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## EFFICIENCY IMPROVEMENT OF MENEAGMENT'S PROCESS COST MENEAGMENT IN NETWORK RETAIL BUSINESSES

**Abstract:** *The paper describes the proprietary methodology of distributing administrative expenses in the network retail businesses within the process approach to management, which has been developed to improve the quality of trade expenses administration. To this end, the author suggests using the original base unit (cost driver) in the course of distribution of the subject expenses to improve the accuracy of calculating the trade process efficiency. The author gives reasons to the necessity of applying a comprehensive approach in its selection. This implies use, as the base unit, of a coefficient representing shop turnover per 1m<sup>2</sup> of sales area. The author has made a coefficient rating to formalize the relationship between the management results and economic factors of the trade businesses risk. This approach takes into account the commodity prime cost, and the quality and economic efficiency of the management processes in selling subdivisions of a network business.*

**Keywords:** *processes, cost management, quality, basic unit, the turnover per unit of retail space, the constant conversion factor, evaluation criteria, sales division, risk factors, the distribution ratio, commodity groups*

### 1. Introduction

The situation on the Russian commodity market for the last few years has changed dramatically. Competition among organizations in this industry stimulates the search for possible sales prices for their goods, appropriate to the level of consumer demand on the one hand and ensuring the necessary profitability of business activities on the other hand. The organization control over the level of trade costs in the context of business processes can solve this problem and

it's naturally leads to the use of innovative methods of calculation of the cost of the commodity groups.

Speaking about the retail enterprise network, you should consider the specifics of the commercial-industrial process that significantly affects the structure and volume of their trading costs. Due to the enlargement and diversification (diversity) of the trading business, complexity of technological processes in the conditions of dynamically changing environment the organizational management structure of these enterprises is

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a more complex processual format. Usually, it refers to the divisional type. Key figures in the governance of organizations with this structure are no longer the heads of functional departments but managers in charge of the industrial department. Structuring by divisions, as a rule, is one of the criteria: by production (products or services) – product specialization; by targeting certain groups of consumers – consumer specialization; by service areas- regional specialization. These features increasingly make it difficult to estimate the volume of trade costs in the context of trade units (stores) and commodity groups. It should be noted that the online trading companies have a significant amount of administrative expenses centralized character, which are required special analysis and distribution.

We believe that the quality of control of trade costs facilitates will be improved by the introduction of one of the most effective systems of cost calculation: the system AB-costing system (functional-based calculation). One of the important advantages of this system is the identification of factors directly characterizing indirect costs. This can significantly reduce their share in the trading cost and improve the accuracy of calculations. Research works, conducted by British economists John Inness and F. Mitchell, demonstrated the effectiveness of this system. In particular, according to 10 criteria qualitative assessment of the use of AB-costing in UK businesses an average efficiency ratio was 3.8-4.1 out of 5 possible. The management of the surveyed companies acknowledged the high degree of usefulness of usage of AB-costing in the solution of such problems as pricing, management of assortment policy, assessment of profitableness of customers, responsibility centers, cost modeling, etc.

This article focuses on the development of a methodology for allocation of administrative expenses of retail network organizations in conditions of process-oriented management. The novelty of our approach is to develop techniques based on genuine cost-drivers that

allow to improve methods of calculation of economic efficiency of management decisions and determine the commercial viability of resource use.

## 2. Materials and methods

The development of a methodology for allocation of management expenses in terms of process-oriented management based on the study the following research resources:

- 1) International theories ABC, hierarchy of costs: Cooper, R., Kaplan, R. (Cooper and Kaplan, 1991), Hongren, C.H., Foster, Jn., Datar, S. (Hongren *et al.*, 2000).
- 2) Russian theories ABC: Ivashkevich, V. (Ivashkevich, 1973), Vahrushina, M. (Vahrushina, 2001), Kaverina, O. (Kaverina, 2005).
- 3) The theories of process management: Robson, M. & Ullah, F. (Robson and Ullah, 1997), Bern, A. (Bern, 2003), Berning, B. (Becker and Berning, 2008), Eliferov, V. & Repin, I (Liferov and Repin, 2006)
- 4) The theories of product-by-product-group calculation: Butakov, I. (Butakov, 1926), Kantorovich, V. (Kantorovich, 1933), Bakanov, M. & Kapelush S. (Kapelush and Bakanov, 1987),

