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The Impact of Long-Term Provision Costs on Performance of Trade in Serbia

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Abstract: Long-term provision costs in trade are based on uncertain obligations in the future in relation to the goods sold. They mostly refer to warranty costs. Warranty costs are caused by repair and servicing of the sold products during the warranty period. They are function of the quality, usage and maintenance (storage) of sold product. In marketing sense, warranty costs are increasingly treated as an instrument of sales and customer satisfaction in terms of functionality and durability of the product. Regarding the above mentioned this paper primarily investigates the impact of the cost of long-term provisions - warranty costs on the performance of retailers, with special emphasis on Serbia. These theoretical, methodological and empirical findings should serve as a basis for retailers to efficiently manage warranty costs in order to achieve the target profit with maximum customer satisfaction.

Keywords: quality, warranty, customer satisfaction, retail profit

JEL codes: K12, L81, M31, M41

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1. Introduction

By definition, long-term provisions represent liabilities for covering costs and risks of previous activities which will arise in the coming years. They primarily relate to: 1) provisions for costs during the warranty period; 2) provision for restoration of natural resources; 3) provision for securities and deposits kept; 4) provisions for other probable costs to be incurred, and are related to current events (litigation provisions for issued guarantees and other guarantees and other provisions). Long-term provisions are estimated in the amount of expected expenditure arising from future obligations. The focus of research in this paper, because of its importance in trade, warranty costs as the most important component of long-term provisions cost.

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Because of its importance attention has been lately paid to the analysis of the costs of long-term provisions, and warranty costs as a "critical factor for business success" of retail companies respectively. Regarding this, the subjects of research in this paper are: importance, role, characteristics and cost factors of long-term provisions – warranty costs in modern retail. The purpose and objective of this analysis is to theoretically and methodologically research the impact on performance of wholesale and retail trade, primarily in Serbia. This should draw attention of the management in retail establishments to defining appropriate warranty politics and efficient management of warranty costs in order to achieve the target profit with maximum satisfaction of customer needs. In that we find scientific contribution of this work.

For the literature is concerned, it is rich from the perspective of mathematical modelling of guarantees and accounting treatment (Kieso, 2016), however, only few papers are devoted to the effects of warranty costs on performance in retail. When it comes to Serbia, there is no complete article on this issue and that is why we find justification and motivation for writing this paper. It must provide an adequate basis (theoretical, methodological and empirical knowledge as a fundamental prerequisite) for managers in Serbian retail to efficiently manage warranty costs in order to achieve the target profit with maximum customer satisfaction.

The primary hypothesis in this paper is that the warranty costs have increasingly been important factor of target profit in modern retail. This is confirmed by the results of research on a global level (global companies - manufacturers and retailers), as well as empirical analysis in this paper find on the example of trade in Serbia. For these reasons, it is necessary to manage warranty costs more efficiently in modern retail.

Owing to the nature and purpose of the issue, available literature and defined hypothesis we have applied appropriate research methodology. It is based on a comparative analysis and examples from practice. We also used the statistical analysis and growth matrix in order to provide thorough analysis of the effects of long-term provision costs in trade of Serbia.

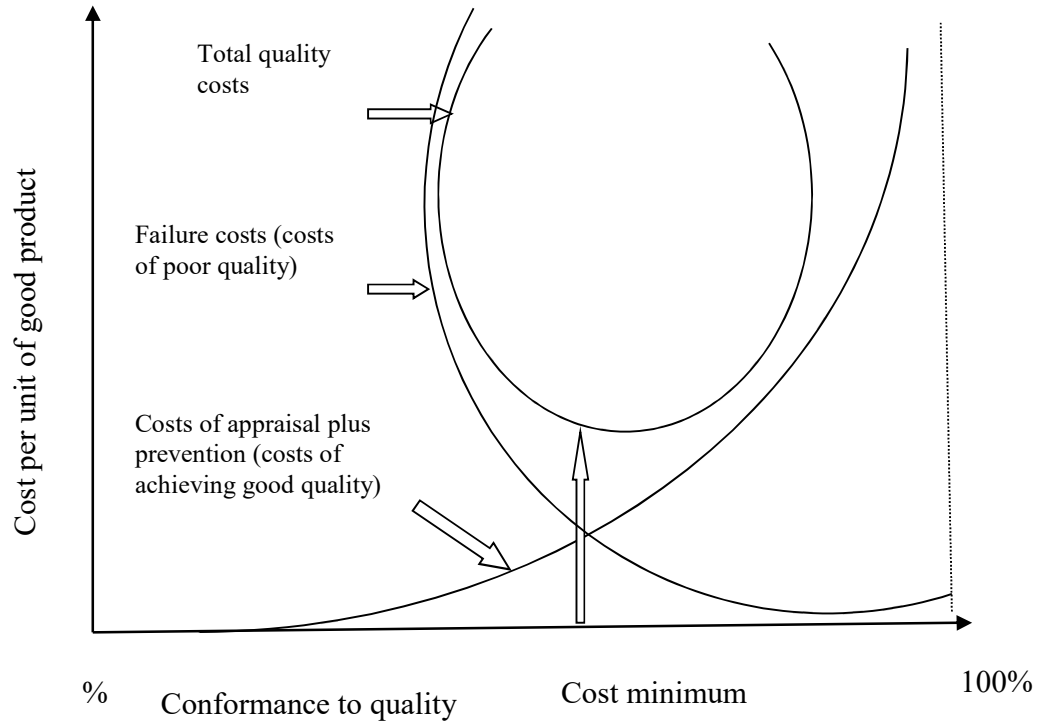
For the purposes of the research in this paper we collected corresponding empirical data from various relevant, and as far as possible, comparable sources. Data on Serbian trade were taken from the Business Registers Agency of the Republic of Serbia which discloses annual financial statements, prepared in accordance with International Accounting Standards and International Financial Reporting Standards.

