

Ministry of Education and Science of Ukraine
**ODESSA NATIONAL ACADEMY OF
FOOD TECHNOLOGIES**

International Competition of
Student Scientific Works

**BLACK SEA
SCIENCE 2020**
PROCEEDINGS



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Ministry of Education and Science of Ukraine
Odessa National Academy of Food Technologies

International Competition of Student Scientific Works

BLACK SEA SCIENCE 2020

Proceedings

Odessa, ONAFT 2020

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2. ECONOMICS AND **ADMINISTRATION**

EXPORT-ORIENTED ANALYSIS APC REFINERIES**Author:** Catherine Narkevich**Supervisor:** Larisa Narkevich*Belarusian-Russian University (Belarus)*

Abstract: *As the result of this research theoretical and practical aspects of analyzing the prospects of export-oriented production of agricultural enterprises are studied. The main results of research: system and complex analysis of production reserves of export-oriented production is offered; the analysis of factors influencing the output of export-oriented production of agro-industrial complex enterprises is made and the directions of perspectives of their use are revealed; information-analytical environment for analytical substantiation of perspectives of export-oriented production development is developed, as well as for information support in substantiation of managerial and planned decisions; investment and reference points are developed.*

Keywords: *analysis, dynamics, factor, reserve, cost price, labor, material resources, investment project, efficiency.*

I. Introduction

The relevance of the topic is conditioned by the system of national priorities formulated in the National Strategy for Sustainable Social and Economic Development of the Republic of Belarus for the period up to 2030, among which are growth and diversification of exports of goods and services, ensuring a balanced foreign trade [7]. The process of export orientation has become the main link that characterizes the country's international relations and is aimed at gaining a place in world markets of products and manufactures [8]. Export deliveries of agro-industrial complex enterprises are of special importance in the system of foreign economic activity of the republic. The important component of development of export potential of the organization is revealing and use of production reserves of export-oriented production, development of effective export strategy, realization of which will allow to take a worthy place in the foreign market. Researches in this direction were carried out in JSC "Bunker - confectionery company "Domochai", specializing in the production of bakery products and focused on the sustainable development of exports.

II. Analytical review of literature.

The works of scientists E. S. Balashova, N. E. Bondarenko, S. N. Gnatiuk, A. G. Baranovsky, M. K. Zhudro, T. N. Kokina, P. V. Manin, G. V. Savitskaya, T. N. Fateeva, V. Vidasova and others were used in the work. analytical materials and normative documents (laws, decrees) of the executive and legislative power bodies [7, 8]; official data of the National Statistical Committee [9]; data published in mass media; sources of the Internet global network [10], as well as internal sources of information of the enterprise under investigation. The article by E.S. Balashova analyzes the dependence of the efficiency of the enterprise's activity on the availability and operation of the mechanism for identification, evaluation and use of reserves [1]. The article by N.E. Bondarenko shows that production of competitive products on the world markets is impossible without the implementation of a systematic approach,

which includes building in practice a system of interrelations and equal opportunities between subjects on the "supply line", as well as the formation of institutions that ensure the sustainability of agricultural producers in the domestic market and their entry into foreign markets [2]. T. A. Korkina, A. S. Kostarev have revealed the stages of evolution of the notion of "production reserves"; considered the definition of intraproductive reserves of development; presented the classification of intraproductive reserves of enterprise development, which creates the basis for their complex and purposeful evaluation and implementation in order to increase enterprise competitiveness [5]. D.K. Shevchenko, O.V. Kirsanov in their work investigate the problems of identification of production reserves, their evaluation and use to increase the efficiency of enterprise activity; they offer classification of intraproductive reserves [12]. In P.V. Manin's research the results of management of the export potential of the industrial enterprise are grounded, the factors influencing the efficiency of the use of export with the allocation of the internal reserves are singled out [6] G.V. Savitskaya considers in her work the factors and reserves of the development of the export potential of the industrial enterprise; she suggests the directions of the development of the export potential of the industrial enterprises due to the involvement of its unrealized elements in the export activity, researches the factors of the export potential development.

III. Object, subject and methods of research

The object of the research is the foreign economic activity of the enterprise, opportunities to increase its export deliveries.

Object of research - production reserves to increase the output of export-oriented products.

The purpose of scientific work is to develop information and analytical environment for management of export-oriented production development of the agro-industrial complex enterprise. The main objective of the research is the formation of theoretical foundations and practical directions for the use of production reserves and creation of conditions for increasing the output of export-oriented products.

Research methods: general scientific methods of analysis and synthesis, generalization, analogies, method of discounting, comparison, analytical methods, flexible budgeting method, statistical and economic-mathematical methods of analysis.

IV. Work results

The working format of the research was built in the economic and analytical environment of JSC "Boulochno - Confectionery Company "Domochay" (JSC "BPC "Domochay"). The analysis of dynamics of financial and economic indicators for the last 3 years revealed a decrease in the dynamics of all levels of profit, the growth of costs for the ruble of marketable products, the deficit of own circulating assets (Table 1 Presentations).

These indicators point to the relevance of search and realization of production reserves of export-oriented production in the context of sustainable development of the economy of the republic and enterprise.

Table 1- Analysis of dynamics of financial and economic indicators of OJSC BPC Domochai

Indicator	2016 y.	2017 y.	2018 y.	Rates of change, %		
				<u>2017</u> 2016	<u>2018</u> 2016	<u>2018</u> 2017
The volume of output in, thousand rubles.						
- at current prices	28 326,0	32 515,0	35 832,0	114,79	126,50	110,20
- in comparable prices (in 2016 prices)	28326,00	24337,57	25945,98	85,92	91,60	106,61
Revenue from sales of products, thousand rubles	38358,00	44264,00	47862,00	115,40	124,78	108,13
Cost of sales, thousand rubles	34756,24	40978,19	45006,59	117,90	129,49	109,83
Gross profit, thousand rubles	3601,76	3285,81	2855,41	91,23	79,28	86,90
Management expenses, thousand rubles	376,68	489,45	235,06	129,94	62,40	48,03
Cost of sales, thousand rubles	352,08	314,36	529,35	89,29	150,35	168,39
Profit from product sales, thousand rubles	2 873,0	2 482,0	2 091,0	86,39	72,78	84,25
Profit before tax, thousand rubles	175,0	643,0	36,0	367,43	20,57	5,60
Net profit, thousand rubles	59,0	205,0	12,0	347,46	20,34	5,85
The average number of employees, people	971	933	920	96,10	94,76	98,61
PPF labor productivity in comparable estimates, thousand rubles	29,176	26,085	28,202	89,41	96,66	108,12
Costs per ruble of marketable products, rub.	0,906	0,926	0,940	102,17	103,78	101,57
Capital productivity of fixed assets, RUB	1,226	1,406	1,607	114,70	131,10	114,30
Working capital turnover ratio, times	4,282	4,877	4,227	113,88	98,70	86,67
Profitability of sold products, %	8,096	5,940	4,568	73,37	56,43	76,90
Return on sales, %	7,490	5,607	4,369	74,86	58,33	77,91
Current liquidity Ratio at the end of the year	0,624	1,103	1,263	176,85	202,46	114,48
Ratio of own short-term funds at the end of the year	-0,603	0,094	0,208	-15,51	-34,53	222,57
Ratio of financial liabilities with assets at the end of the year	0,460	0,490	0,472	106,34	102,53	96,41

Analysis of the results of foreign economic activity of OJSC "BPC "Domochay" in the context of export-oriented production development (tables 2 - 5; figures 1 - 4 of the presentations). The main markets for products are the domestic market of the Republic of Belarus in terms of regions, as well as the market of near and far abroad (Table 2).

Table 2 - Analysis of sales dynamics of bakery products of JSC "BPC "Domochai" by regions of the Republic of Belarus and for export, tons

Indicator	2016 y.	2017 y.	2018 y.	Rates of change, %		
				<u>2017</u> 2016	<u>2018</u> 2016	<u>2018</u> 2017
Mogilev region., including:	48 731	48 761	46 310	100,06	95,03	94,97
Mogilev	20 309	20 311	20 320	100,01	100,05	100,04
Minsk region., including:	108	112	116	103,70	107,41	103,57
Minsk	89	85	87	95,51	97,75	102,35
Vitebsk region	68	61	65	89,71	95,59	106,56
Gomel region	8	6	7	75,00	87,50	116,67
Brest region	41	31	26	75,61	63,41	83,87
Grodno region.	3	2	5	66,67	166,67	250,00
Export supplies	1 016	914	953	89,97	93,81	104,27
Total	49 975	49 887	47 482	99,82	95,01	95,18

The largest share in the assortment structure of output of JSC "BPC "Domochay" is accounted for by bakery products (in 2018 it was 65.28%; the share decrease as compared to 2017 was 4.01 p.p.). The next in terms of capacity is the group of confectionery products: in 2018 the specific gravity made 22.69%; the increase of the share as compared to 2017 was observed. - 0,66 p. p.). Horizontal analysis of the dynamics of volume parameters has established a downward trend in the assortment position of bakery products: the volume of sales in 2018 amounted to 47482 tons and decreased against 2016 - 2017 by 4.99 and 4.82%, respectively. In 2018 bakery products supplies in the Mogilev region decreased: the reduction rates were 95.03 and 94.97%, respectively. There is a trend of increase in volumes of bakery products sold by the company for export: in 2018 the volume of bakery products shipped for export made 953 tons and grew by 4.27% as compared to 2017, and decreased by 6.19% as compared to 2016 (Table 2).

Analytical data indicate active sales of confectionery products in this time interval: in 2018, the volume of confectionery sales amounted to 5,454 tons and increased compared to 2016 - 2017 by 11.73 and 12.87%, respectively (Table 3).

The volume of confectionery products supply in the domestic market increased in dynamics for all regions of the Republic: the relative growth in 2018 in Mogilev region was 8.46%; in Minsk, Vitebsk, Gomel, Brest and Grodno regions, respectively, 11.94; 10.29; 23.66; 7.61; 25.0%. The company's export volume in 2018 is defined as 284 tons of confectionery products, which corresponds to the positive dynamics of export growth by 3.27 times against 2017 and growth by 96.88% against 2016. (Table 3). Vertical analysis of bakery products market structure has shown that practically all bakery products of OJSC BPC Domochai are sold in the Mogilev oblast: in 2016-2018 the share of this market made 97.51; 97.74; 97.53%. The share of export deliveries in 2018 was 2.01 % and increased by 0.17 p.p. as compared to 2017; as compared to 2016. - decreased by 0.03 p.p. as compared to 2016. (Figure 1).

