cost of goods sold* (acquisition value of goods sold). They (i.e. the cost of goods sold) participate in revenue up to 75 - 80% (Forfás, 2008). The share of *operating costs* as the other significant category of trade costs in revenue is 20 - 25 % (Forfás, 2008). Operating costs are in full covered by margin as a component, in addition to acquisition value and taxes, the retail price. In the structure of operating expenses, the largest share of the cost relates to *salaries and wages*. In order to accomplish - target cost and target profit - it is therefore necessary to know the dynamics of the size and cost structure, and more efficiently manage the total cost of trading. In addition to traditional, the modern concepts are analyzed in this paper to the extent necessary for such thorough analysis of the problem - reduction of costs in function of achieving a target profit, on the example of trade in Serbia.

As a component of the retail price, *margin* is used to cover operating costs and for realization of a certain profit. It differs among countries, retailers and product categories.

Table 1 shows the gross margin (in percentage of sales) in trade of selected countries for 2006.

Table 1. International comparison of gross margins in trade, 2006

	Wholesale	Retail
Australia	20.3%	25.7%
United States	19.1%	27.8%
Canada	15.0%	25.0%

Source: Productivity Commission 2011, Economic Structure and Performance of the Australian Retail Industry, Report no. 56, Canberra.

In all observed countries, the wholesale margin is less than retail margin. Wholesale margin is the smallest in Canada. Retail margin is higher in the U.S. than in Australia and Canada.

Gross margin is different in domestic and foreign retail chains. So, for example, in China, it is considerably higher in foreign than in national retail chains (Table 2).

Table 2. Gross profit margin of domestic and foreign retailers in China, 2010-2012

Gross profit margin	2010	2011	2012
Domestic players	14.3%	15.9%	15.9%
Foreign players	14.7%	16.7%	16.8%

Source: Fung Business Intelligence Centre (2013)

Margin is different by retail formats. The data in Table 3 show this on the example of China.

Table 3. Gross profit margin for retail formats in China, 2011-2012

	2012 (%)	2011(%)	Percentage of change
Convenience stores	17.3	16.5	0.8
Supermarkets	14.5	15.4	-0.9
Hypermarkets	12.4	13.1	-0.7
Professional stores	13.1	14.2	-1.1
Specialty stores	17.0	18.3	-1.3
Department stores	17.5	18.6	-1.1
Average	15.6	16.8	-1.2

Source: Fung Business Intelligence Centre (2013)

The information in the table show that the margin ranges from 12.4 % (hypermarkets) to 17.5 % (department stores). Compared to the average (15.6 %), the lowest is in the hypermarkets.

Generally speaking, the structure of the margin consists of operating costs and profit. It differs by retail formats. It is clearly shown in Table 4, on the example of China. Gross profit margin, operating expenses and net profit margin are the lowest in hypermarkets. It is quite understandable when one takes into account the law of economy of scale.

Table 4. The structure of margin - operating costs and profit - in different retail formats in China in the 2012

	Gross profit margin (%)	Operating expenses (%)	Net profit margin (%)
Convenience stores	17.3	13.95	3.35
Supermarkets	14.5	12.05	2.45
Hypermarkets	12.4	10.04	2.00
Professional stores	13.1	11.80	1.30
Specialty stores	17.0	12.85	4.15
Department stores	17.5	15.35	2.15
Average	15.6	13.14	2.46

Source: Fung Business Intelligence Centre (2013)

The margin varies both by individual countries, retailers - companies, retail formats, and by individual product categories. Table 5 shows the gross margin on certain categories of products in observed countries.

Table 5. Gross margin in certain product categories (average, in percent)

	Australia	United States	UK/Europe	Global online
Department stores	44	38	44	24
Electronics	22	23	31	35
Apparel	60	49	61	51
Furniture & hardware	54	35	33	na
Jewellery	na	59	71	44

na - not available

Source: Productivity Commission 2011, Economic Structure and Performance of the Australian Retail Industry, Report no. 56, Canberra

According to the data in the table, the margin of certain categories of products ranges from 22 % (Electronics - Australia) to 71 % (Jewellery - UK / Europe). It is determined by the very nature of the product categories.