The primary limitation of the research in this paper is reflected in fact that the data on the warranty costs are not fully comparable across countries and trade companies due to the different methodology. Given the growing importance of the warranty costs in the future it is necessary to develop and promote their unique system of identifying and disclosure, in accordance with their nature and the relevant regulations. This will significantly improve the quality of their complex analysis in order to optimize and create more efficient warranty policy as an instrument of customer relationship management and target profit in modern retail companies.

2. Cost of quality as determinants of warranty costs

The significant components of long-term provisions are warranty costs. In the broad sense of the word, warranty costs are largely determined by the quality of the product. So, for example, the case study of the supermarket in Greece found that costs of appraisal plus prevention, together with the failure costs (costs of poor quality) corresponds to 83% conformance to quality (Chatzipetrou, 2016). The application of modern technology, robotics and automation of work processes significantly reduces the cost of failure (Chatzipetrou, 2016) and, therefore, warranty costs as a component of operating expenses – long-term provisions. This is clearly seen in Figures 1 and 2.

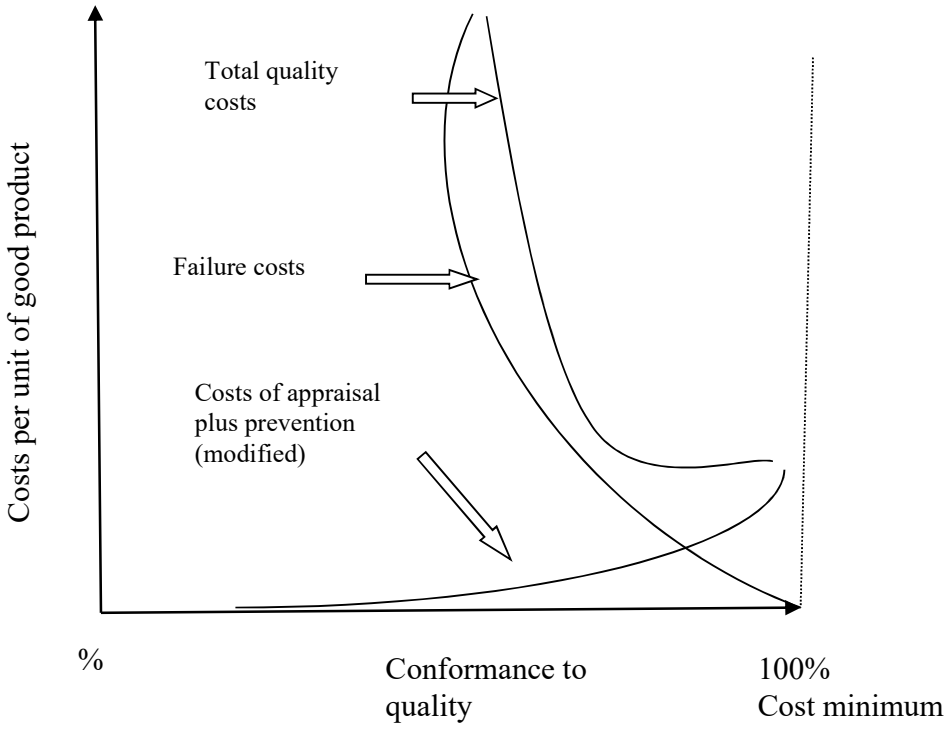
Figure 1. The old Cost of Quality (COQ) model



Source: Chatzipetrou, (2016)

Cost of quality is directly / indirectly affected by shop brand (Mai et al., 2017), as an expression of good quality products. The buyer's perception of products' quality assurance, especially electronics, has a positive influence on retailer profit (Maronick, 2007). All this ultimately reflects on long-term provisions – warranty costs as a factor of manufacturers and retailers' performance.