Table 3 - Analysis of sales dynamics of confectionery products of JSC "BPC "Domochai" by regions of the Republic of Belarus and for export, tons

Indicator	2016 y.	2017 y.	2018 y.	Rates of change, %		
				$\frac{2017}{2016}$	$\frac{2018}{2016}$	$\frac{2018}{2017}$
Mogilev region., including:	3 631	3 711	4 025	102,20	110,85	108,46
Mogilev	1 631	1 673	1 700	102,58	104,23	101,61
Minsk region., including:	132	134	150	101,52	113,64	111,94
Minsk	68	71	80	104,41	117,65	112,68
Vitebsk region	69	68	75	98,55	108,70	110,29
Gomel region	92	93	115	101,09	125,00	123,66
Brest region	759	683	735	89,99	96,84	107,61
Grodno region	54	56	70	103,70	129,63	125,00
Export supplies	144	87	284	60,14	196,88	327,37
Total	4 881	4 832	5 454	98,99	111,73	112,87

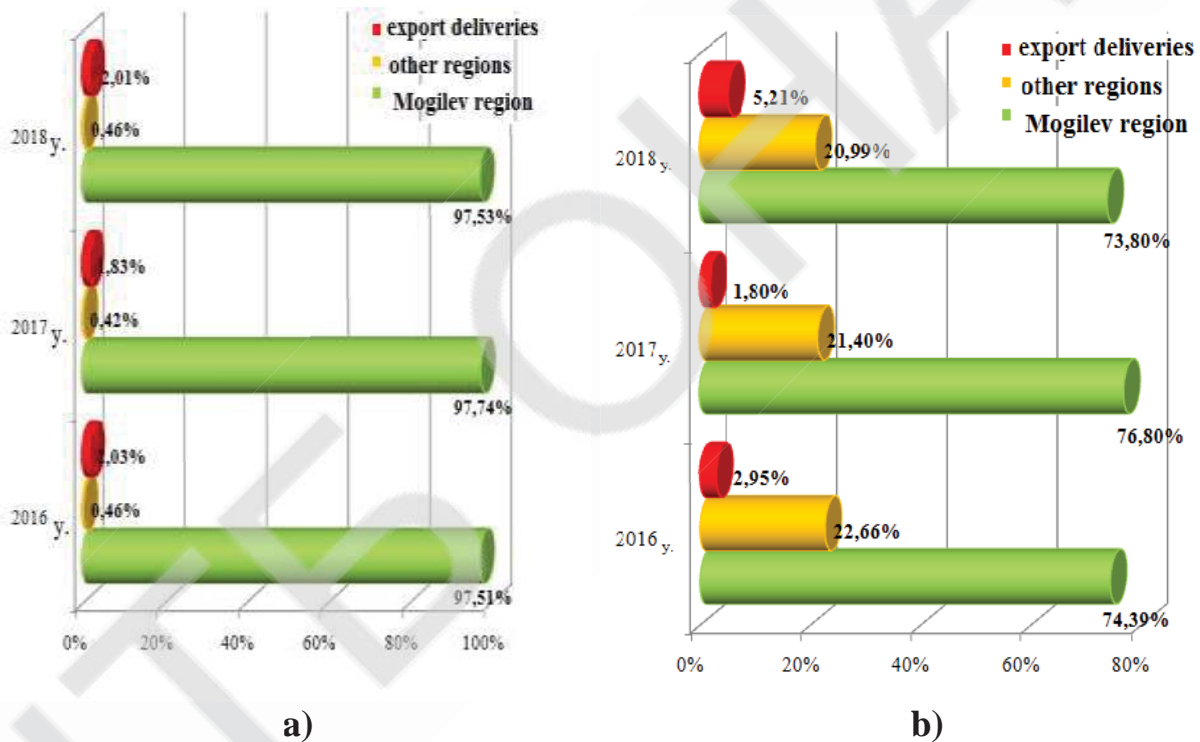
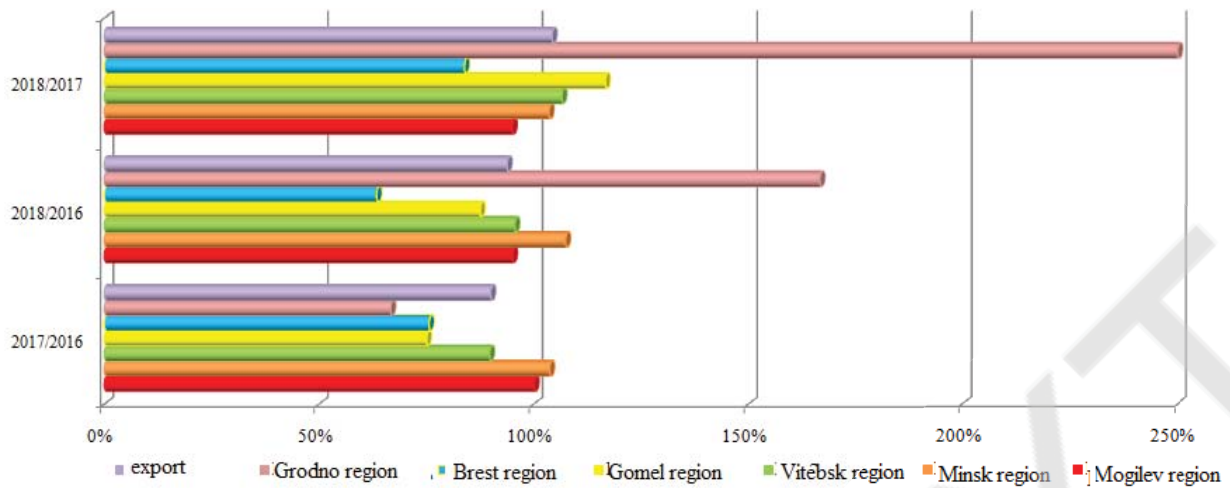


Figure 1 - Analysis of the structural dynamics of sales in the regions of the Republic of Belarus and for export, %: a) bakery products b) confectionery

Export shipments increased in 2018 vs. 2017, but were below the 2016 level. The dynamics indicators were as follows: 93.81 and 104.27% (Figure 2).



Indicator	Rates of change, %		
	<u>2017</u> 2016	<u>2018</u> 2016	<u>2018</u> 2017
Mogilev region	100,06%	95,03%	94,97%
Minsk region	103,70%	107,41%	103,57%
Vitebsk region	89,71%	95,59%	106,56%
Gomel region	75,00%	87,50%	116,67%
Brest region	75,61%	63,41%	83,87%
Grodno region	66,67%	166,67%	250,00%
Export supplies	89,97%	93,81%	104,27%

Figure 2 - The rate of change in sales in the domestic and foreign markets, %

In 2017 - 2018, bakery sales volumes by regions decreased: Vitebsk, Gomel, and Brest regions: the decline rates for 2018 were 95.59, 87.50 and 63.41%, respectively. This trend is determined by the influence of external factors of functioning: the market of Mogilev region is fully covered by demand and at the same time there is an active growth of competition; at the markets of other regions there is a competition with local producers.

The share of exports in the total volume of bakery and confectionery shipments in 2018 was 2.01 and 5.20%, respectively. Export geography of JSC "BPC "Domochay" covers regions of the Russian Federation, countries of near and far abroad. There were noted the basic rates of decline for 2017 - 2018: 89.97 and 93.81%, respectively; the level of decline in export shipments in 2017 is slightly lower than in 2018). In 2018, bakery products exports increased by 4.27% compared to 2017, respectively. This increase in exports is a result of increased shipments of bakery products to the Russian Federation. In 2017 - 2018, bakery export volumes to Russia decreased as compared to the base year of 2016 by 8.07% and 12.03%, respectively; at the same time, in 2018 as compared to 2017 there was an increase in shipment volumes by 7.38% (Table 4).

Table 4 - Analysis of export volumes of JSC "BPC Domochai" by main types of products in physical terms, tons

Export by type products and segments	2016 y.	2017 y.	2018 y.	Rate of change, %		
				<u>2017</u> 2016	<u>2018</u> 2016	<u>2018</u> 2017
Baked goods						
Export total, tons	1 016,00	914,10	953,10	89,97	93,81	104,27
including						
- Panama	34,53	60,70	54,31	175,79	157,28	89,47
- Turkmenistan	15,24	61,80	48,78	405,51	320,08	78,93
- Russian Federation	966,23	791,60	850,01	81,93	87,97	107,38
Confectionery products						
Export total, tons	144,00	86,60	283,50	60,14	196,88	327,37
including						
- Panama	-	-	5,45	-	-	-
- Turkmenistan	3,50	22,80	17,50	651,43	500,00	76,75
- Russian Federation	140,50	63,80	260,55	45,41	185,44	408,39

There was a significant increase in export volumes in 2018 for confectionery products in the assortment: as compared to 2016, there was a 1.97-fold increase as compared to 2017. - by 3.27 times compared to 2017. Supplies of confectionery products in the Russian segment increased: in 2018 as compared to 2016, the growth was 85.44%, compared to the previous year - an increase of 4.08 times. In Turkmenistan, the largest export volumes in terms of this assortment position were recorded in 2017: 6.51 times growth as compared to 2016. In 2018, exports of confectionery products increased by 5 times compared to 2016 and decreased by 23.25% compared to the previous year. Confectionery products are represented by gingerbread, oatmeal biscuits, sugar, sweets, flour and sugar, cakes, pastries, etc. Export geography of confectionery products has expanded: in 2018. 5.45 tons of confectionery products were shipped to Panama. When studying the dynamics of exports for 2016 - 2018, it was determined the average annual rate of decline in exports of bakery products at 96.86%; the average annual growth rate of confectionery export at 140.31%.

The results of the analysis of the structure and dynamics of the export of JSC "BPC "Domochay" (Table 5) by geographical segmentation in the context of individual assortment positions. Sukhari" products group was exported mainly to Turkmenistan (the share in the total volume of exports by these assortment items was 12.23%).

The Corn Sticks Group exported to the Russian Federation, particularly to Kaliningrad, where it supplied USD 1.71 thousand, which is 5.03 times more than in 2017. Significant deliveries of confectionery products of JSC "BPC Domochay" for export in 2018 were made to Kaliningrad (North-Western Federal District) and Krasnodar (Southern Federal District). The growth rate in Kaliningrad was 291.49 %; in Krasnodar products were shipped by USD 102.1 thousand. (there was no shipment in 2017). At present, there is a stable demand in all considered markets, the number of orders received by the company in 2020 is planned to increase on average by at least 5%. A significant share of confectionery products is produced on the grissini line.

