

## ABC - Analysis, as an Important Tool for Generating an Optimal Assortment Plan Commercial Enterprises

**Shabanova L.B.**

*Kazan Institute (branch), "Russian Economic University" named after,  
G.V. Plekhanov, Kazan, 420111, Russia*

**Bagautdinova N.G.**

*Kazan Federal University, Institute of Management, Economics and Finance, Kazan, 420008, Russia*

**Gafurov I.R.**

*Kazan Federal University, Institute of Management, Economics and Finance, Kazan, 420008, Russia*

**Salimov L.N.**

*Institute of Economics, Management & Law (Russia, Kazan), Kazan, 420108, Russia*

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### Abstract

*High rates of financial and economic state trading enterprise is largely dependent on its assortment policy. It is known that not all commodity groups food supermarket are equally profitable. Since the formation of a range of tactical problems of commercial enterprise, the analysis of its economic efficiency should be evaluated systematically. The most popular method of assessment of such acts ABC - analysis. The purpose of the ABC-analysis in our study - Identification of product groups, with the most high, medium and low share of sales.*

**Keywords:** *Trade policy, the assortment plan, methods, graphical methods, the definition of boundaries, grouping objects of management.*

### 1. Introduction

Optimal assortment policy of commercial enterprise is manifested through the assortment plan. Assortment Plan is a list of product categories and headings on the sale of the company which specializes. The plan has the following characteristics: the breadth of product lines (the number of product groups), depth of product lines (the number of headings in each commodity group), saturation (number of product categories and headings in the plan). Due to the fact that the commodity groups and headings have different margin necessary to optimize the assortment plan. For this purpose we use a technique ABC - analysis. Marketing analysis of enterprises in Russia, assessment of the role of consumer spending in ensuring the dynamics of the Russian economy, as well as study models the interaction of firms and components of the environment in Russia has a particular organization [1, 2, 6].

### 2. Method

Method ABC - analysis is widely used on the Russian trading companies. This is a graphical method for determining the boundaries between groups of products A, B and C. On the x-axis are postponed headings arrayed in descending order of their share in total sales. Along the Y-axis deferred sales share in total sales, calculated on an accrual basis and expressed as a percentage. Under current conditions, this method is widely used [3, 4, 5].

### 3. Result

For analysis, the following data were used:

- supermarket sales for the quarter of the year;
- the range presented in the form of commodity groups;
- revenue for each product - is calculated by multiplying the price of the goods on his sales for the quarter.

$$\text{revenue} = \text{sales\_volume} * \text{price} \quad (1.)$$

- the share of each commodity group in the total range - calculated by the ratio of revenue to the commodity group's total revenue of all product groups..

$$\text{share\_of\_revenue\_by\_product} = \frac{\text{revenue\_by\_product}}{\text{total\_revenue}} * 100\% \quad (2.)$$

Following the results of calculations of the best selling and highest revenue-bearing products, will be located in the blocks "A" and "B".

Thus, the entire range of supermarket for the reporting quarter of the year was divided into product groups, the total amount of 41.

Using the formula mentioned earlier, we have obtained the original data (see. Table 1) needed for the ABC analysis.