Figure 2. The new Cost of Quality (COQ) model

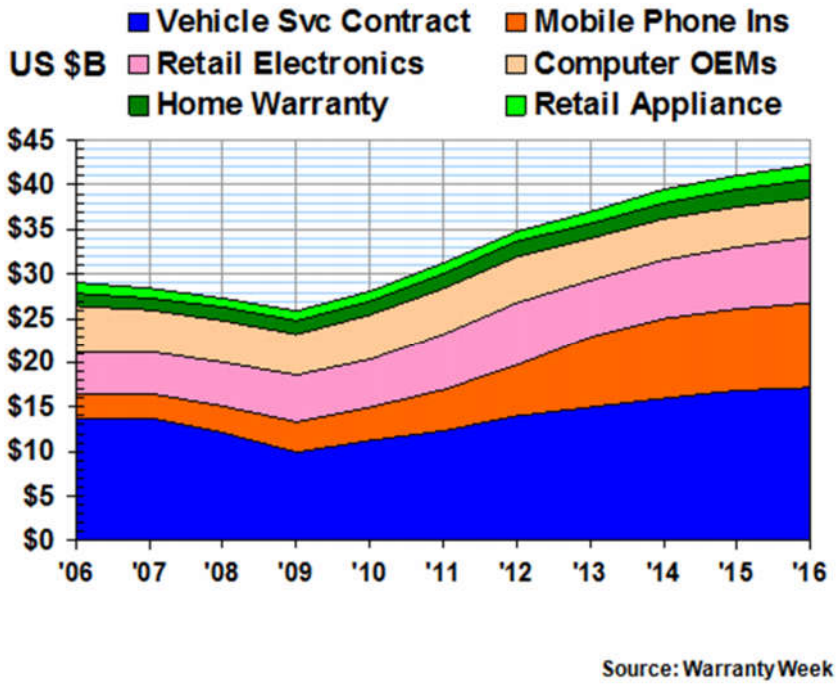


Source: Chatzipetrou, (2016)

3. Characteristics and determinants of warranty costs

Warranty costs in their essence and structure are very complex and specific types of business costs of manufacturers and retailers (see: *Settlements and Plans…*). Determinants of warranty costs are: product reliability, type of warranty, warranty period and product types (cars, electronics, mechanics, household appliances, etc.) (Amberkar, 2014). Warranty costs can be methodologically expressed in different ways: warranty costs per unit, warranty expenses during a period (for example, the life cycle of the product), and the warranty cost per unit time (actual and estimated rate of guarantee costs). For the purposes of comparative analysis, warranty costs are usually expressed as a percentage of sales. Expressed in such a way, and depending on the type of product and the manufacturer, warranty costs range from 1-10% of the purchase price (Murthy, 2007). The warranty fee differs among product categories, which is quite logical, given the differences in their nature, functionality and usage. This is clearly seen in Figure 3.

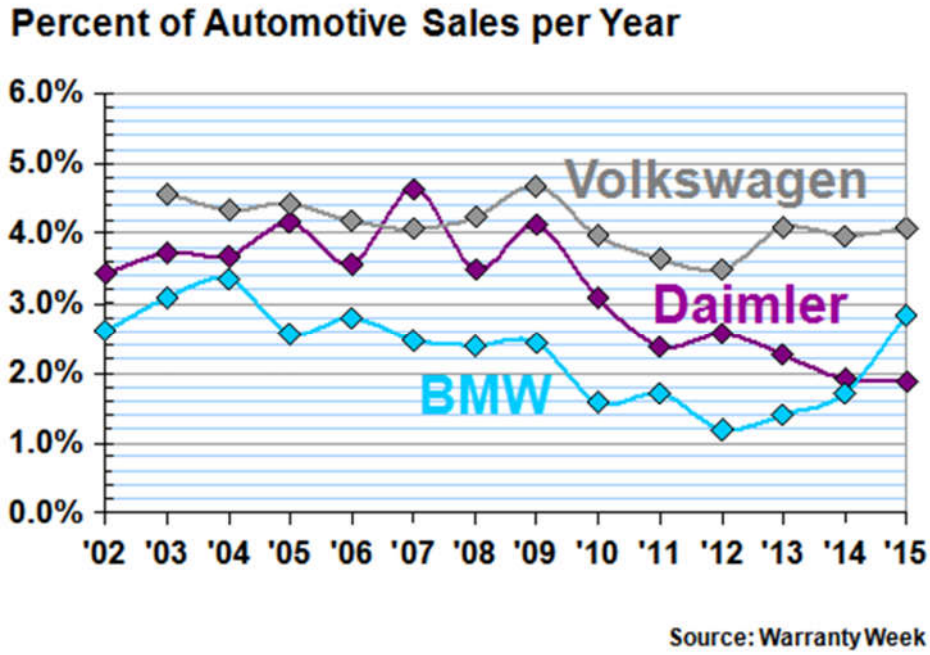
Figure 3. Contracts in US service industry. Premiums paid by consumers, 2006 - 2016 (in billions of dollars).