During research were used following methods:

- 1) Study international and Russian experience of the formation of the theoretical foundations AB-costing.
- 2) Study of the economic content of direct and indirect costs in terms of AB-costing.
- 3) The identification of the processes of the network of retail trade in the system AB-costing. With this purpose were conducted the study of international experience in process-oriented system of administration costs; a comparative study of the structure and content of the business

processes of manufacturing and trading companies; a comparative analysis of the system cost drivers cost international and Russian companies.

- 4) A survey of heads of trade units of online retail organizations. The purpose of the survey was to study the characteristics of the trade processes and to identify causal relationships between work processes of trade organization and trade costs.
- 5) The study of volume and structure of trade costs of individual trading units of the network of the retailer. The main task was the selection logically correct objects, which would allow to formulate the efficient cost drivers. For this purpose he received permission to study documents of the reporting units with similar economic characteristics.

This has made it possibly to realize a ranking of the objects investigated with the aim of choice of quality criteria for forming an effective driver of costs. The result of ranking was 4 group of units, characterized by location and management level. All units would meet the following prerequisites:

- all units are included in the same retail organization;
- all units are elements of one business process;
- all units in the same set of operations, as a consequence units are formed of similar costs.

### **3. Study international and Russian experience of forming theoretical foundations of the AB-costing**

Theoretical aspects of formation of AB-costing sufficiently elaborated in the economic literature. In this regard, the purpose of this study is to explore the

possibilities AB-costing for network retail based on the already established theoretical framework in the field of AB-costing and process-oriented management.

For more effective solution of the tasks we will look at the fundamental aspects that form the initial preconditions for learning of the model.

Firstly, the basic principle of the system is the focus on indirect costs because the direct costs do not require forced distribution and, consequently, they can be naturally attributed to a specific costing object. Analysis of the literature in the study area suggests that the basis of AB-costing is the use in making management decisions not only direct but also indirect costs. From this it follows that the objective of the system AB-costing is the determination of factors directly characterizing indirect costs.

Secondly, as noted earlier, the system under consideration is based on highlighting operations (types of activity, functions, actions) as an original object of calculation. Western economists impose such disparate concepts as "activity", "activity" and "processes". In the Russian economic literature the authors use different terminology approach. Some of the authors use such terms as "action" and "operation", the other prefers western terminology. From the point of view of grammar of Russian language, these terms are synonymous and can be used in the same context. Accordingly, a fundamental difference in the use of a concept in relation to the system AB-costing does not exist. In this article, we will use the term "process", identifying them with the phrase "activity" based on accepted interpretations of these concepts by Atkinson, A.. According to. Atkinson, A., the process "...is work performed within one organization." Processes of specific organization in the future, on the one hand, are detailed through the allocation of separate types (tasks), the decisive individual goals within a specific job (for example, servicing equipment, sales of goods). On the other

hand, the interrelated activities of the organization objectively can be combined in a sustainable purposeful set representing processes, due to two reasons, the first of which is characterized by the features of the trading process. The second is determined by the interests of the consumers of the generated design information. The most characteristic processes of retail organizations are logistics, sale of goods, etc. Important characteristic of the process requires the presence of two components, namely, incoming and outgoing flows. Incoming flows represent the resources needed to maintain the health of the process and converted into a target result (output stream) that is used external to the process consumers.

Resources are economic elements, including labor, material and cash costs identified with the implementation of a specific activity and not a product. Resources can be subdivided into two interrelated groups: material and information.

Thirdly, the objective of the calculations is the calculation of costs for separate operations with subsequent distributions by the final cost objects. Diagram of causal relationships in trade can therefore be described as follows: the main objects of calculation: activities → costs by types of activities → the cost of other commercial calculation: product group, product category, a structural unit.