According to its characteristics, specific indicators are developed to monitor operational efficiency in trade (retail). The following are typical: output: sales, profit; input: area (shop size), population, inventory, employee, salaries, other costs; Tobit model independent variables: education of manager, experience of manager, experience of staff, age of the shop, dependent variable (Uyar et al., 2013). Based on the determinants and their numerical values and with application of appropriate measures, the efficiency of business operations in retail can be significantly improved.

Performance (i.e. the efficiency of business) in retail formats are certainly different. Table 6 shows performance in retail formats in China for 2012.

Table 6. Performance of selected retail formats in China 2012

	Department store	Hypermarkets	Supermarkets	Convenience store
Operating area (m ²)	42,038	11,863	2,315	144
Number of employees	1,421	327	74	8
Retail sales (million yuan)	1,139	285	41	5
Average sales per m ² (yuan / m ²)	28,000	26,000	20,000	42,000
Average customer spending (yuan / visit)	337	81	58	21
Gross margin (%)	14.3	13.7	13.4	17.2

Source: Fung Business Intelligence Centre (2013)

According to the data shown in the table, China's department stores are leading in terms of the operational area, number of employees, sales, average sales per m² and average customer's spending. Convenience store have the highest gross margin. These differences are due to the nature of their business.

In order to make international comparison of performance and cost-effectiveness of trade in Serbia, we will present a performance of trade and retail of New Zealand. The data are shown in table 7.

Table 7. Business performance of retail and services of New Zealand, 2011-2008

	2011	2010	2009	2008
Sales: closing stock (stock turn)	10.4	10.4	10.5	10.1
Salaries / wages as a percent of sales (%)	13.3%	13.2%	13.2%	12.7%
Gross margin (%)	26.2%	26.2%	26.2%	26.6%
Income per employee (\$000)	208.2	202.0	193.9	195.4
Surplus per employee (\$000)	6.2	5.9	3.9	5.9
Return on equity (%)	17.6%	17.4%	12.7%	19.1%
Return on total (%) assets	6.0%	6.0%	4.3%	6.7%
Net margin (before tax and exclusion of salaries and wages paid for work to proprietors (as % of total income)	3.0	2.9	2.0	3.0

Source: New Zealand Retailers Association (2013).

Gross retail margin in New Zealand is slightly greater than 26 %. and it is significantly higher than the retail margin in China (which is slightly above 15 %). It is specific that labor costs in retail New Zealand are high (approximately 13 %). This is a general feature of structure of operating expenses in retail (Forfás, 2008).

The margin is very important indicator of trade performance. The higher operating costs - higher the margin. High margin goes "hand in hand" with high operating costs (PWC, 2013). Table 8 shows the structure of total costs (in percentage of operating revenues) of retail in Canada for 2011.

Table 8. The structure of the total cost of retailing in Canada, 2011 (in percentage of total operating revenue)

	Operating expenses*	Cost of goods sold*	Gross margin
Total, all stores	21.8	73.1	26.9
Motor vehicle and part dealers	14.4	82.6	17.4
Furniture and home furnishings stores	33.3	57.4	42.4
Electronics and appliance stores	25.0	69.7	30.3
Building material and garden equipment and supplies dealers	28.5	66.7	33.8
Food and beverage stores	20.5	72.0	28.0
Health and personal care stores	28.5	68.1	31.9
Gasoline stations	6.8	86.6	13.4
Clothing and clothing accessories stores	42.3	48.8	51.2
Sporting goods, hobby, book and music stores	27.2	61.7	38.3
General merchandise stores	21.4	72.5	27.5
Miscellaneous store retailers	33.3	56.1	43.9

Note: * The author's calculation

Source: Statistics Canada, CANSIM, table 080-0023

According to the data shown in the table, the average cost of goods sold in Canadian retail in 2011 as a percentage of total operating revenue was 73.1 % and ranged in certain product categories from 48.8 % (Clothing and clothing accessories stores) to 86.6 % (Gasoline stations). That same year, the average operating costs from total operating revenue amounted to 21.8 %, and ranged in certain product categories from 6.8 % (Gasoline stations) to 42.30 % (Clothing and clothing accessories stores).

The situation is similar with the size of the gross margin which covers operating costs and makes some profit. As a percentage of total operating revenues, it amounted to 26.9 % in 2011 and ranged in certain product categories from 13.4 % (Gasoline stations) to 51.2 % (Clothing and clothing accessories stores). Therefore, the nature of the product categories largely determines the size of the cost of goods sold, operating expenses and gross margin - as measures - return on sales.