Source: *Warranty Week - US...*

The warranty fee is different not only in certain categories of products, but also within one and the same product category. This is clearly seen from Figure 4.

Figure 4. The rate of guarantee required for the three automotive original manufacturer's parts in Germany, 2002 - 2015 (as a percentage of sales)



Source: *Warranty Week – Three…*

For the purpose of gaining a more complete idea about the importance of warranty costs, Table 1 shows the guarantee fee in the automotive industry of the recognizable manufacturers from various countries. Knowing the size of the warranty costs in the automotive industry is important for their more efficient management in terms of "optimization" and the realization of the target profit.

Table 1. The warranty fee in the automotive industry (September 21, 2015)

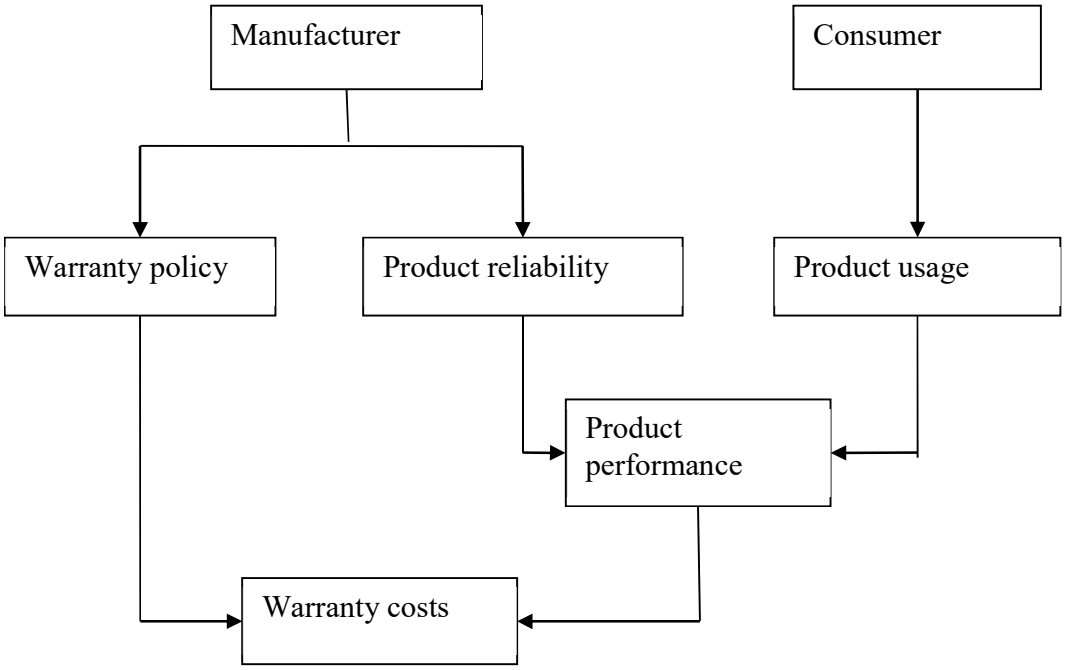
	Automotive sales (in millions)	Warranty provisions (in millions)	Warranty provisions as % of sales, (%)
GM	$151.092,00	$2.540,00	1.68%
Ford	$135.782,00	$2.108,00	1.55%
BMW	€60.280,00	€1.451,00	2.41%
Daimler	€120.19,00	€2.617,00	2.18%
Tesla	$3.192,00	$97,17	3.04%

Source: *Is Tesla…*

The data in the table show that the warranty provisions in companies General Motors (GM) and Ford (on September 21, 2015) amounted to over 2 billion dollars respectively. The data in the same table show that the company Tesla Motors has allocated the highest provision for product servicing within the warranty period (expressed as a percentage of sales in comparison to other companies). This certainly affects its brand, customers' satisfaction and, ultimately, profit (as a primary business objective with maximum customer satisfaction).

In principle, the amount of warranty costs largely depends on the reliability of the product, its method of use and products' performance. Figure 5 shows characteristic determinants of warranty costs per unit.

Figure 5. Simple characterisation for warranty cost analysis



Source: Murthy, (2007)

4. Repair or replacement of product within the warranty period

Given the importance, it is necessary to efficiently manage warranty costs in order to achieve the target profit on the relation manufacturer – retailer – customer. Warranty costs can be reduced

through proper logistics service. The key issue and dilemma: repair or replacement of the product purchased within the warranty period. One should also add the question: return of goods within the warranty period, primarily because of the poor quality. Costs of returned goods are significant in general (because customer changes his mind), and especially because of the poor quality (common failures when using the product) (Lukić, 2014, 2015). So, for example, in US retail in 2015, return of goods as a percentage of total sales amounted to 8.0% and 6.1% due to the failure (according to: *2015 Consumer Returns…*).