**Table 1.** Initial data for ABC-analysis

Sl. No	Assortment position	Revenue, thous. roubles	Specific weight sales volume, %	Share in the turnover on an accrual basis, %	Classification
1.	Wine beverages	73692	26,30	26,3	A
2.	Meat & sausage products	54440	19,45	45,75	
3.	Semi-finished products	16213	5,76	51,51	
4.	The low-alcohol products	15642	5,50	57,01	
5.	Cheese	14436	5,15	62,16	
6.	Vegetable oils	11472	4,09	66,22	
7.	Baking products	10070	3,59	69,81	
8.	Milk production	9634	3,44	73,25	
9.	Baby Food	9211	3,29	76,54	
10.	Confectionery	8246	2,94	79,48	
11.	Pasta	6800	2,42	81,9	B
12.	Means for washing & cleaning	4902	1,75	83,65	
13.	Personal hygiene items	4367	1,56	85,21	
14.	Groats	3841	1,37	86,58	
15.	Juices	3786	1,35	87,93	
16.	Frozen products	3786	1,35	89,28	
17.	Non-alcoholic beverages	3280	1,17	90,45	
18.	Fishery products	3163	1,13	91,58	
19.	Canned Fish	3163	1,13	92,71	
20.	Tobacco	2500	0,89	93,6	
21.	Meat Canned	2324	0,83	94,43	
22.	Chips & Snacks	2324	0,83	95,26	
23.	Own pastries	1757	0,62	95,88	
24.	Flour	1500	0,54	96,42	
25.	Tea	1411	0,50	96,92	
26.	Coffee	1333	0,47	97,39	
27.	Vegetables & fruits	1088	0,38	97,77	
28.	Olive oil	951	0,34	98,11	
29.	Stationery	951	0,34	98,45	
30.	Salt	614	0,22	98,67	
31.	Matches	512	0,18	98,85	
32.	Utensils	512	0,18	99,03	
33.	Eggs	512	0,18	99,2	
34.	Sugar	495	0,17	99,37	
35.	Perfume	241	0,08	99,45	
36.	Salads	186	0,06	99,51	
37.	Kitchenware	145	0,05	99,56	
38.	Toys	110	0,04	99,6	
39.	Sauces & spices	111	0,03	99,63	
40.	Margarine products	111	0,03	99,66	
41.	Goods for animals	14	0,005	99,665	
In total		279.846	99,665	99,665	

Using the data in Table 1 we construct a curve Lorentz concentration, where the x-axis are arranged product groups, in descending order of their share in total sales, and the vertical axis - the size of turnover. Border blocks "A", "B" and "C" was determined by the tangent to the curve analysis (see. Figure. 1).

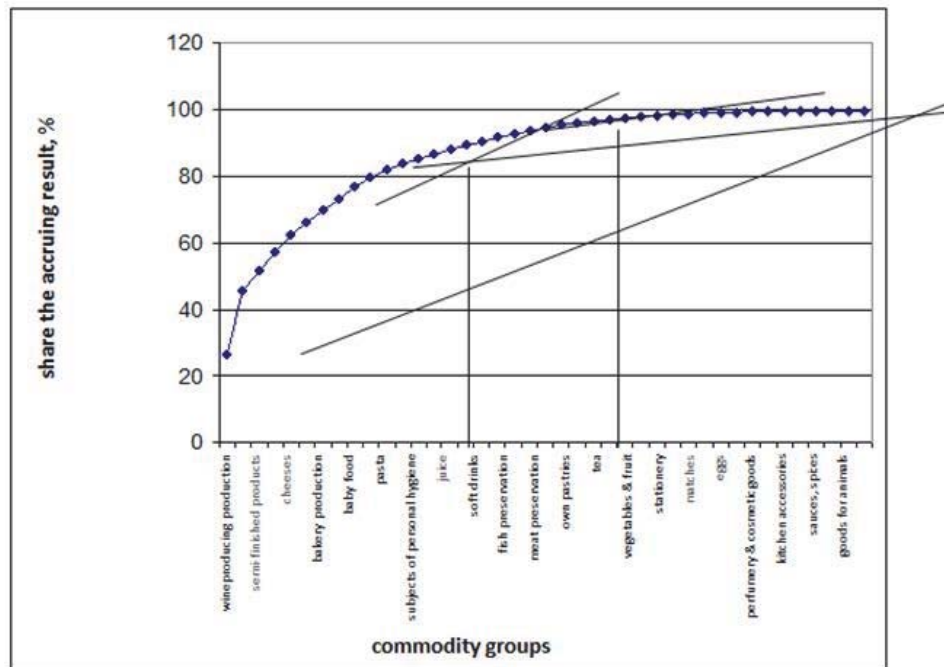


Figure. 1. ABC analysis supermarket "Perekrestok" in the reporting quarter of the year

#### 4. Conclusion

The obtained results allow us to conclude that the most advantageous from an economic point of view for the supermarket "Perekrestok" is the sale of the first 11 product groups on the list in Table 1. - These goods included in the block "A".

The block "B" are 9 product groups. Do not forget that they are also beneficial to the commercial enterprise, but the return they gain less than the profits from the sale of goods Block "A".

In the block "C" includes all remaining items in Table 1. Note that they account for almost 50% of the total range of the supermarket. These products are not economically viable to implement. However, to give them a supermarket can not, as many of them are necessary for the buyers who come just for this group of products. All hopes seller focused on the fact that purchase goods from the commodity group "C", the buyer will make a number of acquisitions of goods from the block "A" or "B».

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