Table 5 - Analysis of structure and dynamics of export of JSC "BPC "Domochay" products in the context of separate assortment items

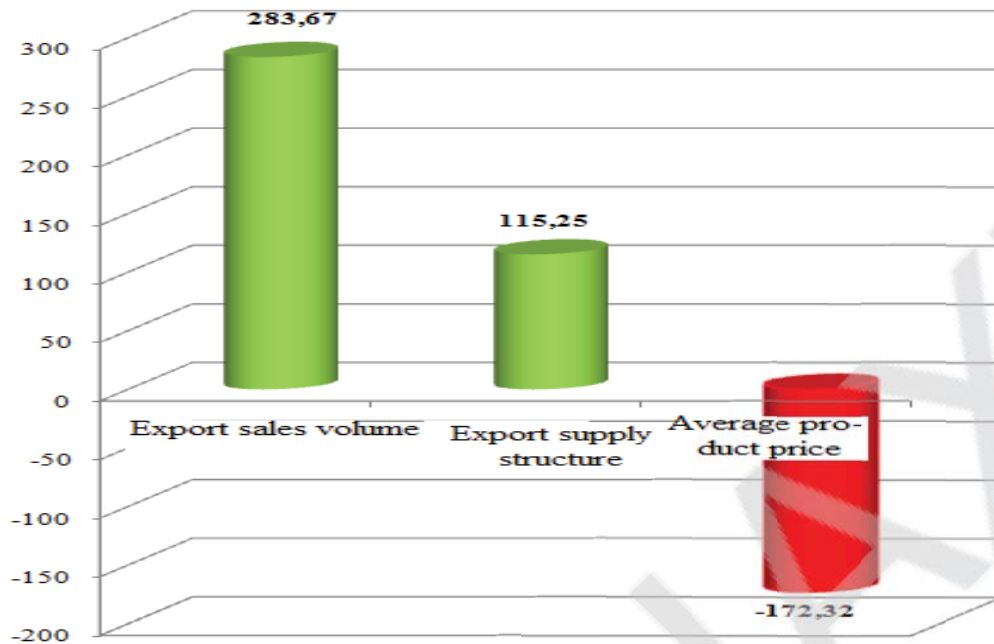
Export by type products and segments	Export, thousand dollars		Rate of change, %	Export structure, %		
	2017 y.	2018 y.		2017 r.	2018 r.	deviation
Confectionary products						
1. Export total	151,40	352,46	232,80	77,97	84,97	7,00
including						
1.1. Russian Federation	121,94	319,90	262,34	62,80	77,12	14,32
thereof						
- Kaliningrad	5,76	16,79	291,49	2,97	4,05	1,08
- Krasnodar	0,00	102,10	-	0,00	24,61	24,61
- other RFs	116,18	201,01	173,02	59,83	48,46	-11,37
1.2 Turkmenistan	29,46	19,83	67,31	15,17	4,78	-10,39
1.3 Panama	0,00	12,73	-	0,00	3,07	3,07
Breadcrumbs						
Export total	36,53	53,08	145,31	18,81	12,80	-6,02
including						
- Russian Federation	1,10	2,36	214,55	0,57	0,57	0,00
- Turkmenistan	35,43	50,72	143,16	18,25	12,23	-6,02
Cornsticks						
Export total	6,25	9,26	148,16	3,22	2,23	-0,99
including						
- Kaliningrad	0,34	1,71	502,94	0,18	0,41	0,24
- other RFs	5,91	7,55	127,75	3,04	1,82	-1,22
Total	194,18	414,80	213,62	100,00	100,00	0,00

Analysis of export shipment factors of JSC "BPC "Domochai" products.

The results of factor analysis of export volumes are shown in Figures 3 and 4 of the Presentations. Revenue from export sales increased by USD 226.60 thousand due to changes in the amount of export products, by USD 283.67 thousand; due to changes in the commodity structure of export products by USD 115.25 thousand; due to changes in the amount of export products by USD 283.67 thousand. (Figure 3). Export shipments decreased by USD 172.32 thousand due to changes in the average price in foreign currency for certain products. For all items considered for export, there was an increase in the natural volume of shipments, which resulted in an increase of exports by \$283.67 thousand. Thus the greatest positive influence of the sales volume factor is on bakery products: the size of influence is defined in the sum of USD 238,96 thousand.

Analytical data show the redistribution of export-oriented products in favor of its expensive types (confectionery products, other types of products), as evidenced by the growth of exports as a result of the impact of structural shifts by \$ 115.25 thousand. Positive structural shifts in favour of confectionery and other products resulted in export growth of USD 307,98 thousand and USD 8,45 thousand respectively. Decrease in the share of bakery products negatively affected the output of export-oriented products and corresponds to the decrease of export supplies by USD 196.39 thousand. Reduction of average selling prices for export-oriented products was established,

which negatively influenced the results of export operations and decreased the efficiency of export potential of the enterprise.

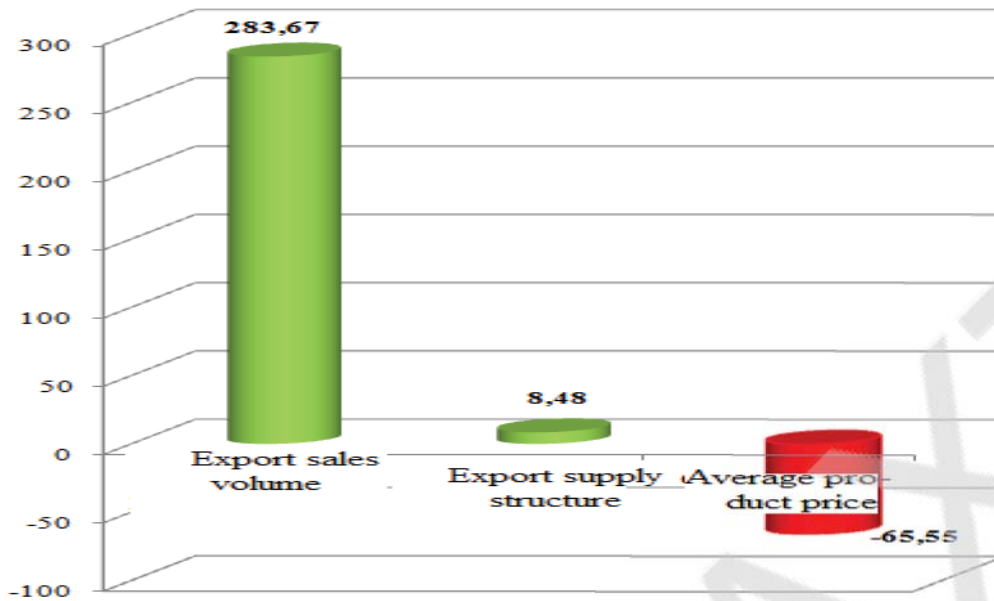


Export of products	Change in export volume in value terms, thousand USD			
	total change, thousand dollars	including through (export change factor)		
		export sales volume	structure export deliveries	average production price
Baked goods	-28,16	238,96	-196,39	-70,74
Confectionery products	201,06	36,26	307,98	-143,17
Other products	53,70	8,45	3,66	41,59
Total	226,60	283,67	115,25	-172,32

Figure 3 - Results of factor analysis of product export by assortment, thousand dollars

The greatest decrease in the average selling price falls on confectionery products (the relative decrease in price is established at the rate of 28,89 %): quantitative influence of the factor -143,17 thousand dollars.

Factorial analysis of export of BPC "Domochay" products by markets (Figure 4) showed that revenue from export sales increased by \$226.60 thousand, including due to the growth of natural volume of export products by \$283.67 thousand; due to the change in the structure of export sales by \$8.48 thousand; due to the change in the structure of export sales by \$8.48 thousand.



Sales market	Total change, thousand dollars	Including through (export change factor)		
		export sales volume	structure export deliveries	average production price
Russian Federation	253,30	239,70	60,83	-47,23
Panama	-0,08	18,80	-20,01	1,14
Turkmenistan	-26,62	25,18	-32,34	-19,46
Total	226,60	283,67	8,48	-65,55

Figure 4 - Results of factor analysis of export of products by sales markets, thousand dollars

The decrease in the average price in the markets had a negative impact on the performance indicator: the impact of the factor was -65.55 thousand USD. The increase in the volume factor for export sales led to an increase in exports in value terms of 239.70 (Russian Federation), 18.80 (Panama) and 25.18 (Turkmenistan), respectively. The greatest positive influence of the sales volume factor is noted on the Russian market. The structural factor also had a positive impact on shipments of BPC Domochai products to the Russian Federation: the amount of influence was USD 60.83 thousand. Decrease in the share of exports to the markets of Panama and Turkmenistan decreased country exports by USD 20.01 thousand and USD 32.34 thousand, respectively. The impact of the price factor on export volumes is negative for the leading markets of the Russian Federation and Turkmenistan: the decrease in average prices reduced export volumes by 47.23 and 19.46 thousand USD, respectively. Insignificant increase was received on the factor of growth of sale prices in panama (1,14 thousand dollars).

As reserves of growth of sales of export-oriented production the following is considered: optimization of assortment of production in a context of manufacture of new bakery (confectionery) products demanded in the external market and maintenance of high level of profitability of sales; search of the favorable markets of

sales of production for export on parameters of volume and price (expansion of geography of export deliveries of products).

2. The analysis of production cost in the system of export-oriented production development of JSC "BPC "Domochay" (tables 6-10; figures 5-12 Presentations).

Analysis of production and sales costs. On the whole, production costs of the enterprise increased by 3 029.22 thousand rubles or 9.91% (Table 6).

Table 6 - Analysis of Formation and Structure of Costs of Production and Sales of OJSC BPC Domochai Products

Cost structure by elements	Amount, thousand rubles			Cost structure, %		
	2017 y.	2018 y.	change	2017 y.	2018 y.	change
1 Material costs	23 024,34	25 482,60	2 458,26	75,30	75,83	0,53
1.1 raw materials and supplies	21 182,48	23 576,85	2 394,36	69,28	70,16	0,88
1.2 works and services of a production nature	396,38	457,25	60,87	1,30	1,36	0,06
1.3 fuel	774,34	779,06	4,72	2,53	2,32	-0,21
1.4 electrical energy	666,39	665,25	-1,15	2,18	1,98	-0,20
1.5 other material costs	4,03	4,33	0,30	0,01	0,01	0,00
2 Costs of wages	4 478,36	4 813,34	334,97	14,65	14,32	-0,32
3 Social contributions	1 522,64	1 636,53	113,89	4,98	4,87	-0,11
4 Depreciation of fixed assets	871,92	1 064,59	192,67	2,85	3,17	0,32
5 Other costs	677,91	607,34	-70,57	2,22	1,81	-0,41
Total production costs, including:	30 575,18	33 604,40	3 029,22	100,00	100,00	0,00
– variable costs	26 606,52	29 454,26	2 847,74	87,02	87,65	0,63
– regular expenses	3 968,66	4 150,14	181,49	12,98	12,35	-0,63

The largest share in the structure of costs in 2017 - 2018 are material costs: 75.30 and 75.83%, respectively. In 2018 this indicator increased by 10.68%, the share in the structure of costs in the dynamics increased by 0.53 p. p. As part of material costs in 2018 there was an increase in costs for raw materials by 2 349.36 thousand rubles, fuel - by 4.72 thousand rubles. The growth of material costs in 2018 was due to an increase in costs by lines: raw materials and supplies - by 11.30%; services of third parties - by 15.36%; fuel - by 0.61%. The relative reduction of energy for technological needs was defined as 1.15 thousand rubles or 0.17 %. Labor costs in the structure of production costs amounted to 2018. 14.32 %, which is 0.32 p.p. lower than the share of this cost category in 2017. There was an increase in depreciation of fixed assets by 192.67 thousand rubles and a decrease in other costs - by 70.57 thousand rubles. (Table 6).