In the UK the annual costs of the goods returned amounted to about £ 60 billion. From the above mentioned sum, £ 20 billion applies to return goods purchased via the Internet (Quoted from: *UK retailers…*).

Returns of goods purchased via the Internet (online), observed at the international level, are significant due to customer dissatisfaction, primarily due to poor quality, frequent failures during use and alike. According to estimates these percentages (of total purchases), amounted in some categories of products: fashion 25%, sports and travel equipment 15%, beauty and health of 15%, furniture15%, household goods 10% and electronics 10% (according to: *UK retailers…*). To a large extent, they are determined by the type of goods. There are differences from country to country. For example, about 70% of goods ordered online is returned in Germany, compared with 25% in Great Britain of the women's fashion, labelled as product category with the largest percentage of return (according to: *UK retailers…*).

The extension of warranty types stimulates external (outsourcing) maintenance of products within the warranty period. This affects the reduction of warranty costs and increases the profits of manufacturers and retailers.

As far as the accounting aspect is concerned, according to the International Financial Reporting Standards and International accounting standards (IAS 37) the costs of long-term provisions (warranty costs and other) are, in principle, recognized in the year when sales of the product has been realized, if it is certain, according to estimates, that they will occur in the warranty period (*Гарантийный ремонт…*). The amount is easily determined by an assessment based on the costs incurred in the past (Greuning, 2011). Also, in order to provide more accurate estimates of the amount of warranty costs mathematical modelling is applied (Kulkarni, 2008; Ambekar, 2014). (See: *Warranty Cost: An Introduction…*).

5. The characteristics of long-term provision costs of trade in Serbia

The policies and strategies of long-term provisions, i. e. warranty in trade of Serbia in relation to the countries with developed market economy is specific. This is itself showed by comparatively analyzed empirical data in this paper. Table 2 shows the share of liabilities arising from long-term provisions in the total assets / liabilities of trade of Serbia for the period 2011 - 2015.

Table 2. Share of liabilities arising from long-term provisions in the total assets / liabilities of trade in Serbia, 2011 - 2015

Year	Total assets/liabilities (in 000 RSD)	Liabilities arising from long-term provisions (in 000 RSD)	Share of liabilities arising from long-term provisions in total assets/liabilities, (%)*
2011	2.146.251.140	9.526.104	0.44
2012	2.160.474.147	8.847.452	0.41
2013	2.157.565.402	8.277.464	0.38
2014	2.077.002.753	7.818.199	0.37
2015	2.234.368.510	8.338.587	0.37

Note: *Calculation performed by the author
Source: Business Registers Agency of the Republic of Serbia

The data in the table show that, in the analyzed period, participation of liabilities of long-term provisions in the total assets / liabilities in the trade of Serbia have decreased from year to year. This is partly a result of poor performance because of unfavourable general economic conditions (inflation, high interest rates, high foreign exchange risk, financial instability, weak enforcement of regulations of total quality management, application of the concept of sustainable development is at the very beginning, the concept of customer relationship management has been introduced into companies, so as the Japanese business philosophy, high unemployment, low purchasing power of the population, etc.). On the other hand, policies and strategies of warranty in connection with the goods sold in the trade companies in Serbia are inadequate in relation to comparable countries of developed market economy.

In order to provide complex analysis Table 3 shows descriptive statistics of the total assets / liabilities, liabilities from long-term provisions and liabilities arising from long-term provisions in the total assets / liabilities of trade in Serbia for the period 2011 - 2015.

Table 3. Descriptive statistics of total assets / liabilities, liabilities arising from participation of long-term provisions and liabilities arising from long-term provisions in the total assets / liabilities of trade in Serbia for the period 2011 - 2015

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Total assets/liabilities (000 RSD)	5	2077002753,00	2234368510,00	2155132390,4000	55892605,51989
Long-term provisions liabilities (000 RSD)	5	7818199,00	9526104,00	8561561,2000	650978,57796
Share of long-term provisions in total assets/liabilities (%)	5	,37	,44	,3940	,03050
Valid N (listwise)	5				

Source: Calculation performed by the author based on the data in Table 2 using the SPSS software program.

According to the descriptive statistics, for the period 2011-2015, average total assets / liabilities in the trade of Serbia amounted to RSD 2.155.132 million dinars, the average liabilities arising from long-term provisions amounted to 8,561 million dinars, and the average percentage of the total assets / total liabilities amounted to 0, 39%. In other words, the data in the table show that the share of liabilities arising from long-term provisions in the total assets / liabilities of trade in Serbia is under 1 percent, i. e. range from 0,37-0,44%, and the average is 0, 39%. It is, therefore, significantly less than the trade of countries with developed market economies, in which more resources are set aside for warranty reserves (as shown by the above data for automotive industry; the situation is similar for other product categories).