#### **4. A study of the economic content of direct and indirect costs in terms of process-oriented management**

In modern scientific studies on the retail trade, there is no single approach to the problem of direct and indirect costs. In this regard, for the purposes of process management, we propose to allocate such cost categories as direct costs of the departments associated with the implementation of various business processes of retail network organizations. In addition,

we believe that reporting entities should group direct expenditure by commodity groups and commodity categories for the convenience of calculation of the specific trade costs, and to ensure the most accurate calculation of total trading cost. For the purposes of this study, we introduce the definitions of these concepts. Specific trading cost is the cost of living and materialized labor, expressed in monetary form, associated with bringing n- items to the final consumer.

Shopping Total cost – is the cost of living and materialized labor, expressed in monetary form associated with bringing the total mass of commodities to the final consumer.

Direct ranking of the proposed expenditures will improve the quality of administration of trade costs of business processes in general and process “Management” in particular.

We believe that the main objective of such classification is the maximal reduction of indirect costs, which allows to increase the objectivity of the cost calculations. It is important to note that the nature of indirect costs in modern literature are described differently. Firstly, it is necessary to note the differences in terminology between the Russian and Western authors. In particular, in the Western practice the classification of costs into direct and indirect in a greater degree applies to the calculation processes. Secondly, some economists equate concepts such as indirect and overhead costs. For example, Drury, K. in addition to material and labor costs allocates manufacturing overhead, and Hongren, C.H. uses in this terminology a number of indirect costs. Overall, the Western classification distinguishes conditionality, simplification, mixing various classification criteria.

In the Russian classical theory, on the one hand, there is a clear division of expenses on direct - indirect. On the other hand the Western approach at present is the determining factor in the theory and practice of management. The conducted studies allow us to identify the key factors that with a certain degree of conditionality can be used to

group trade costs in terms of process management. Firstly, the grouping of expenditures according to the principle of the direct-indirect in a greater degree depends on subjective factors, such as, for example, the commercial interests of trade organizations in this particular economic situation. Secondly, in our view, article-by-article to determine the composition of the classified set against the direct and indirect costs should be based on the fact that their structure is determined by the individual features of the trading process. In particular, speaking about the network of retail trade relative to the calculation cost, in our view, should be distinguished between

the group of direct-indirect costs applied to cost objects. In accounting for such objects traditionally are considered as media expenses, which. From our point of view in the retail trade is useful to distinguish two main objects of calculation: the basic structural unit (store) and commodity group (commodity category).

In this regard, the following definition is more accurate, in our opinion. Indirect selling expenses are expenses of a general nature, relate that with a separate calculation object is possible only through special methods of distribution or by calculation.

**Table 1.** Identification of the direct costs relative to the trading processes

Article trade costs	Shopping processes in the retail organization					
	Management	Supply	Storage	Selling	Marketing	Support the sales process
Transport cost		x	x			
The cost of labor	x	x	x	x	x	x
Deductions on social needs	x	x	x	x	x	x
Physical contingency	x	x	x	x	x	x
The cost of inventories insurance			x			
The costs of fixed assets	x	x	x	x	x	x
Amortization expenses	x	x	x	x	x	x
Technological losses		x	x	x		
Advertising costs				x		
The cost of packaging		x				
The costs of recruitment and training						x
Taxes and fees	x	x	x	x	x	x
Other expenses, including:	x	x	x	x	x	x
- communication costs	x	x	x	x	x	x
- business trips	x					
- maintenance of fire, paramilitary and patrol guards	x	x	x	x	x	x
- entertainment expenses, etc	x					

Practical studies allow to identify the most typical articles of trade costs of direct relevance to different business processes and product groups. In table 1 you can see the grouping of direct

## 5. The identification of the processes of the network of retail trade in the system AB-costing

System AB-costing accumulates costs associated with individual operations. The result is the ability to distribute the collected costs on specific media expenditures. This approach allows us to track the impact of management decisions on the scope and nature of the costs associated with ancillary activities. This is true in this modern stage of market conditions, and this is the main difference of this system from traditional approaches to the calculation, involving the distribution of indirect costs only for units.