According to one study in Canada, gross margin in an average percentage of sales and in groceries it is 30 %, apparel - 58 % and others - 41.4 %. The main determinants of the cost of the shops are - labor and occupancy. Labor costs in average percentage of sales in groceries are 13%, apparel - 15 % and others - 14 %. Occupancy in average percentage of sales amount to 3.3 % in groceries, apparel - 16.3 % and others - 6.3 %. As an average percentage of sales general and administrative expenses are in groceries - 5.8 %, apparel 15.8 % and other - 11.5 % (PWC, 2013).

General and administrative expenses of human resources, finance, store operations, corporate services, IT, merchandising, marketing, supply chain and others differ among categories. So, for example, general and administrative expenses of merchandising are significant in apparel and department stores, compared to groceries and specialty (while the costs of store operations is reverse) (PWC, 2013).

There are differences in the size and structure of the margin and operating expenses for certain categories of products among retailers of Canada and the United States. For example, in Canada, for apparel the average percentage for observed indicators is as follows: gross margin - 58 %, labor costs - 15 %, general and administrative expenses - 15%, occupancy - 17 %; in the United States gross margin is 55 %, labor costs - 15 %, general and administrative expenses - 16% and occupancy - 15 % (PWC, 2013). Therefore, in Canada, gross margin and occupancy are higher and in the United States - general and administrative expenses. These differences are caused by numerous controlled and uncontrolled factors specific for Canada and the United States.

With increasing the size of the retailer, the competitiveness also increases in relation to medium and small, but with "doubling" of certain functions - effects of the economy of selling are to some extent neutralized. Therefore, the general conclusion is that the improvement of the efficiency of the control system of general and administrative costs significantly increases the profitability, rather than high margins (PWC, 2013).

2. THE ROLE OF TRADE IN CREATING ADDITIONAL VALUE OF THE SERBIAN ECONOMY

The role of trade in creating additional value of the Serbian economy is very important. In 2011 it participated with 10.6 % (wholesale 7.0 % and retail trade with 3.6 %) in total gross added value of the Serbian economy (Table 9).

Table 9. The structure of gross value added by sectors in the Serbian economy in 2011

Sector	%
Industry	27.1
Agriculture	10.7
Services	62.2
Trade	10.6
Wholesale	7.0*
Retail	3.6*

Note : *Author's calculation based on the data from the Statistical Yearbook of the Republic of Serbia in 2013.

Source: UNEP (2013), Green Economy: Serbia

In order to increase the share of trade in the creation of gross value added of the Serbian economy in the future, it is necessary to manage (by using modern concepts, such as the calculation of activity based costing, target costing, total quality management and other) total costs (cost of goods sold and operating expenses), i.e. to take typical cost reduction activities across the entire supply chain. 17% of the given activities is related to the so-called changes of sustainable development in business of modern retailer (Deloitte: The Retail Review - Cost saving initiatives for retailers, 2009).

3. SPECIFICS OF THE SIZE AND STRUCTURE OF COSTS AND MARGINS OF TRADE IN SERBIA

The size, cost structure and margins of trade in Serbia are to some extent different from other countries, especially the developed market economies. Specifics of the size and the structure of costs and margins in trade in Serbia will be illustrated on the example of the five leading trading companies which largely control the market in Serbia. Table 10 shows the size and structure of costs and margins as a percentage of total operating revenue for five leading trading companies in Serbia in 2012 (with a share of 9.11% in total operating revenues of trade in Serbia).