In order to conduct complex analysis of the long-term provisions in trade of Serbia, Table 4 shows their dynamics (i. e. management efficiency) for the period 2011-2015.

Table 4. Long-term provision costs in trade of Serbia, 2011-2015

Year	Number of enterprises	Total revenue (000 RSD)	Long-term provisions costs (000 RSD)	Long-term provisions costs per enterprise (000 RSD)	Net profit (000 RSD)	Share of long-term provisions costs in total revenue, (%)*	Share of long-term provisions costs in net profit (%)*
2011	33.849	2.835.572.922	5.888.901	173,975	100.346.447	0.02	5.86
2012	33.905	2.987.680.991	3.238.994	95,531	89.730.566	0.10	3.60
2013	32.911	2.995.521.976	2.335.350	72,109	86.955.935	0.07	2.68
2014	32.386	2.924.565.910	2.359.627	72,859	79.234.350	0.08	2.97
2015	31.948	3.084.081.630	3.759.627	117,679	102.303.232	0.12	3.67

Source: Calculation performed by the author

The data in the table show that the long-term provision costs per company decreased until 2014, and in 2015 increased significantly. In the same period, they have participated in total income between 0.02 to 0.12% and in net profit in the range of 2.68 to 5.86%. Data of the descriptive statistics (Table 5) (in 000 RSD) show the following values: minimal costs of long-term provisions amounted to 2.335.350, the maximum cost of long-term provisions amounted to 5.888.901, the average costs of long-term provisions amounted to 3.516.499.800, the average share of the costs of long-term provisions in total revenues amounted to 0.0780%, and the average share of the costs of long-term provisions in net profit amounted to 3.7560%. Based on these data, it can be generally concluded that the costs of long-term provisions, i. e. warranty costs in the trade of Serbia are much lower compared to countries with developed market economy and the European Union. It also adequately reflected on sales and profits of trade in Serbia. Regarding that the warranty is an important factor in customer satisfaction, and together with the quality of products – key determinant of sales.

Table 5. Descriptive statistics indicators of the efficiency of long-term provisions cost management in trade of Serbia, 2011 - 2015

Descriptive Statistics						
	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
Number of enterprises	5	31948,00	33905,00	32999,8000	389,32293	870,55253
Total revenue (000 RSD)	5	2835572922,00	3084081630,00	2965484685,8000	41238066,47217	92211119,89243
Long-term provisions costs (000 RSD)	5	2335350,00	5888901,00	3516499,8000	651838,83298	1457555,94092
Long-term provisions costs per enterprise (000 RSD)	5	72,11	173,98	106,4306	18,85815	42,16811
Net profit (000 RSD)	5	79234350,00	102303232,00	91714106,0000	4295147,45149	9604241,67491
Share of long-term provisions costs in total revenue, (%)	5	,02	,12	,0780	,01685	,03768
Share of long-term provisions costs in net profit, (%)	5	2,68	5,86	3,7560	,55831	1,24841
Valid N (listwise)	5					

Source: Calculation performed by the author on the basis of the data in Table 4, using the SPSS software program.

Table 6 shows the correlation between the total revenue, net income and the cost of long-term provisions in trade of Serbia for the period 2011 - 2015.

Table 6. The effect of long-term provisions costs on total revenue and net profit in the trade of Serbia - correlation, 2011 – 2015

Correlations					
		Total revenue	Long-term provisions costs	Long-term provisions costs per enterprise	Net profit
Total revenue	Pearson Correlation	1	-,509	-,472	,129
	Sig. (2-tailed)		,381	,422	,836
	N	5	5	5	5
Long-term provisions costs	Pearson Correlation	-,509	1	,998**	,780
	Sig. (2-tailed)	,381		,000	,120
	N	5	5	5	5
Long-term provisions costs per enterprise	Pearson Correlation	-,472	,998**	1	,806
	Sig. (2-tailed)	,422	,000		,099
	N	5	5	5	5
Net profit	Pearson Correlation	,129	,780	,806	1
	Sig. (2-tailed)	,836	,120	,099	
	N	5	5	5	5
**. Correlation is significant at the 0.01 level (2-tailed).					

Note: Calculation performed by the author on the basis of the data in Table 4, using the SPSS software program.

The data in the table show moderate negative impact on long-term provision costs on trade revenues in Serbia. However, its impact on net profit trade in Serbia is significant. This in itself indicates that it is necessary to create an appropriate policy and strategy to efficiently manage the costs of long-term provisions – warranty costs by retailers in Serbia in order to achieve the target profit, with maximum customer satisfaction.