Graphical interpretation of the structural cost dynamics shows that production of BPC Domochay products is material intensive: the specific weight of material costs in 2017-2018 was 75.30 and 75.83%, respectively (Figure 5).

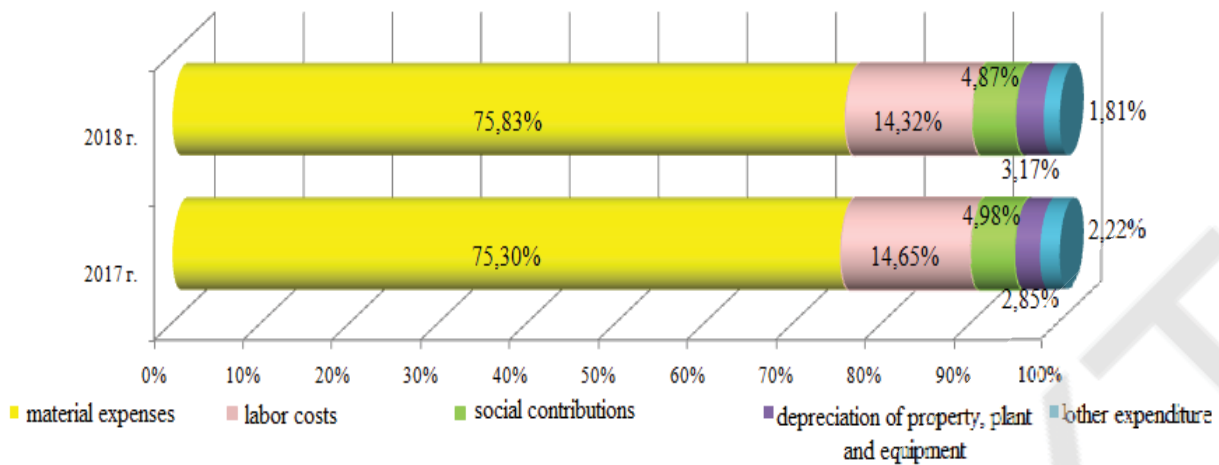


Figure 5 – Analysis of the structural dynamics of costs by economic elements, %

Positive structural dynamics can be seen in terms of material costs (0.53 p.p. increase), including an increase in the share of raw materials and supplies (0.88 p.p. increase); depreciation charges (0.32 p.p. increase). In the structure of costs, the specific weight of labour costs has decreased (0.32 p.p. reduction; social allocations (0.11 p.p. reduction); other costs (0.41 p.p. reduction). Absolute increase in variable costs in the dynamics made RUR 2,847.74 thousand with simultaneous growth of their specific weight in the structure of costs by 0.63 p. p.

Table 7 (input data for factor analysis) has been compiled to calculate cost indicators under different production conditions. The coefficient of change in natural volume of production (Kn) is calculated based on the statoutcheckability data (Kn = 1.0064).

Table 7 - Absolute values of indicators for factor analysis

Indicator	2017 y.	2018 y.	Change rate, %
Specific Variable Costs per 1 Tonne of Production (bi), thous.	0,492	0,541	110,00
Volume of production (Q), tons	54 062,00	54 408,00	100,64
Amount of variable costs (Zvar), thousand rubles	26 606,52	29 454,26	110,70
Amount of fixed expenses (A), thousand rubles	3 968,66	4 150,14	104,57
The cost of marketable products (TP), thousand rubles	32 515,00	35 832,00	110,20
Costs of production	30 575,18	33 604,40	109,91
Ratio of change in natural production volume (Kn)	1,0064		
Index of Bakery and Confectionery Products Prices (Iz)	1,0459		

Calculation of the quantitative influence of factors on the change of the resultant indicator is made by the chain substitution method (Table 8).

Table 8 - Costs and Marketable Products at Different Factor Values

Costs	Method of calculation	Indicator level, thousand rubles
Basis costs Z_0 (2017 y.)	$A_0 + \sum Q_{i0} \times UD_{i0} \times bi_0$	30 575,18
Based on actual volume of production (Z_{us1})	$A_0 + \sum Q_{i1} \times UD_{i0} \times bi_0$	30 745,46
Based on actual volume and structure of production (Z_{us2})	$A_0 + \sum Q_{i1} \times UD_{i1} \times bi_0$	31 893,20
In fact, at the base value of fixed costs (Z_{us3})	$A_0 + \sum Q_{i1} \times UD_{i1} \times bi_1$	33 422,92
Actual costs of the reporting period Z_1 (2018 y.)	$A_1 + \sum Q_{i1} \times UD_{i1} \times bi_1$	33 604,40

Results of the factor analysis have shown: the greatest negative influence from the point of view of growth of a level of expenses under the flexible budget was made by increase in variable expenses which is connected with increase on separate articles of direct material and labour expenses as a part of production cost price, and also structure of release of production in favour of its costly kinds (Figure 6).

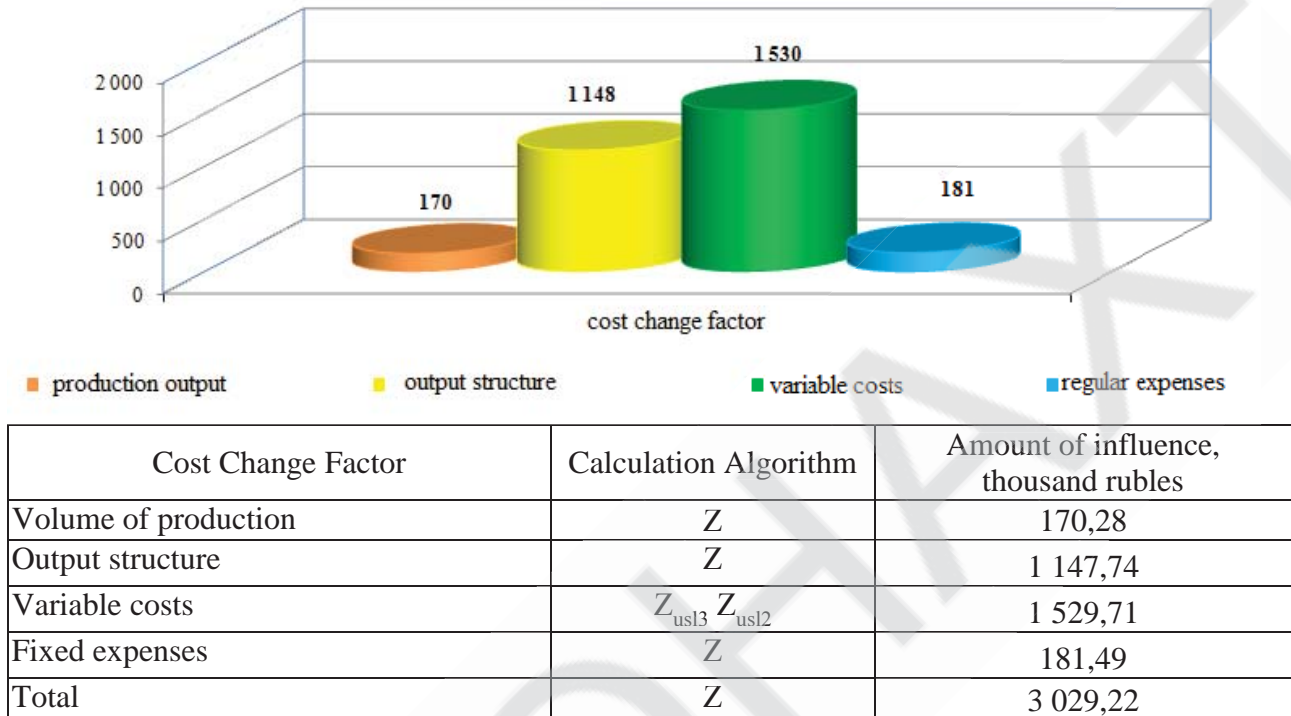


Figure 6 - Factor analysis of production costs, thousand rubles

The increase in production costs was determined by the increase in variable and fixed costs: the influence of factors is 1,529.71 and 181.49 thousand rubles, respectively. Changes in the structure of products manufactured indicated an increase in total production and sales costs by RUB 1,147.74 thousand. The slight increase in physical output by 0.64% resulted in an increase in costs of RUB 170,28 thousand. The increase in variable costs determined the largest increase in the resultant indicator by RUB 1,529.71 thousand, which is due to an increase in production volume and overspending on material costs items (expenses for basic and auxiliary raw materials, packaging, fuel and electricity), expenses on remuneration of main workers.

Analysis of commodity product ruble costs. Commodity product ruble costs analysis is performed in the following order: comparative analysis of actual marketable product ruble costs in the reporting year 2018 with baseline values for 2015 - 2017; factor analysis of changes in marketable product ruble costs; identification of reasons and generalization of marketable product ruble costs reduction provisions. Commodity product ruble costs in 2018 decreased slightly by RUB 0.0025 compared to 2017 and increased by RUB 0.0317 compared to 2015. (Figure 7).

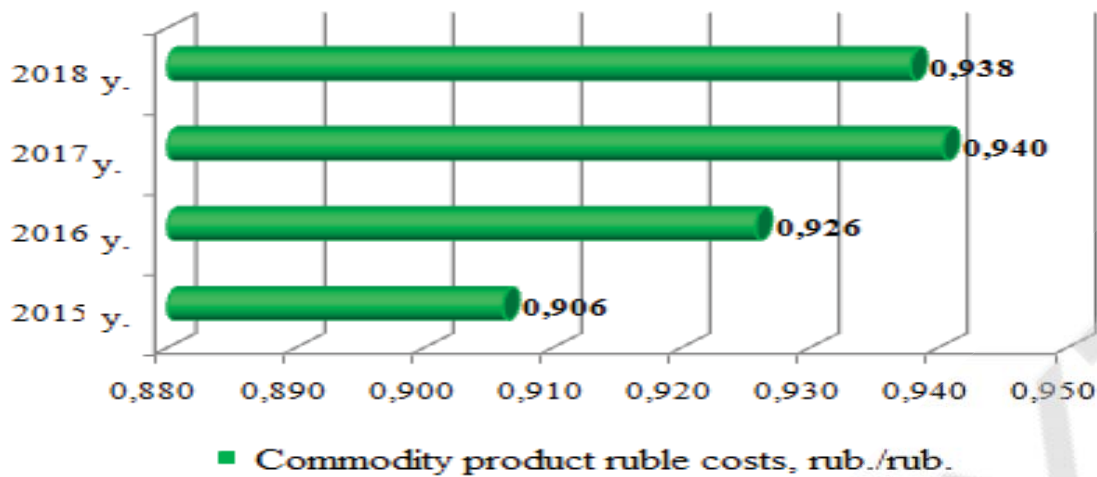


Figure 7 – Dynamics of commodity product ruble costs, rub.