Table 10. Size and cost structure and margins of five leading trading companies in Serbia, in 2012 (in percentage of total operating revenue)

Company	Cost of goods sold	Operating expenses	Salary, wage and other personal expenses	Other operating expenses	Gross margin
DELHAIZE SERBIA	81.33	15.31	5.68	9.63	18.67
MERCATOR-S	85.47	17.26	5.30	11.96	14.53
IDEA	83.04	18.59	5.64	12.95	16.96
LUKOIL SRBIJA	93.19	8.08	1.24	6.84	6.81
KNEZ PETROL	97.35	2.50	0.55	1.95	2.65
Minimum	81.33	2.50	.55	1.95	2.65
Maximum	97.35	18.59	5.68	12.95	18.67
Mean	88.0760	12.3480	3.6820	8.6660	11.9240
Std. Deviation	6.88878	6.83854	2.56010	4.43202	6.88878

Note : Author's calculation

Source: Republic of Serbia - Serbian Business Registers Agency: annual report

The data presented in the table show that the acquisition value of the goods sold (costs of goods sold) ranges from 81.33% (Delhaize Serbia) to 97.35% (Knez Petrol). Operating costs are between 2.50% (Knez Petrol) and 18.59% (IDEA). Labor costs amount from 0.55 % (Knez Petrol) to 5.68% (Delhaize Serbia). Gross margin ranges from 2.65% (Knez Petrol) up to 18.67%. The average values of given variables (indicators) are as follows: acquisition value of the goods sold - 88.07%, operating expenses – 12.34%, labor costs - 3.68%, other operating expenses - 8.66% and gross margin - 11.92%. Size and cost structure is defined by the activity nature of observed companies. Acquisition value of the goods sold is lower for companies that trade with food and complementary products (Delhaize Serbia, Mercator -S, IDEA) compared to these that sell fuel (Lukoil Serbia, Knez Petrol), while, on contrast, the operating costs are higher respectively. The higher operating costs - the higher gross margin (from which they are covered). General conclusion is that the observed companies have high total costs (cost of goods and operating expenses) - while the labor costs are lower - in relation to global retail chains. This is also the case with other trading companies in Serbia. In order to increase the profitability of trade in Serbia in the future it is necessary to take appropriate measures to "optimize" them (i.e. decrease to the level of "standard values").

Average acquisition value of goods sold in five observed trading companies in Serbia is higher than in Canada. In order to reduce the cost of goods sold is necessary to develop and implement an effective concept of relationships with suppliers and modern business technology (enterprise resource planning system and radio frequency identification).

Gross margin of trade (of the observed trading companies) in Serbia (almost entirely and in individual product categories) is lower than in Australia, the USA, UK/Europe, New Zealand and Canada. However, it is in certain analyzed companies higher or approximately equal to the gross margin in China, while the average is lower. That size of gross margin in trade was caused by the high acquisition value (as a result of "monopoly" position of some major suppliers) and the low purchasing power of the population (due to high unemployment).

Operating costs of trade in Serbia are, in almost all product categories, lower than in Canada and other observed countries, primarily developed market economies. So, for example, the operating costs (expressed as a percentage of operating revenues) in food and beverage stores in Canada 2011 amounted to 20.5 %, while in Serbia (in 2012 in company Delhaize Serbia, as good representative, which mainly sell food and beverage) it was 15.3%. Labor costs (expressed as a percentage of operating revenues) in groceries in Canada are 13% on average and 5.68% in Serbia (Delhaize Serbia). Compared to other countries, primarily developed market economies, the labor costs in trade, as important determinants of the size of the gross margin, are lower in Serbia. That is partly an explanation to the question: Why is the gross margin lower in the trade of Serbia compared to the countries of developed market economies?

In order to provide thorough analysis of the specifics of size and structure of trade costs in Serbia, Table 11 shows comparative structure of operating expenses and operating costs of the companies Delhaize Serbia and IDEA for year 2012.

Table 11. Structure of operating expenses and operating costs of trading companies in Serbia, 2012

	DELHAIZE SERBIA		IDEA	
	(as a percentage of total operating expenses)	(as a percentage of total operating costs)	(as a percentage of total operating expenses)	(as a percentage of total operating costs)
Cost of goods sold	84.16	-	81.70	-
Cost of materials	2.09	12.14	2.22	13.18
Salary, wage and other personnel expenses	5.88	30.37	5.56	37.10
Depreciation and reservation costs	1.84	9.40	1.72	11.66
Other operating expenses	6.03	48.09	8.80	38.06

Note : Author's calculation

Source: Republic of Serbia - Serbian Business Registers Agency: annual report

In both trading companies, the biggest share of the total operating expenses relates to the acquisition value of goods sold, which is consistent with the general character of the trading business. Consequently to the nature of the business, the share of labor costs in the total operating expenses and operating costs is high. The general conclusion is that the labor costs of trade in Serbia are lower than the "industry standard" (13% of total general operating expenses, according to BDC - Retail industry standard for administrative costs; www.bdc.ca). Therefore, the Serbian retail market is attractive to many global retailers. In order to improve the profitability of trade in Serbia in the future, significant savings can be achieved by reducing other operating expenses, among other things, with the increased application of the "green economy" businesses concept. Cost of goods sold (acquisition value of goods sold) may be, for these purposes, reduced by applying the concept of managing relationships with suppliers (which is partly based on the development of "partnership") and modern technology (radio frequency identification - RFID and Enterprise Resource planning System - ERP).