Matrix of growth can evaluate the effectiveness of cost management of long-term provisions – a warranty cost of trade in Serbia. (On theoretical and practical aspects of the matrix of growth you can read more: Stojanovic, 1985a, b, 1986a, b, 1988; Stojanović, 1990; Hanić, 1978). Table 7 shows relevant aggregates (components, elements) of growth of long-term cost effectiveness of management provisions – warranty costs in trade of Serbia.

Table 7. Long-term provisions (warranty costs) efficiency aggregates' management in trade of Serbia for the period 2014/15.

Aggregates	Y_{it}		$\Delta Y_{i,15}$
	2014	2015	
1.Total revenue	2.924.565	3.084.081	159.516
2. Long-term provisions – warranty cost	2.359	3.759	1.400
3. Net profit	79.234	102.303	23.069

Note: Amounts in millions of dinars
Source: Business Registers Agency of the Republic of Serbia

Let determine the matrix of efficiency growth per unit (components, elements) in relation to the current and previous values for the period of 2014/15.

The efficiency yield vector is

$$\Delta\gamma'_{15} = \begin{Bmatrix} 159.516 \\ 1.400 \\ 23.069 \end{Bmatrix}$$

The vector of reciprocal efficiency value is

$$\left(\frac{1}{\gamma_{15}}\right) = \left(\frac{1}{3.084.081}, \frac{1}{3.754}, \frac{1}{102.303}\right)$$

External multiplication of vector $\Delta\gamma'_{15}$ i $\left(\frac{1}{\gamma_{15}}\right)$ defines the matrix of efficiency growth in relation to the current value

$$R_{15} = \Delta\gamma'_{15}\left(\frac{1}{\gamma_{15}}\right) = \begin{pmatrix} 159.516 \\ 1.400 \\ 23.069 \end{pmatrix} =$$

$$= \begin{Bmatrix} \frac{159.516}{3.084.081} & \frac{159.516}{3.754} & \frac{159.516}{102.303} \\ \frac{1.400}{3.084.081} & \frac{1.400}{3.754} & \frac{1.400}{102.303} \\ \frac{23.069}{3.084.081} & \frac{23.069}{3.754} & \frac{23.069}{102.303} \end{Bmatrix} = \begin{Bmatrix} 0.052 & 42.492 & 1.559 \\ 0.001 & 0.373 & 0.014 \\ 0.007 & 6.145 & 0.225 \end{Bmatrix}$$

The elements of the main diagonal indicate direct growth efficiency rate by components, i. e. total revenue increased at a rate of 5.2%, the cost of long-term provisions at the rate of 37.3% and net profit at a rate of 22.5% for the period 2014/15. The elements outside the main diagonal indicate indirect growth rates. So, for example, the elements in the first row (excluding the first), which corresponds to the total revenue, indicate growth of total revenues compared to costs of long-term provisions (42.492%), and net profit (155.9%). The elements in the first column (excluding the first) indicate the increase in the cost of long-term provisions in relation to the total revenue (0.1%) and the growth of net profit to total income (0.7%). The situation is similar in other rows and columns for the other components.

Other analytical values can be also envisaged by using the submatrix of growth. So, for example, an indicator of the long-term provision costs, in relation to the net profit, we determine from the submatrix of growth (intersection of the second and third types and columns of growth), i.e.

$$S_{23,t} = \begin{vmatrix} r_{22} & r_{23} \\ r_{32} & r_{33} \end{vmatrix}$$

$$S_{23.15} \begin{vmatrix} 0.373 & 0.014 \\ 6.145 & 0.225 \end{vmatrix}$$

From the submatrix of growth, we determine the following parameters:

$$P_{23,15} = \frac{0{,}014}{0{,}373} = 0.037$$

$$Q_{23,15} = \frac{0{,}014}{0{,}225} = 0.062$$

$$E_{23,15} = \frac{0{,}373}{0{,}225} = 1.657$$

$$K_{23,15} = \frac{0{,}014}{6{,}145} = 0.002$$

Their meaning is as follows: the ratio between the cost of long-term provisions, and net income is on very low level ($P_{23,15} = 0.037$), in other words, the share of the costs of long-term provision in net profit was 3.7%; the ratio of absolute changes (limit value, growth, speed) the costs of long-term provision, and net income is very low ($Q_{23,15} = 0.062$), so for example, if the net income changes (increases or decreases) for 100 dinars, long-term provision costs change (increase or decrease) for 6.2 dinars; the ratio of relative changes (direct elasticity, coefficient of elasticity) costs of long-term provisions and net income is unsatisfactory ($E_{23,15} = 1.657$), so for example, if the net income changes by 1% the long-term provision costs are changed for 0.001%; finally, the ratio of relative changes (indirect elasticity) of net income and long-term provision cost is also unsatisfactory ($K_{23,25} = 0.002$), so for example, if the cost of long-term provisions changes by 1%, net gain is changed by 0.00%. These parameters would otherwise be traced (via submatrix of growth) from year to year and compared with each other. In this way we obtain additional parameter (index) for predicting the movement dynamics. All in all, growth matrix enables comprehensive cost-effectiveness analysis (in our case, warranty costs), both in static and in a dynamic sense. Based on the analysis of the effectiveness of cost management of long-term provisions (warranty costs) using a matrix of growth, we can conclude that the cost management of long term provisions (warranty costs) in trade of Serbia is highly inefficient. Given the fact that they as a whole, especially the warranty costs are becoming an increasingly important factor in modern retail performance, it is necessary to treat them as rationally as possible in the future so as to achieve the target profit and meet the needs of consumers.