The increase in this indicator is explained by higher growth rates of production costs as compared to the marketable products growth rates. On the whole, the level of this indicator is below one unit, which corresponds to profitable production

Assessment of the current parameter of costs on ruble of marketable products is supplemented by calculation of the size of influence of factors on change of the analyzed parameter (Figure 9). In 2018, there was a decrease in costs per ruble of marketable products by 0.0025 rubles, which is associated with the growth of production volumes (the size of the influence -0.0008 rubles); changes in the structure of products (the size of the influence 0.0050 rubles), an increase in selling prices (the size of the influence -0.0469 rubles). Other factors determined the growth of the effective indicator. Growth of costs per 1 ruble of commodity products occurred as a result of increase in variable costs (the size of influence 0.0448 rub.), growth of fixed costs (the size of influence 0.0053 rub.).

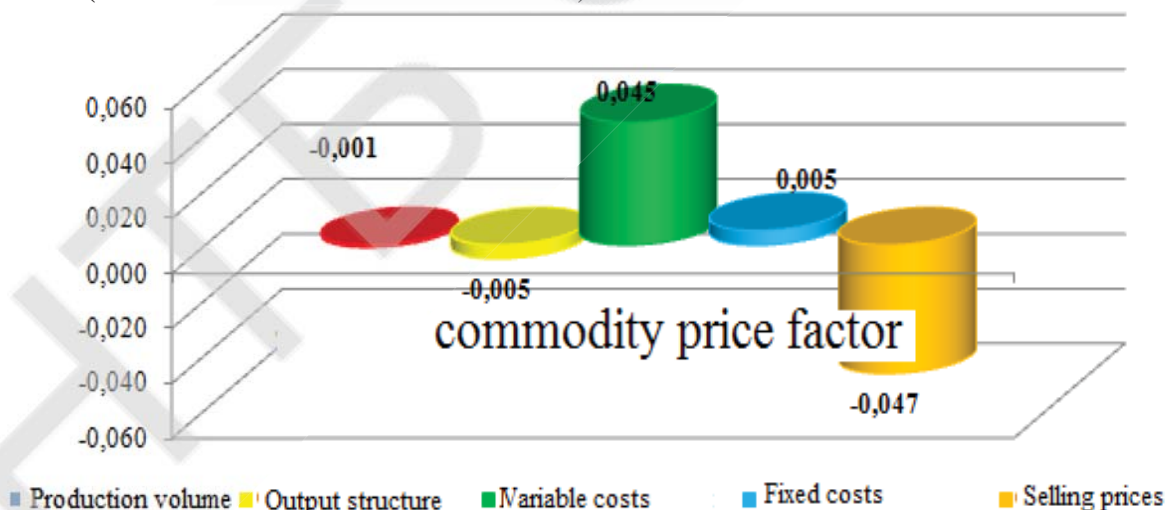


Figure 9 – Factor analysis of marketable product ruble costs, rub.

The increase in variable costs indicates resource intensity of production and an increase in the cost of consumed resources, taking into account the resource price factor (Figure 9).

In 2018 there was a decrease in the wage and other costs intensity with a

simultaneous increase in the material intensity (due to the negative deflator of prices for materials, a slight increase in the volume of produced goods), amortization intensity (Figure 8).

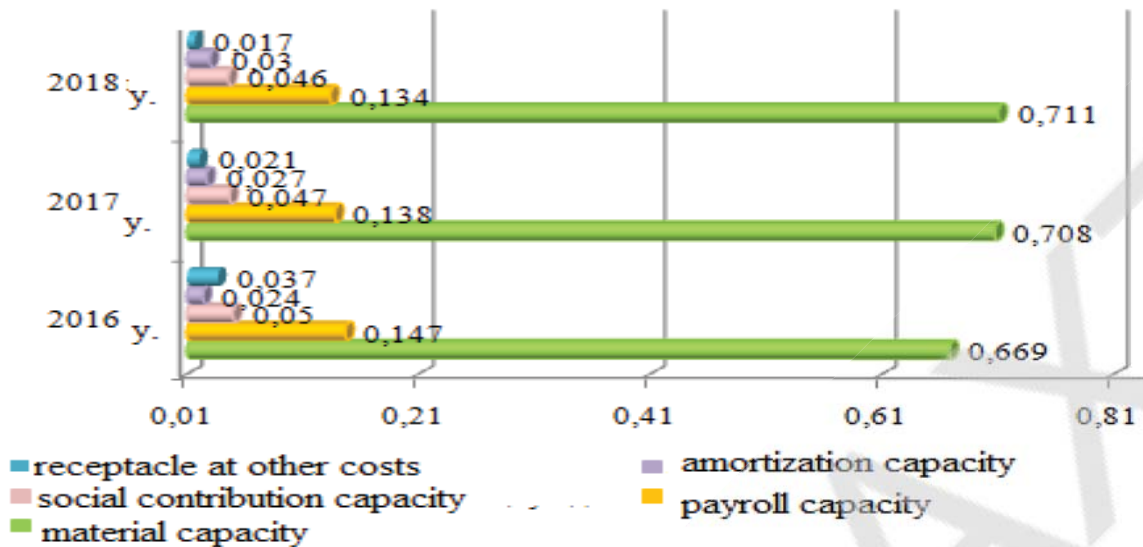


Figure 8 – Dynamics of commodity product ruble costs by elements, rub.

At the same time, the structure of costs per 1 rouble of products by elements does not change significantly. In the analysis of indicators for 2016 - 2018 more significant deviations are noted: growth in the final line of 0.012 rubles. A significant growth of material intensity in the amount of 0.043 rubles was established (mainly due to the increase of raw materials costs, fuel and electricity costs).

In 2018, the capacity of labour costs decreased by RUB 0.012 and 0.003, respectively, as compared to 2016-2017, the capacity of social contributions - by RUB 0.004 and 0.001, the capacity of other costs - by RUB 0.020 and 0.003, respectively. At the same time, the material intensity increased by 0.043 rubles as compared to 2016 and by 0.003, 2017. The analysis of the given data testifies to growth of efficiency of activity of the enterprise and testifies to necessity of development of measures on improvement of functioning of JSC "BPC Domochay" in a number of directions. As for the result achieved in 2018 in terms of the level of costs on the rouble of products sold, it should be noted that this indicator has decreased in dynamics, but its level remains quite high.

Analysis of prime cost of some kinds of export production. The cost price is considered to be a pricing factor that largely determines the competitiveness of export products. For carrying out of the given block of the analysis in group of confectionery products the assortment positions which occupy the greatest specific weight in volumes of export-oriented manufacture, are in demand and the most popular at buyers are chosen: taralli with aroma of vanilla (Figure 10); grissini vanilla (Figure 11).

The structural diagram below shows that the largest specific weight falls on the main and auxiliary raw materials and auxiliary materials (from 16 to 18 %). The high level of automation of confectionery production process on the grissini line indicates the low level of salary in the structure of production cost. Structural shifts are practically not visible on the presented charts.