The activities of the organization, according to general opinion, can be classified into three rough clusters: principal activities, auxiliary activities and the management of the organization. These groups differ from each other according to certain criteria, which include: the appointment process, the end result of some process, the nature of the interaction with other types of activities, degree of influence on the quality of the final product, a group of users.

Traditionally, the main types of retailers are usually considered three operational processes: "Supply", "Storage" and "Selling". To the list of these operations, in our view, it is necessary to include marketing. We consider that ancillary activities appropriate to classify such operations as the provision of personnel, legal support, administrative support, financial management. These operations should be combined in a single conditional block "Support the shopping process." Process control organization is a separate activity pertaining to the entire organization as a whole. Thus, in our view, in the network of retail trade for the purposes of

AB-costing is useful to distinguish the following processes of "Management", "Supply", "Storage", "Implementation" and "Support the shopping process."

The selected processes will most effectively allow you to increase the profitability of selling expenses in our proposed system, process cost control.

For the formation of methodology of AV-costing one of the most important step is determining the level of detail each activity carried out based on interviews with employees of the organization. The number of activities that allow to realize a particular process, as a rule, should not be overly large (no more than 6-8 levels).

It is important at this stage to classify operations based on their interaction with the object of calculation. This classification allows to establish a closer link between the processes and the associated costs. It involves the use as the basis for dividing the specific activities of the organization to the volume and structure of the costed object. In foreign literature, the first such group was developed by Cooper, R.. The author identified five types of bases for identifying different types of activities: unit-level data of product, batch level product-level product, work with clients and ensure business continuity. Drury, K., in turn, was limited to four groups of transactions, excluding from the list the type of activities with clients.

In domestic practice, there are various modifications of these groups. As a rule, the authors adapt the basic classification in relation to specific areas of his research. Most of them are divided into four main groups.

We have developed a hierarchy of activities, adapted to the organizations network retailers. The proposed hierarchy involves the identification of the following commercial processes (see table 2).

**The first group** of operations has a close relationship with key trade processes. The costs of these activities can be linked to quantitative factors.

**1.1. Activity at the level of the commodity unit.** These operations are somehow connected with sales and product groups are industrial in nature. They are either directly proportional to the volume of sales, or depends on the work, which is proportional to this factor. For example, the quality control of sold goods, material handling, packaging, storing (at varietal records), sales etc.

**1.2. Activities at the consignment level.** These operations are mainly determined by the number of parties, not the amount of goods sold. To this operating group includes such local production processes as the design of supply contracts, transportation (if it is at the expense of the buyer), storage (when batch records), quality control of incoming goods, order processing, etc.

**Table 2.** Identification processes in the retail organization

Processes	Level activities of				
	Sales unit	commercial batch	commodity section	Commercial subdivision	By provision of business
Supply		x			
Storage		x			
Implementation	x				
Marketing	x		x	x	
Support the sales process		x	x	x	
Management					x

The second group of operations is characterized by the indirect nature in relation to one calculation objects and direct – to others. Resulting requires compulsory distribution. These operations generally do not correlate with sales.

For example, marketing, merchandising, etc.

**2.1. Activities at the level of commodity groups.** With this activity are identified subprocesses involved in maintenance of sale of a commodity groups. They do not depend on such quantitative factors such as sales volume or the number of purchased batches. The magnitude of the costs associated with these operations, as a rule, is administrative in nature and is determined by the product structure of the mass of commodities sold trade organization. For example, this group should include administrative work for improving sales process, optimizing traffic flows, handling complaints, installation and maintenance of commercial equipment, etc.

The third group of operations – management operations – is purely indirect.

**2.2. Level activities of the sales force.** This category in the retailers are the functional procedures to influence the mass market to increase sales, but directly beyond its control.

**3.1. Activities to ensure business continuity.** The costs of these operations, as a rule, are of a general nature. They do not depend on sales or from the assortment policy of the organization, or the number and nature of consignments. Strictly speaking, this group includes expenses associated with administrative functions.