In order to entirely acknowledge the importance of long-term provision costs – warranty costs as a factor performance (sales and net income), in Table 8 they are shown by individual retail companies with the largest market share in trade of Serbia in 2015.

Table 8. Long-term provision costs of the five largest trade companies in Serbia, 2015

Company	Total revenue (000 RSD)	Long-term provision costs (000 RSD)	Share of long-term provision costs in total revenue, (%)*
Mecator-S	112.229.632	33.023	0.03
Delhaize Serbia	77.338.737	57.006	0.07
Nelt Co.	50.026.040	-	-
Knez Petrol	37.273.829	-	-
OMV Srbija	31.920.817	527	0.002

Note: *Calculation performed by the author
Source: Business Registers Agency Republic of Serbia

The data in the table show slight share of long-term provision costs in the total revenues for companies Mercator-S and Delhaize Serbia (less than 1%). Therefore, it is much lower than in retail companies of countries with developed market economy. It is specific that the companies Nelt and Knez Petrol have no long-term provision costs on the grounds that the first deals with the provision of distribution services and the other sells fuel. This is the case with company OMV Serbia, which also sells fuel. In view of this, it is necessary to pay more attention to the creation of adequate policies and strategies for providing a guarantee for the quality of products to consumers as a critical factor for business success of trade companies in Serbia – the way it is done in the trade of countries with developed market economy.

6. Conclusion

Based on the conducted theoretical, methodological and empirical analysis in this paper, as well as in other works of similar nature, we can conclude that the long-term provision costs, i. e. warranty costs, are becoming increasingly critical factor of business success of retailers. Therefore, they have been studied lately on theoretical, methodological (mathematical modelling of guarantees) and empirical grounding, including accounting regulations (context, identification, recognition and disclosure). Conducted empirical analysis in this paper (as cited in other works) shows that the size and structure of warranty costs varies by individual companies depending on the policies and strategies for providing warranty for the quality of products to consumers, product type and its way of use. It is empirically proven that, in general, they range from 1 - 10% of sales. Thus, for example, in the company Tesla in 2015 warranty costs amounted to slightly more than 3% (3.04%) of sales.

In retail companies in Serbia warranty costs are well below 1% of sales. They are significantly lower than retail countries with developed market economy. Given the fact that the warranty is increasingly becoming a very important instrument of management in modern retail it is necessary to – in general, and in Serbia in particular, pay considerable attention to the creation of adequate policies and strategies for providing warranty for the quality of products to consumers and, in this connection, to efficiently manage warranty costs in order to achieve target profit. This will have a positive impact on the future growth and profitability of retail companies, with maximum satisfaction of consumer needs in Serbia, similarly, on the efficiency (with regard to the

share of retail in the creation of gross domestic product, added value and in number of employees) of the total economy in Serbia.

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Wpływ kosztów długoterminowego zaopatrzenia na handel w Serbii

Streszczenie

Koszty długoterminowego zaopatrzenia w handlu opierają się na niepewnych zobowiązaniach w przyszłości w relacji do sprzedanych dóbr. Odnoszą się one głównie do kosztów gwarancji. Koszty gwarancji wynikają z naprawy i serwisowania sprzedanych produktów w okresie gwarancyjnym. Stanowią one funkcję jakości, użytkowania i utrzymania (magazynowania) sprzedanych wyrobów. W sensie marketingowym, koszty gwarancji coraz bardziej traktowane są jako instrument sprzedażowy oraz satysfakcji klienta z punktu widzenia funkcjonalności i trwałości produktu. Mając na uwadze powyższe kwestie, niniejszy artykuł w pierwszym rzędzie bada wpływ kosztów długoterminowego zaopatrzenia – kosztów gwarancji – na kondycję handlu detalicznego, ze szczególnym naciskiem na Serbię. Teoretyczne, metodologiczne oraz empiryczne wyniki badań powinny służyć jako podstawa dla detalistów do wydajnego zarządzania kosztami gwarancji w celu osiągnięcia zysku docelowego wraz z maksymalnym zadowoleniem klienta.

Słowa kluczowe: jakość, gwarancja, satysfakcja klienta, zysk detaliczny

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