4. THE IMPACT OF RESOURCE EFFICIENCY USE ON ECONOMY OF TRADE IN SERBIA

In order to analyze the impact of rational use of key resources on efficiency (i.e. economy) of business, Table 12 shows the dynamics of the number of employees, fixed assets, inventory, operating income and operating expenses of trade in Serbia for the 2002-2012 period.

During the reported period the number of employees in the trade of Serbia moved rectilinearly and ranged from 159 881 to 214 924. Average number of employees was 191 866. Fixed assets had cycle change from 158 to 1 018 billion dinars - an average amount of 667 billion. Inventories had a tendency of increase, ranged from 83 to 463 billion - an average amount of 277 billion dinars. Operating revenues had cycle change until 2006, and from that year they moved rectilinearly to 2012 and ranged from 538 to 2 979 billion

dinars, i.e. an average of 1 787 billion. A similar trend was also in the operating expenses, i.e. they ranged from 540 to 3876 billion dinars, or an average of 1 735 billion. The average realized profit (as a difference between operating income and operating expenses) in the observed period in trade in Serbia amounted to 52 billion dinars.

Table 12. Dynamics of the number of employees, fixed assets, inventories, operating income and operating expenses of trade in Serbia, 2002-2012

	Number of employees	Fixed assets (billions of dinars)	Inventories (billions of dinars)	Operating income (billions of dinars)	Operating expenses (billions of dinars)
2002	159881	158	83	538	540
2003	173615	189	110	678	679
2004	186803	287	147	929	917
2005	175992	682	181	1184	1143
2006	192805	807	229	1585	1540
2007	206757	954	297	1982	1909
2008	214294	980	357	2361	2281
2009	207325	1018	367	2291	2225
2010	197677	720	391	2431	2356
2011	200801	752	421	2704	2625
2012	193954	788	463	2979	2876
Minimum	159881.00	158.00	83.00	538.00	540.00
Maximum	214924.00	1018.00	463.00	2979.00	2876.00
Mean	191866.7273	666.8182	276.9091	1787.4545	1735.5455
Std. Deviation	16568.02463	313.05010	313.05010	850.20367	815.40694
Pearson Correlation	.798(*)	.794(*)	.998(*)	1.000(*)	1
Sig. (2-tailed)	.003	.004	.000	.000	1
* Correlation is significant at the 0.01 level (2-tailed).					
R Square 1.000; Adjusted R Square 1.000; F-value 36072.036, Sig. .000					

Note : Author's calculation of variables using SPSS statistical software

Source: Republic of Serbia - Serbian Business Registers Agency: annual report

In order to analyze the impact of the efficiency of the key resources use on economic efficiency (expressed as the ratio between operating income and expenses) Table 13 shows the dynamics of resource efficiency of trade in Serbia for the period 2002 – 2012.

Table 13. The dynamics of trade resources use efficiency in Serbia 2002-2012

	Operating income per employee (000 dinars)	Operating income / Fixed assets (ratio)	Operatin income / Inventories (ratio)	Operating income / Operating expenses (ratio)
2002	3 367.792	3.40	6.42	0.99
2003	3 910.681	3.58	6.14	0.99
2004	4 973.892	3.23	6.27	1.01
2005	6 730.936	1.73	6.53	1.03
2006	8 222.903	1.96	6.91	1.02
2007	9 588.202	2.07	6.67	1.03
2008	11 021.353	2.48	6.60	1.03
2009	11 054.156	2.24	6.23	1.02
2010	12 299.908	3.37	6.21	1.03
2011	13 467.637	3.59	6.41	1.03
2012	15 363.359	3.77	6.42	1.03
Mean	9090.9835	2.8564	6.4373	1.0191
Std. Deviation	3993.58074	.76208	.22913	.01578
Pearson Correlation	.805(*)	-.358	.367	1
Sig. (2-tailed)	.003	.280	.267	
* Correlation is significant at the 0.01 level (2-tailed).				
RSquare .849; Adjusted RSquare .785; F-value 13.153, Sig. .003				