The build directory is a time-consuming procedure. The main difficulty was that a large part of the processes of the organization are involved in the implementation of several core activities. It follows that a variety of processes in a retail organization can be represented as a set of differential action character (see table 3). The conducted research allows to make a conclusion about expediency of allocation from this point of view, several main groups of processes: through processes, processes, sub-processes and unit operations the lowest level, performed by one person.

**Table 3.** Decomposition of the main processes of the retail organization

Processes	Subprocesses
<b>Supply</b>	delivery, processing orders, sourcing and contracting, procurement of goods, quality control of incoming goods, optimization of traffic flow, material handling, documentation, distribution of purchased goods between the trading divisions
<b>Storage</b>	the contents of storage facilities, cargo handling, provision of special storage conditions, the movement of goods
<b>Implementation</b>	merchandising, pre-sale preparation, advertising, content of trading and cash register equipment, quality control of goods sold, after-sales activities (return or goods)
<b>Marketing</b>	the collection and analysis of data on the status of the internal and external environment in which the company operates, determination of the nature consumer preferences, the determination of the preliminary prices for the new goods and services, working out of projects of management decisions based on the results of the analysis of internal and external environment, analysis of new markets for new products
<b>Management</b>	overall coordination of the work of the organization as a whole, planning and setting goals in the areas of quality, accountability, authority and interrelation between departments, maintain regular analysis of processes and management decisions, including: the organization receiving the input for the analysis and design decisions taken as the analysis results

### 6. The rationale for cost driver cost of the process Management on the basis of comparative analysis of the system cost drivers cost international and Russian companies

The increase in the number of shopping units, the expansion of the range of realizable product groups of such companies complicates the process of calculation and determine the need for special preparation of accrual calculations that meet the needs of all levels of government retail outlets. Studies have shown that a characteristic of most organizations, the network of retail trade is the presence of numerous machine control. The expense reporting process to a greater extent are indirect, traditionally distinguishing the organization's divisional structure. Thus, in our view, only a portion of these costs requires compulsory distribution. We are talking about the expenses of the central office. The costs of the managerial personnel of the trading units should be attributed to the implementation process and distribute it.

For cost allocation in the system AB-costing is used the cost driver cost, which is a cost factor that influence the total costs in a given period of time (range of relevance). In different sources this indicator is called differently: "driver costs", "factor cost", "cost", "base unit".

Analysis of literature leads to the conclusion that as the cost driver (the factor) cost of management activities of industrial organisations, it is recommended to use such indicators as the number of production cycles, direct labor costs of production workers, number of administered objects, etc.

In Russian publications, by analogy with foreign experience, the wholesalers are also offered using as cost driver, the number of control cycles. In our opinion, unlike industrial organizations, in which the cyclical control can be easily correlated with the quantity and duration of production processes, in sales organizations, this can cause understandable difficulties. For example, if in the retail trade as a conditional loop to qualify the process, including procurement, storage, pre-sales preparation and marketing, with the last element will inevitably have problems. In this case, if the

moment of acquisition can be identified, how to determine the time of implementation (especially when using the graded method of storing used food traders) to solve is quite difficult.

In practice of the traditional calculation is also seen with a differentiated approach to the choice of cost drivers cost: the estimated (standard) overhead rate; the number of hours of equipment operation; direct costs of processing products; mass (volume) of product produced; wages, etc. the Most simple and common method of distribution for administrative costs in the Russian practice is the distribution in proportion to the wages of production workers (without bonuses on a progressive-award systems).

In our view, these cost drivers costs are impractical to apply in the calculation of the apportionment of administrative costs in the retail trade. From our point of view, identifying key cost driver of the system AB-costing for trade organizations should first and foremost be guided by the analysis of specific features of these organizations.