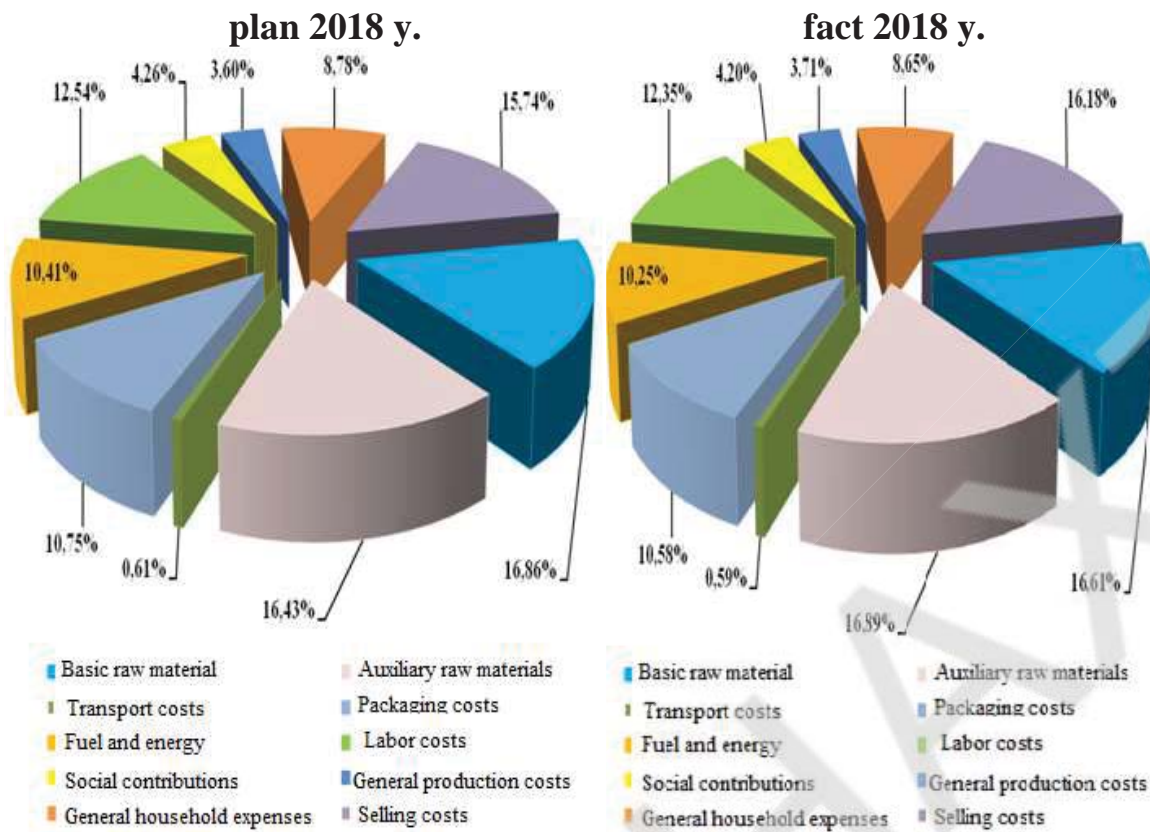


Figure 10 – Cost structure of «Taralli with vanilla scent» product

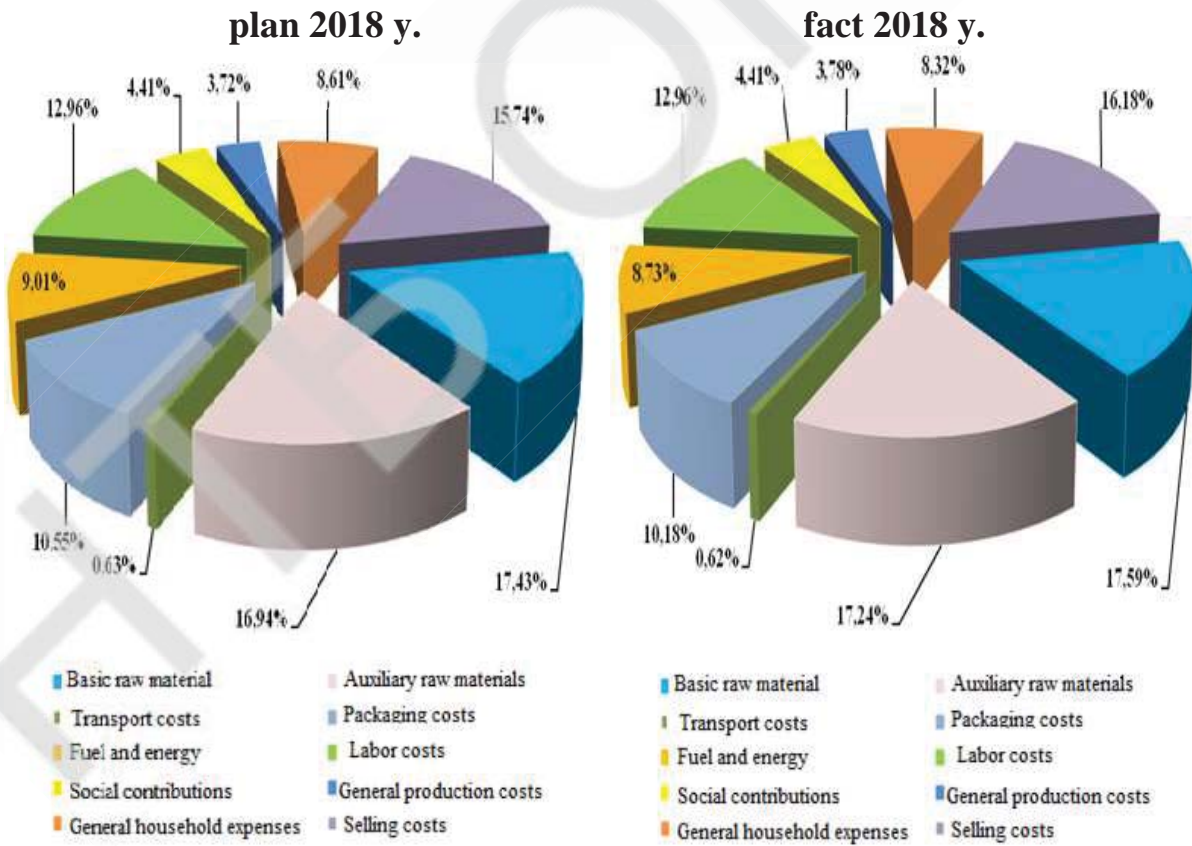


Figure 11 – Cost structure of «Grissini vanilla» product

The following analysis provides for the study of factors of change in unit cost of production; the factor analysis is performed by the chain substitution method (Tables 9,10). Table 9 provides background information for a factor analysis of the cost per tonne for the selected assortment items.

Table 9 - Input data for factor analysis of the cost of 1 tonne of product

Indicator	Plan	Fact 2018 y.	Absolute deviation
Vanilla-scented Taralli			
Volume of production (Q), tons	50,75	55,89	5,14
Amount of fixed costs (A), thousand rubles	25,45	30,13	4,68
Amount of variable costs per product (b), rub.	2 429,86	2 594,39	164,54
Cost of 1 tonne (C), rub	2 931,25	3 133,47	202,22
Grissini Vanilla			
Volume of production (Q), tons	60,59	63,84	3,25
Amount of fixed costs (A), thousand rubles	31,99	36,12	4,13
Amount of variable costs per product (b), rub.	2 568,65	2 772,07	203,42
Cost of 1 tonne (C), rub	3 096,60	3 337,89	241,29

Calculation of influence of factors on change of cost price of confectionery products is made by a chain substitution method and is presented in tables 10.

Table 10 - Analysis of the cost of 1 tonne of confectionery products

Cost of 1 tonne (C), rub		Factors		
		production rate	fixed costs	variable costs
Vanilla-scented Taralli				
C_0 (plan)	2 931,25	50,75	25,45	2 429,86
C_{usl1}	2885,14	55,89	25,45	2 429,86
C_{usl2}	2968,932	55,89	30,13	2 429,86
C_1 (fact 2018 y.)	3 133,47	55,89	30,13	2 594,39
Balance of factors	202,22	-46,11	83,79	164,54
Grissini Vanilla				
C_0 (plan)	3 096,60	60,59	31,99	2 568,65
C_{usl1}	3069,725	63,84	31,99	2 568,65
C_{usl2}	3134,469	63,84	36,12	2 568,65
C_1 (fact 2018 y.)	3 337,89	63,84	36,12	2 772,07
Balance of factors	241,29	-26,88	64,74	203,42

The total change in the cost of 1 ton of "Taralli with Vanilla Scent" product is 202.22 rubles. This overconsumption was obtained as a result of the growth of variable and fixed costs; the increase in production volumes for this name of confectionery products provided a decrease in cost price by 46.11 rubles. The increase in cost of production is the result of significant growth of variable costs (the size of the factor influence is 164.54 rubles); fixed costs (the size of the factor influence is 83.79 rubles). Similar calculations were made at the cost price of "Grissini Vanilla" product. The production cost per tonne of the product in 2018 increased by RUR 241.29 as compared to the planned figures. This growth is caused

by the increase in costs of main and auxiliary raw materials, packaging costs, fuel, electricity (the amount of influence of variable costs is 203.42 rubles).

The absolute growth on all articles of calculation of considered assortment positions is established. Increase in the industrial cost price is connected with growth of expenses on raw materials, auxiliary materials, fuel and energy for technological purposes, expenses for labour payment of industrial workers. Concerning the product "Taralli with vanilla aroma" the increase in profit and profitability accordingly on 143,58 roubles on 1 ton of production and 2,83 p. p. On the product "Grissini vanilla" - the increase in financial results accordingly on 102,20 roubles and 1,23 p. p. p.

Analysis of direct material and labor costs in the cost of goods. The analysis of direct material and labor costs and indirect costs is performed for confectionery products, the share of which in the structure of export-oriented products in 2018 was 29.76%: taralli; grissini. In the process of analysis, it has been established that the highest specific weight in the production cost of the JSC "BPC "Domochay" is occupied by the expenses for the main and auxiliary raw materials, packaging materials, fuel and electricity for technological needs (Figure 12). In 2018, there is a 16.37% growth in total costs as compared to 2017. The growth of this indicator was due to an increase in material costs, in particular, in the items "Raw materials and supplies", "Fuel", "Electrical energy", which is due to the increase in resource costs, provided that the production volumes of products slightly increased and direct material costs increased even more. In general, these structures of direct and indirect costs speak about material intensity of production.

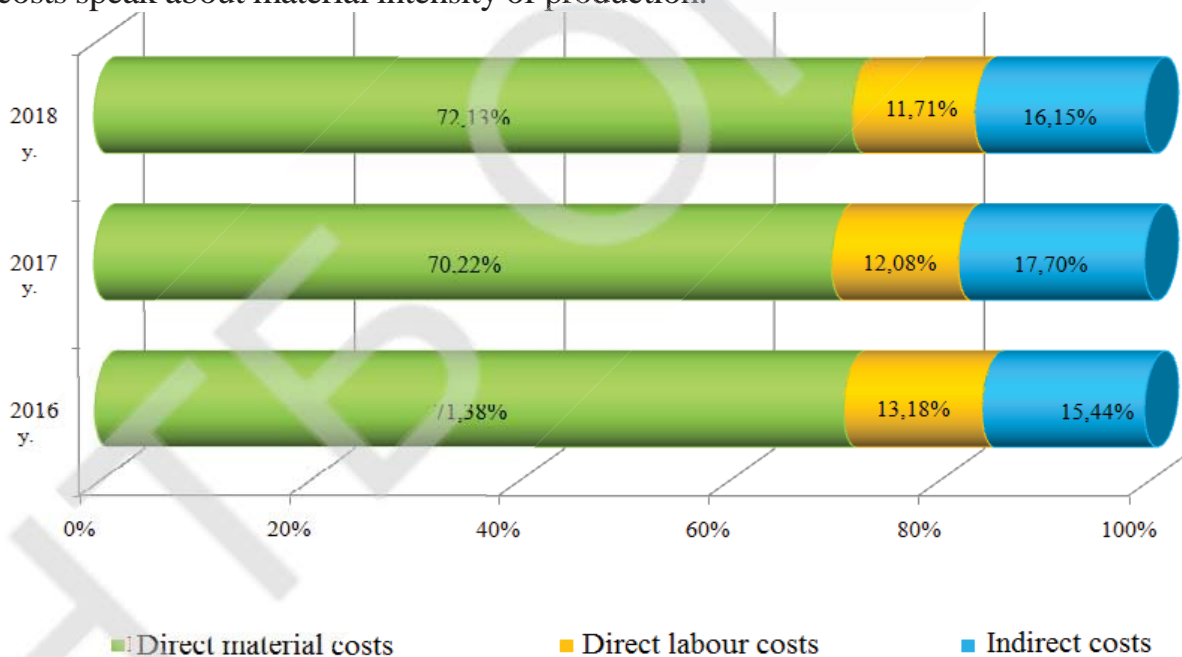


Figure 12 - Structural dynamics of costs by categories of direct and indirect costs of JSC «BCC «Domochai»

3. Analysis of production reserves for reduction of export production costs in the context of use of resources of JSC "BPC "Domochay" (Tables 11 - 13 Figures 13 - 15 Presentation). The production reserves of export-oriented production are revealed by the results of the analysis of the factors of changes in the dynamics of efficiency of the use of resources (human resources, fixed and circulating assets).

Analysis of labor resources efficiency factors and reserves for export-oriented output growth of JSC BPC Domochai. In 2018, the total number of employees of the enterprise decreased slightly, the structure was redistributed in favor of managers and specialists (0.58 p.p.), while the share of workers decreased by the same amount accordingly. Decrease in the number of employees of the enterprise is accompanied at the same time by improvement in the quality of the structure due to attraction of specialists (extensive factors of production activity development are used).