Note: Author calculated ratio numbers, and statistical parameters using the SPSS program

Source: Republic of Serbia - Serbian Business Registers Agency: annual report

During the reported period the movement of individual variables (indicators) was as follows: operating revenue per employee - rectilinear, fixed assets turnover ratio - cyclical, with the tendency of increase at the end of the period; inventory turnover ratio - cyclical, and it was the biggest in the middle of the given period (2005 - 2008); the ratio of economy of operations - even. Average revenue per employee, as a measure of labor productivity, expressed in thousands amounted to 9 090.9835 dinars. The average values of the analyzed coefficients are: fixed assets turnover ratio - 2.85, inventory turnover ratio - 6.43, and the ratio of economy of operations - 1.01.

During the reported period there was a significant impact of the observed variables – factors, on economic efficiency of trade in Serbia (R Square .849, Adjusted R ..785). The influence of certain factors on economic efficiency on trade in Serbia was different : - Strong influence of labor productivity; - weak (inverse) impact of inventory turnover ratio; weak influence of inventory turnover ratio. In order to improve the profitability of trade in Serbia in the future it is necessary to invest in modern technology, apply the Toyota's operations principles (lean, just- in- time, kaizen), modern concepts of accounting and cost management, the concept of managing relationships with suppliers and the concept of customer relationship management. Beside that, there is a significant role of private brand development and application of "green economy" concept.

5. THE IMPACT OF APPLICATION OF “GREEN ECONOMY” CONCEPT ON COST REDUCTION IN TRADE IN SERBIA

The concept of sustainable development, i.e. “green economy” is being frequently applied as a function of target costs and profit implementation (Schönberger et al., 2013). The concept of sustainable development, i.e. corporate social responsibility, falls into major elements of corporate values of leading global retail chains (Loissaïef et al., 2014; Jones et al., 2014). Retail integrates financial and sustainable reports as an information support in creation of sustainable value (Integrated Financial and Sustainability Reporting in the United States, 2013, IRRC Institute, Sustainable Investment Institute (Si2), Washington, DC). Basic reasons for applying the concept of sustainable development are: higher productivity, benefits of improving image, decrease of ecological footprint, decrease of sickness absence for minor health reasons, the pressure of the market/state, personal belief and lower costs of servicing (Jones Lang LaSalle, 2013a). By applying the concept of sustainable development, i.e. “green economy”, the cost and risks are being reduced and the brand image is improving. So, for example, typical risks of supply chain are: 1) economic risks: country risk, business ethics, corruption and bribery; 2) environmental risks: hazardous substances, water scarcity and energy consumption; and 3) society risks: child labour, working conditions, talent attraction and retention (KPMG, 2013). By increasing energy efficiency, leading retail chains significantly reduce costs, increase the loyalty to the brand, and increase sales through time. Regarding use of sustainable development concept in 2013 leading retailers were: J Sainsbury PLC (United Kingdom), Woolworths Ltd (Australia), Casino Guichard Perrachon SA (France), Kesko OYJ (Finland), Carrefour SA (France), Delhaize Group SA (Belgium), and Koninklijke Ahold NV (Netherlands) (KPMG, 2013).

Therefore, green economy is very important factor of decreasing costs in trade. In central and eastern Europe in 2012 certified green area of total available shopping centre area (16.75 million square meters) was 5.5%. The situation differs in countries, and the percentage share is as follows: Poland – 74%, Czech Republic – 6%, Serbia – 2%, Hungary – 10%, Bulgaria – 5% and Romania – 3% (Jones Lang LaSalle, 2013b). The lowest is in Serbia and there are big opportunities for decreasing “high” costs in trade in the future.