In particular, the allocation of these costs between retail units (shops) should be taken into consideration that different retail segments have differentiated level of profitability. If you distribute administrative costs, for example, is proportional to the volume of goods sold, this will lead to the fact that organizations with higher levels of profitability (higher sales volume) will have a higher amount of indirect costs that artificially reduce their income and vice versa. This will entail a distortion of the real picture of efficiency of financial and business activities processes sales organization. From our point of view at the use of incentive forms of remuneration it will negatively affect the interests of honest employees.

When considering the distribution of expenditure by commodity groups should also be considered that different types of implemented by the organization products can have different storage conditions, the complexity and the degree of mechanization

of the trading process. A large part of administrative costs in the distribution in proportion to their wages will be allocated to the most labor-intensive products with lower level of mechanization. It should be the opposite.

This implies that in trade organizations when selecting a cost driver the cost of the process "Management", you should use individual approach, taking into account the specifics of the trading process. In our opinion, the cost factor in this case should be comprehensive, taking into account a number of features of the trading activities of the structural units. First and foremost, you need to take into account such objective factors as the area of the shopping service and location of the outlet. Both elements have a primary influence on the volume of trade of specific trading unit. On the basis of studies in table 4 we have produced a ranking of the structural units of the trade organization in accordance with such risk factors as the location (risk factor I) and the level of efficiency of management personnel (risk factor II).

The basis of the proposed ranking system is based on two essential criteria (of course, many criteria can be increased), affecting the quality of the resulting division income:

- 1) **internal (adjustable) criterion** – efficiency of the process "Manage", which represents the value of turnover per unit of retail space. From our point of view, it is the most objectively characterizes the effectiveness of the management of the sales force;
- 2) **external (unregulated) criterion** – the level of solvency of the population, corresponding to the location of the concrete structural units. We believe that this figure allow to take into account the distribution of costs negative (positive) influence of circumstances which manager of the trading division hasn't an objective opportunity to manage.

**Table 4.** Ranking of sales subsidiaries

<b>Risk group</b>	<b>Risk factors I</b>	<b>Risk factors II</b>
<b>1 group</b>	<b>Unfavorable location</b>	organizations with a low level of trade per unit of trade area with a low level of solvency of the population as a result of the vie disadvantageous location of the commercial facility not connected with the efficiency of administrative staff
		organizations with the level of trade per unit of trade area above the minimum with a low level of solvency of the population due to a disadvantageous location of the commercial facility not connected with the efficiency of administrative staff
		organizations with a low level of trade per unit of trade area with an average level of solvency of the population as a result of the vie normal location of the commercial facility not connected with the efficiency of administrative staff
<b>2 group</b>	<b>Insufficient work of managerial staff</b>	organizations with a low level of trade per unit of trade area with an average level of solvency of the population due to the normal location of the retail facility associated with the low efficiency of management personnel
		organizations with the level of trade per unit of trade area is higher than the minimum at the medium and high level of solvency of the population due to the favorable location of the retail facility associated with the low efficiency of management personnel
		organizations with a low level of trade per unit of trade area with a high level of solvency of the population due to the favorable location of the retail facility associated with the low efficiency of management personnel
<b>3 group</b>	<b>Sufficient work of management personnel</b>	organizations with the average level of trade per unit of trade area with a low level of solvency of the population due to a disadvantageous location of the retail facility associated with the performance of managerial staff
		organizations with a high level of trade per unit of trade area with a low level of solvency of the population due to a disadvantageous location of the retail facility associated with the performance of managerial staff
		organizations with the level of trade per unit of trade area is above average, with an average level of solvency of the population due to the normal location of trading object, related to related to performance of managerial staff
<b>4 group</b>	<b>Best location of a retail facility</b>	organizations with the average level of trade per unit of trade area with medium-high level of solvency of the population due to the favorable location of the shopping facility, not associated with the efficiency of administrative staff
		organizations with a high level of trade per unit of trade area with a high level of solvency of the population due to the favorable location of the shopping facility, not associated with the efficiency of administrative staff

The model allows to link both criteria and enables the use of a comprehensive database of the distribution of the administrative costs of the process "Management".