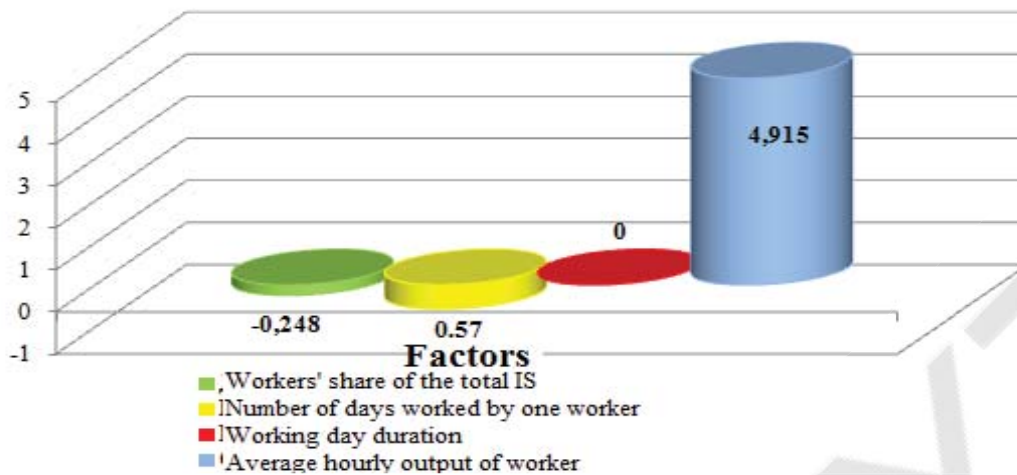
The average annual output of the enterprise's workers in 2018 is 4.098 thousand rubles or 11.76% higher than in 2017 (Table 11).

Table 11 - Analysis of Dynamics of Efficiency of Workforce Use of OJSC BPC Domochay

Indicator	2017 y.	2018 y.	Deviation	Rate of change, %
Volume of production, thousand rubles	32 515	35 832	3 317	110,20
The average number of industrial and production personnel, people	933	920	-13	98,61
The average number of workers, people	764	748	-16	97,91
The share of workers in the total number of workers (Ud), %	81,89	81,30	-0,58	99,29
Spent by one worker per year of days (D)	243	239	-4	98,35
Average duration of working day (P), h	8	8	-	100,00
Working hours fund, person-hour	1 813 752	1 759 040	-54 712	96,98
including a single worker, man-hour	1 485 216	1 430 176	-55 040	96,29
Average annual output of one worker (W^{year} worker), thousand rubles	34,850	38,948	4,098	111,76
including one worker, thousand rubles	42,559	47,904	5,345	112,56
Average daily output of worker (W^{d} worker), thousand rubles	0,175	0,200	0,025	114,44
Average hourly output of worker (W^{h} worker), thousand rubles	0,022	0,025	0,003	114,44
Average annual salary, rub.	8241,60	9397,20	1155,60	114,02

Average hourly output per worker in 2018 increased in the current estimate by RUB 0.003 thousand or 11.76% (Table 11). Average hourly output per worker in 2018 increased in the current estimate by RUB 0.003 thousand, or 14.44%, as compared to the 2017 output of RUB 0.022 thousand, or 11.76% (Table 11). Day-to-day losses in working time were noted. The increase in the average annual output at the enterprise is determined by the intensive factor, and the decrease by extensive factors, which can be considered positively and used as production reserves of labor productivity growth, export-oriented output and profit (Figure 13).

Average annual output of workers decreased by 0.248 thousand rubles due to a decrease in the share of the enterprise's workers in the total number of employees, with daytime losses of 0.570 thousand rubles. The length of the working day did not change and did not affect the resultant indicator.



Factor (xi)	Size of influence ($\Delta W^{\text{year}}_{\text{worker xi}}$), thousand rubles	Share of factor, %
Workers' share of the total IS	-0,248	-6,05
Number of days worked by one worker	-0,570	-13,91
Working day duration	0,000	0,00
Average hourly output of worker	4,915	119,97
Total	4,098	100,00

Figure 13 - Factor analysis of the average annual output of an employee of the core business of JSC «BCC «Domochai»

The increase in labor productivity at the enterprise was determined by the increase in the average hourly output of a worker by 14.44% (the amount of influence of 4.915 thousand rubles in terms of all workers).

The increase in the dynamics of the labor remuneration fund in 2018 due to the disproportion between the rates of productivity rotation and wages and salaries was determined in the amount of 71.57 thousand rubles ($8645.42 \times (1 - 1.081 / 1.090)$) and considered as a production reserve for the growth of efficiency of production and output of export-oriented products.

Analysis of efficiency factors of material resources use and growth reserves of export-oriented production output of JSC "BPC Domochay". Outpacing growth rates of material costs in comparison with the growth rate of output were established, which determined the increase in material intensity of production and reduction of material output. As a negative fact it is necessary to note increase in material consumption by 0,003 roubles or by 0,43 %. At the same time, the material intensity of direct material costs increased to a greater extent - by 0.023 rubles or 3.81% (Table 12).

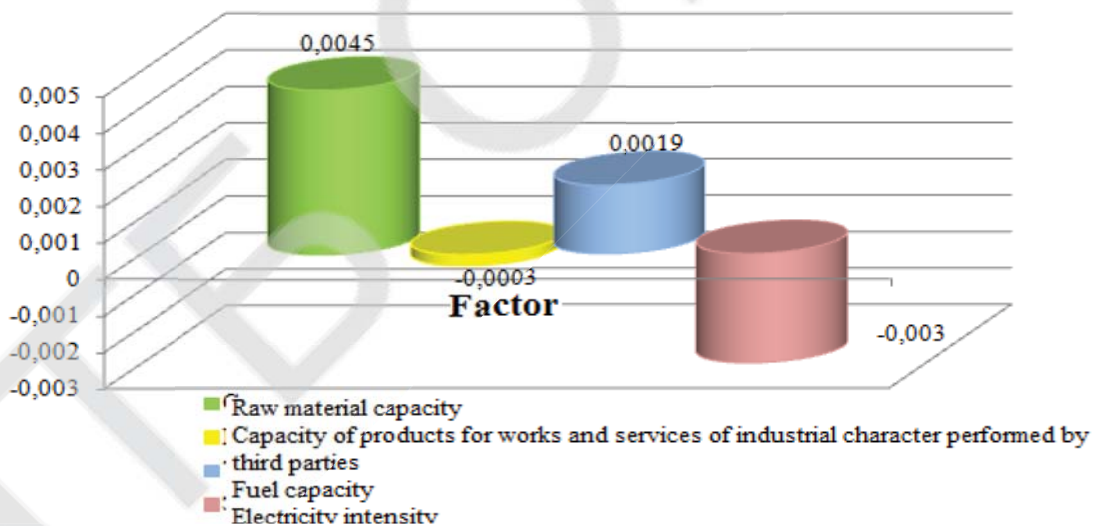
The increase in material intensity of BPC "Domochay" OJSC products in dynamics by 0.0031 rubles occurred due to the following factors (Figure 14): the increase in the raw material intensity of the capacity (the size of the factor influence is 0.0045 rubles); the increase in fuel intensity in dynamics: correspondingly, the material intensity increased by 0.0019 rubles or 0.43% (Table 12).

Decrease in energy intensity of the output products in 2018 as compared to 2017 determined the reduction of material intensity by 0.0030 rubles.

Table 12 - Analysis of private indicators of material intensity of products

Indicator	2017 y.	2018 y.	Deviation
1 Production output, thousand rubles	32 515,00	35 832,00	3 317,00
2 Material costs, thousand rubles	23 024,34	25 482,60	2 458,26
2.1 Raw materials and supplies, thousand rubles	18415,45	20454,55	2 039,10
2.2 Works of industrial nature performed by third parties, thousand rubles	256,35	271,56	15,21
2.3 Fuel, thousand rubles	3532,88	3961,42	428,54
2.4 Electric and thermal energy, thousand rubles	819,67	795,06	-24,61
3 Material capacity of products total, rub.	0,7081	0,7112	0,0031
3.1 Raw material capacity, rub.	0,5664	0,5708	0,0045
3.2 Product capacity for works performed by third parties, rubles	0,0079	0,0076	-0,0003
3.3 Fuel capacity, rub.	0,1087	0,1106	0,0019
3.4 Electric power intensity, rub.	0,0252	0,0222	-0,0030

Analysis of Fixed Assets Use Effectiveness Factors and Growth Reserves for Export-Oriented Products of OJSC BPC Domochai. The share of the active part of fixed assets in the dynamics decreased by 1.102 p.p., as well as the level of technical condition of fixed assets in terms of renewal, retirement, depreciation, average age of equipment. The results of the analysis of factors of intensive and efficient use of fixed assets of OJSC BPC "Domochay" (Table 13, Figure 15) show: due to changes in the structure of technological equipment (in favor of less expensive equipment), the level of the active part stock allocation increased by 0.228 rubles.



Factor	Size of influence on material capacity, rub.
Raw material capacity	0,0045
Capacity of products for works and services of industrial character performed by third parties	-0,0003
Fuel capacity	0,0019
Electricity intensity	-0,0030
Total material intensity of products (balance of factors)	0,0031

Figure 14 - Factor analysis of material capacity of JSC «BCC «Domochai» products

Table 13 - Factor analysis of the active part of fixed assets yield

Endowment of active part of fixed assets	Indicator level, rub.	Factor of change in yield				
		equipment structure	number of days worked	shift ratio	shift duration	average hourly output
Basically (2017 y.)	1,922	8,494	335	1,700	11,250	2,548
Conditional 1	2,150	7,594	335	1,700	11,250	2,548
Conditional 2	2,169	7,594	338	1,700	11,250	2,548
Conditional 3	2,041	7,594	338	1,600	11,250	2,548
Conditional 4	1,889	7,594	338	1,600	10,412	2,548
In fact (2018 y.)	2,230	7,594	338	1,600	10,412	3,007
Balance of factors	2,230 - 1,922 = 0,308	2,150 - 1,922 = 0,228	2,169 - 2,150 = 0,019	2,041 - 2,169 = -0,128	1,889 - 2,041 = -0,152	2,230 - 1,889 = 0,341