Based on conducted empirical research it is estimated that the improvement of energy efficiency (green building etc.) can reduce energy consumption 10-30% in retail. Decreasing energy consumption for 10%, as well as the margin, improves the sales per square meter for 8% (Jemieson, 2013). Application of modern appliances for cooling can decrease energy consumption for 30%. Energy savings is beneath 1% of sales of big retailers (Galvez-Martos et al., 2013). Energy consumption is significantly higher in small and big, than in medium sized objects. There are the opportunities for reducing energy consumption in retail. In retail, over the 50% of energy is spent on lighting, heating and cooling (Jemieson, 2013; Spyrou et al., 2014).

In the tradition of many developed countries, significant attention is lately paid on decreasing carbon dioxide in Serbia in all economy sectors, including trade. Indeed, it differs through sectors so, for example, according to estimates, emission of gasses that makes the green house effects amounted in transportation sector 6.5 million metric tons in 2010, and in dwelling, commercial and public service amounted slightly above 2 million metric tons (UNEP, 2013, Green economy: Serbia). Serbia pays attention to improving energy efficiency and renewable energy sources use. The effects are – significant reduction of energy consumption. According to the estimates, in Serbian dwelling sector, commercial

and public service, it will in the future annually amount: 2018 – 0.52, 2025 – 0.8 and 2030 – 1 (expressed in millions of tons of equivalent oil per year; mtoe/year) (UNEP, 2013, Green economy: Serbia).

Considerable attention is on the global level paid to the problems of food loss through the whole supply chain, including retail. In the retail sector there are different food loss in some categories of products. So, for example, in the United States of America the food loss in retail (in percentage from the whole supply chain) was in 2010: crops – 12%, fruit – 9%, vegetables – 8%, dairy products – 11%, meat, poultry and fish – 5%, eggs – 7%, walnut and peanut – 6%, added sugar and sweeteners - 11%, added fats and oils – 21% and total – 10% (Buzby, 2013). The losses are, therefore, determined by the very nature of the product. Every category has differences in specific products (Food waste within global food systems, 2013, A Global Food Security). Contrasting Serbia with countries of developed market economy, there are no available data concerning food loss through entire supply chain in particular categories of products (Lukić, 2013). Therefore, because of the significance of food loss, it is necessary to manage official register of this kind in the future.

Significant investments are necessary for the development and application of the concept of sustainable development (environment, society and economy) in food retail. The drivers of sustainable investments are: 1) internal: process capabilities, human resource capabilities and customer driven capabilities; 2) supplier relationship drivers: interorganizational process and policies, supplier communication; 3) external drivers: uncertainty: competitive and economic (Claro et al., 2013).

CONCLUSION

The economic crisis in order to achieve the target profit is very important that effective cost management in all companies, which means in trade. To confirm the results of the research, the example of Serbia's trade.

Based on conducted comparative analysis of empirical data it can be concluded that the trade costs (particularly acquisition value of goods sold) in Serbia are higher compared to other countries, especially developed market economies, while the cost of labour in trade in Serbia are lower. Trade margin (which covers the operating costs and makes certain profit) is lower compared to other countries.

The size and the structure of the trade margin in Serbia was influenced by high bank interest, floating exchange rate (moving to unfavourable course). „Monopolistic“ behaviour of some big suppliers is significant determinant. The efficiency of using key resources had influence on economy of business (cost efficiency) of trade in Serbia.

Significant measures to improve the efficiency of cost of trade in Serbia are applying new concepts of cost (particularly cost accounting for basic activities that contribute significantly to the reduction of costs), new business models and new information and communication technologies. In other words, aiming at the decreasing of trade costs in Serbia in the future it is necessary to apply modern concepts of calculation and managing of costs (calculation of activity based costing, calculation of target cost, total quality management etc.), Toyota business principles, modern information and communication technology, the concept of managing relationships with customers, the concept of managing relationships with suppliers, and the concept of „green economy“.

In order to improve the efficiency of the management costs of trade in Serbia in the future, specifically suggesting a complete implementation of the concept of sustainable development, with particular emphasis on the "green economy." In this context it is necessary to develop an appropriate system of indicators for sustainable reporting as a basis for effective management of revenue, expenses and profit throughout the value chain.

It is a great importance of the "green economy" to improve the effectiveness of cost management in retail. This is primarily related to energy efficiency, reduction of carbon dioxide emissions, and water consumption. Retail companies in Serbia increasing attention to improving the "green economy". This will increase their profits in the future.

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