The analysis allows to conclude that the distribution of the costs management process should be in proportion to such cost-driver

costs as turnover per unit of retail space, taking into account differentiated aspects of the trading activities of the structural units of the network organizations.

Table 5 is on the basis of the described group trading divisions carried out the detailing of the coefficients of efficiency of process of

"Management" on the basis of research data of the retail network.

After you select the cost factor in the next stage, the calculation of payments within each

group of stores indirect expenses must be allocated between specific units of the group. In our view, as the cost should also use the turnover per unit sales area.

**Table 5.** The ranking of efficiency (Keff) of the management process depending on the level of solvency of the population and class of the sales department

The ranking of the coefficients of efficiency of the process "Management"					
Low		middle		High	
Keff (t/R per 1 m2 of retail space, RUB./m2)	class of trading unit	Keff (t/R per 1 m2 of retail space, RUB./m2)	class of trading unit	Keff (t/R per 1 m2 of retail space, RUB./m2)	class of trading unit
4000-3000	1	4000-3000	2, 1	4000-3000	2
6000-4000	1	6000-4000	2	6000-4000	2
7000-7000	3	7000-7000	4	7000-7000	4

### 7. Development of practical recommendations for the administration costs of the process "Management" on the basis of research data sales subsidiaries network retailer

The proposed model for the process "Management" includes the following settlement mechanism:

- 1) Group trading divisions of the network operator, in accordance with the criteria described above.
- 2) Definition of fixed conversion factors for different structural units of the analyzed group of enterprises. For this trade per unit of trade area one of the structural units (t0) taken as one unit, and other units of fixed conversion factors (KP), are defined as the ratio of turnover per unit of retail space for a particular unit with the same figure for the division, taken as a unit:

$$K_n = \frac{T_n}{T_0}, \quad (1) \text{ where } K_n -$$

the conversion factor for n-th commercial division  
 T<sub>n</sub> – trade per unit of trade area of the n-th structural unit,

- 3) The definition of conditional trade according to various structural units of one group. To do this, the actual turnover of a particular structural unit is multiplied by the appropriate conversion factor:

$$T_n^{con} = T_n^f \times K_n, \quad (2)$$

where T<sub>n</sub><sup>con</sup> – the conditional turnover of the n-th structural units, T<sub>n</sub><sup>f</sup> – actual turnover of the n-th structural unit.

- 4) The determination of the total amount of trade conditional on all structural units of the considered group. For this cumulative calculated above conventional indicators of turnover for individual structural units:

$$\sum T_m^{con} = T_1^{con} + T_2^{con} + \dots + T_n^{con}, \quad (3)$$

where  $\sum T_m^{con}$  – total notional turnover in the m-th group of the top-trading units.

- 5) Determination of the coefficient of distribution of administrative costs. This is calculated against the total actual amount of administrative expenses attributable to a particular (m-th) group trading divisions,

conditional to the total turnover of the analyzed group of units.

$$X_m = \frac{\sum C_m}{\sum T_m^{con}}, \quad (4)$$

where  $X_m$  – the distribution ratio of management expenses for m-th group of trading divisions,  $\sum C_m$  – the total amount of management expenses attributable to m-th group of companies.

- 6) The determination of the actual value of administrative expenses for each structural unit included in the analyzed group of enterprises. For this conditional turnover for each

unit is multiplied by the distribution ratio.

$$C_n = T_n^{con} \times X_m, \quad (5)$$

where  $C_n$  – the administrative costs attributable to the n-th structural division.

In the next phase costing calculations costs management, distributed between stores, should be grouped by commodity groups in order to determine the shopping cost. To implement this process, you can use the same cost driver cost as in the previous stages, as different commercial products have differentiated income.

The results of the calculations are presented in tables 6 and 7.

**Table 6.** The results of the distribution of the expenses of the process "Management" trade divisions of ZAO "Retail network" on results of work for the month of the reporting year

№	Calculation object (shop)	Factor costs, million RUB/m2	The cost of activity, million RUB./month.
1	Megastore	0,006818	1,78771
2	Supermarket № 1	0,005556	1,456691
3	Supermarket № 2	0,006667	1,748117
4	Supermarket № 3	0,007	1,835431
5	Shop No. 1	0,003667	0,961416
6	Shop No. 2	0,004508	1,182069
7	Shop No. 3	0,00459	1,203518
8	Shop No. 4	0,00456	1,195652
9	Shop No. 5	0,004567	1,197488
10	Shop No. 6	0,00437	1,145931
11	Shop No. 7	0,004519	1,184776
12	Shop No. 8	0,004366	1,144836
13	Shop No. 9	0,004648	1,218697
14	Shop No. 10	0,004759	1,247732
15	Shop No. 11	0,005034	1,320064
<b>TOTAL cost factor in the procurement</b>		0,075628	19,83

**Table 7.** The results of the apportionment of the expenses of the trading process "governance" by commodity groups, ZAO "Retail network" on results of work for the month of the reporting year.

№	Cost object (product groups)	Administrative expenses, million RUB./month.	
		The cost factor	The costs of activities
I	Megastore		
1	Gastronomy goods	0,001227	0,321788
2	Groceries	0,00225	0,589944
3	Dairy products	0,001364	0,357542
4	Vegetables and fruits	0,000545	0,143017
5	Frosen products	0,000682	0,178771

6	Meat and meat products	0,00075	0,196648
	Total store "MM"	0,006818	1,78771
<b>II Supermarket</b>			
1	Gastronomy goods	0,001078	0,282612
2	Groceries	0,002411	0,632236
3	Dairy products	0,001345	0,352537
4	Vegetables and fruits	0,000678	0,177725
5	Frosen products	0,000544	0,142763
6	Meat and meat products	0,000611	0,160244
	Total store "SM"	0,006667	1,748117
<b>III Market 1</b>			
1	Gastronomy goods	0,000631	0,165574
2	Groceries	0,001774	0,46504
3	Dairy products	0,00086	0,225543
4	Vegetables and fruits	0,000632	0,165668
5	Frosen products	0,000403	0,105794
6	Meat and meat products	0,000266	0,069869
	Total store "M1"	0,004567	1,197488
<b>IV Market 2</b>			
1	Gastronomy goods	0,000697	0,182698
2	Groceries	0,001752	0,45931
3	Dairy products	0,000834	0,218606
4	Vegetables and fruits	0,000604	0,15843
5	Frosen products	0,000467	0,122325
6	Meat and meat products	0,000237	0,062149
	Total store "M2"	0,00459	1,203518

## 8. Conclusions

Our studies show that in the current economic conditions trade organizations are forced to, on the one hand, constantly monitor the competitor's prices and, on the other hand, seek new opportunities to optimize their own pricing policy. Objectively, we believe that in this situation the role and importance of process-oriented management of trading costs is significantly risen.

The concept of process-oriented system of trading costs management was developed from the standpoint of positive international experience of "low costs" strategy, which suggests not only improved trade formats, but also transformation of existing management and calculation models. In this regard, the said concept is considered on the background of stage-oriented calculation system.

Studying the theory and practice of managing business processes, with respect to the author's identification of direct expenses

concerning trade processes and selected objects for calculation, made it possible to formulate the unified key points for administrating the expenditures of the "Management" process in the network retail organizations, when stage-oriented calculation is used. Innovative approaches and practical recommendations are developed on the basis of the proposed trading processes hierarchy, linked to the specific objects of calculation, taking into account their correlation with cost factors, as well as with the developed schemes for exchanging information resources within a network retail organization in order to obtain reliable and objective information.

The proposed method enables to consider, when assessing the marketable cost, the quality and economic efficiency of the management processes of trade units within a network organization. This, in turn, provides the necessary business profitability through equitable distribution of administrative

expenses between commercial entities that have different economic conditions. These benefits are achieved by implementing the original base unit of trading costs distribution (cost driver) into the process management. In

this quality, it is proposed to use the amount of turnover for 1 m<sup>2</sup> of the retail space. The effectiveness of the author's approach is confirmed by research.

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