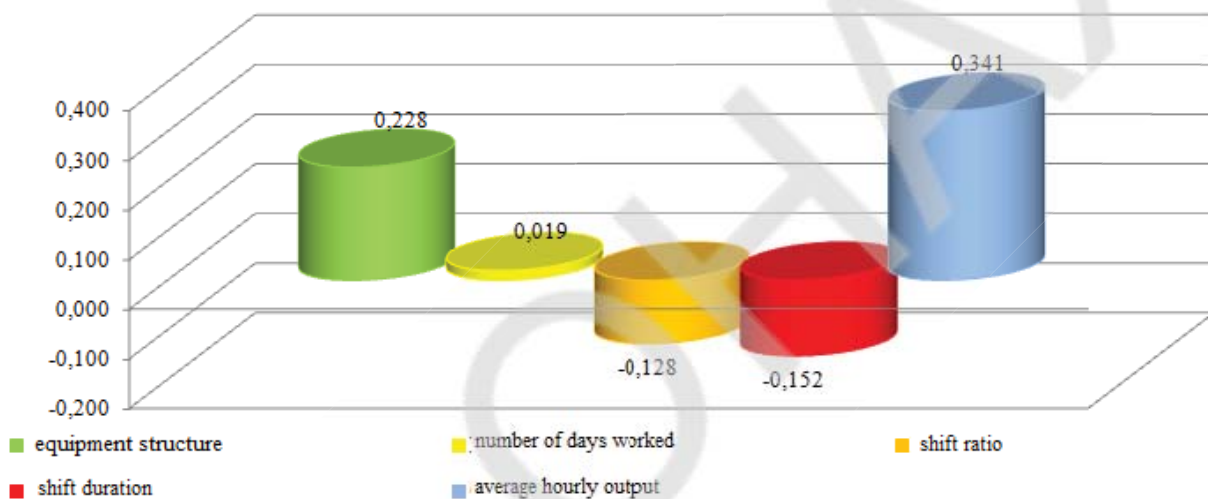


Figure 15 - Analysis of factors of change in asset allocation of the active part of fixed assets of JSC «BCC «Domochai»

Decrease in the operating time of a unit of equipment determined a decrease in the active part of fixed assets allocation by RUB 0.260. The number of days on average worked by one machine in the time interval under consideration increased by 3 days in accordance with the production calendar and determined a RUB 0.019 growth in the active part of the asset. Decrease in the equipment shift ratio determined a decrease in the active part of the funds yield by 0.128 rubles, intra-shift equipment downtime determined a decrease in its yield by 0.152 rubles. The positive effect of the average hourly output of equipment was established: the increase in the average hourly output of a unit of equipment resulted in an increase in the active part fundraising by RUB 0.341.

4. Investment oriented management of export production development of JSC "BPC Domochay" (Tables 14-19 of the Presentation). As an effective tool of perspective development of export-oriented production of JSC "BPC Domochay" the investment project is considered, which provides for realization of production reserves revealed in the analytical part in the following directions: providing competitive price; improving quality of export-oriented production; improving organization of sales activity in foreign markets (marketing approach to research of snack products market needs). The review of the snack

market according to the data of "Market Analytics" company has shown the expediency of production of the given group of products (key chains, rings, straws and other kinds of products) and export to the Russian Federation, Ukraine, Turkmenistan, Kazakhstan [10]. The purpose of the investment project is to create conditions for increasing the output of export-oriented products of JSC "BPC "Domochai". Technological and economic effect of introduction of the snack production line is summarized in Table 14 of the Presentation: creation of conditions for increasing the output of export-oriented products as a result of introducing a new product - snacks to the market; increasing the productivity of the equipment used in the JSC "BPC "Domochai" at the production site № 3; increasing the capacity utilization at this production site of the enterprise up to 85%; reducing the raw materials, energy and labor intensity and, accordingly, the direct and indirect cost of production.

Table 14 - Investment oriented development management of export-oriented production of JSC «BCC «Domochai»: effect of introduction of a snack production line

T	E
<ul style="list-style-type: none"> - minimizing losses of time, raw materials, energy resources for preparation, start-up and production; - no time losses on technological breaks (automatic switching of technological process on assortment positions of products); € possibility of non-stop changeover of the equipment and transition to another kind of assortment positions of snacks at the expense of raw materials supply according to the recipe by precision dispensers;- high speed and accordingly productivity; § reduction of material resources losses as a result of ensuring high accuracy of automatic dosing of ingredients of products recipes; ¶ dosing accuracy and nominal consumption of raw materials in accordance with the recipe for making snacks; Ⓜ possibility to use domestic main and auxiliary raw materials; € automated production and synchronization of production and sales activities; ⓪ minimum number of scrap; Ⓜ energy saving, as these devices are equipped with raw material level sensors. 	<ul style="list-style-type: none"> - expanding the range of export-oriented products; - decrease in the prime cost of production in directions: decrease in material consumption (including raw materials consumption, fuel and energy consumption), labour consumption, level of overhead costs per unit of production; - elimination of losses of working hours of the equipment, workers; - increase in productivity of the equipment, workers (average hourly output of the equipment; average hourly output of workers); - increase in sales volumes of competitively capable products in foreign and domestic markets; - expanding the geography of export deliveries; - increase in volumes of export deliveries; - increased brand awareness of JSC «BCC «Domochai»; - increased competitiveness of products in terms of price and quality parameters; - capacity utilization in this unit of production of the enterprise up to 85%.

The investment project of introduction of the automated snow production line according to the commercial proposal of UE "Vladimir" and equipment cost of 584 thousand rubles was developed. The implementation of the investment project for the introduction of a snack production line at BPC Domochai provides for an increase in the volume and efficiency of export-oriented production: increase in export sales,

capacity utilization up to 95% as a result of technology development and implementation of snack production.

Financing of the investment project. According to the results of work for 9 months of 2019 the low level of net profit (48 thousand rubles) was established, which does not provide investment activity of the organization. As a source of financing of the investment project of introduction of the snack production line of JSC "BPC Domochay" was considered a leasing company and a lessor - the leasing company LLC "ASB Leasing" (Table 15).

Table 15 - Terms of leasing of LLC «ASB Leasing»

Leasing terms and conditions	Characteristics of the parameter
Leasing subject	Automated line for the production of snack groups of products (key chains, rings, straws or individual snack shapes)
Lease term	30 months
Cost of the leasing object	584,358 rubles RB
Lease interest	13% p.a. (annuity accrual scheme)
Initial facility fee	10 %
One-time fee	1 %
Depreciation (monthly)	3,33 %

The total cost of purchase, dismantling, installation and commissioning works under the investment project of implementation of a snack production line is 584358 rubles. Calculation of lease payment flows (contract with LLC ASB Leasing) is presented in Table 16. The cost of leasing payments amounted to 665,981.32 rubles, which corresponds to the price increase of the leasing object by 81,623.32 rubles or 13.97 %. The discounted value of leasing payments, taking into account tax benefits from leasing, was determined as RUB 442,787.82 thousand, which is 24.23% lower than the value of the investment object (Table 16), indicating beneficial use of leasing.

Table 16 - Perspective analysis of leasing payments under the investment project of implementation of the snack production line

Indicator	01.01.20 – 31.12.20	01.01.21 – 31.12.21	1.01.22 – 01.07.22	Total
Lease payment, rub	305 053,66	220 709,76	140 217,90	665 981,32
Tax concession on leasing, rubles	54 909,66	39 727,76	25 239,22	119 876,64
Post-tax value of leasing	250 144,00	180 982,00	114 978,68	546 104,68
Discount factor at a discount rate of 13%, unit shares	0,885	0,783	0,693	2,36
Present value of lease payments	221 366,38	141 735,46	79 685,99	442 787,82

Prospective analysis of financial indicators based on the investment project implementation results (Tables 17 - 19 Presentation).

Calculation of financial results from the implementation of the investment project outside the automated snow production line is presented in Table 17.

Table 17 - Calculation of income from the implementation of the investment project for the introduction of an automated snow production line

Indicator	2020 y.	2021 y.	2022 y.
Snack sales volume, t	617,317	864,244	987,708
including			
Bretzel product, t.	192,527	269,538	308,044
Rings product, t.	223,748	313,247	357,997
Straw product, t.	201,042	281,459	321,667
Cost of production 1 t, rub	3187,85	3347,243	3548,077
Sales price 1 t, rub.	3347,243	3581,549	3902,885
Revenue from sales, thousand rubles	2066,31	3095,33	3854,91
Production and sales costs, thousand rubles	1967,91	2892,83	3504,46
Expenses on marketable products rouble, thousand roubles	0,952	0,935	0,909
Profit from sales, thousand rubles	98,40	202,50	350,45

Export volume before the introduction of the snow production line is taken on the basis of the level for 2018 taking into account the average annual growth of export volume for 2016 - 2018 in the amount of 23.95%, adjusted for the risks of foreign economic activity of the enterprise. The price of 1 ton is assumed to be USD 1,098.18 for 2018. (USD exchange rate adopted at the level of 1.974). Export costs have been set in accordance with their relative export intensity indicator at the level of 2018 at \$0.938 (USD exchange rate adopted at 1.974).

The calculation of profit from the sale of snow products was made taking into account the growth of production volumes, cost increases and is shown in Table 18.

Table 18 - Prospective analysis of profit growth from the investment project of implementation of the automated snack production line

Indicator	2019 y.	2020 y.	2021 y.	2022 y.
Export volume before implementation of the line, t	1477,785	1625,563	1869,397	2149,807
Price 1 ton, USD.	1098,18	1098,18	1098,18	1098,18
Revenue from sales to line implementation, thousand USD	1622,87	1785,16	2052,93	2360,88
Cost of rouble of products shipped for export before implementation of the line, USD	0,938	0,938	0,938	0,938
Production and sales costs before the implementation of the line under the flexible budget, thousand dollars	1521,98	1674,18	1925,31	2214,10
Profit from product export to line implementation, thousand USD	100,89	110,98	127,63	146,77
Export volume of snow products, t	-	432,122	604,971	691,395
Price 1 ton, USD.	-	1695,66	1814,36	1977,15
Revenue from the export of snow products, thousand dollars	-	732,73	1097,64	1366,99
Cost of rouble of products shipped for export after implementation of the line, USD	-	0,952	0,935	0,909
Cost of production and sales after implementation of the line under the flexible budget, thousand USD	-	697,84	1025,83	1242,72
Profit from snack products export, thousand dollars.	-	34,89	71,81	124,27
Total profit from the export of products, thousand dollars.	100,89	145,87	199,43	271,04
Relative profit growth, %	100,00	44,58	97,67	168,65

In accordance with the above conditions, the prospective line of profit on export of products before introduction of the production line of snow products of JSC BPC Domochay is defined as USD 100.89; 110.98; 127.63; 146.77 thousand (USD exchange rate adopted at the level of USD 1.974). The relative increase in profit after introduction of the investment project in 2020 - 2022 is defined in the amount of 44,58; 97,67; 68,65 % accordingly.

For the purpose of the current assessment of the projects' prospects, the calculation of net present value (NPV) has been made taking into account the annual economic effect from the implementation of the investment project for the introduction of an automated snow production line in the first 3 years of the project life cycle and a discount rate of 13%. Results of calculations are brought in the table 19.

Table 19 - Evaluation of investment project efficiency. Calculation of net discounted value, thousand rubles

Years	Amount of investment	Sales revenue on domestic and foreign markets	Discount factor (discount rate 13%)	Discounted capital investments	Discounted income	Net Present Value (NPV)
2020 year	305,05	153,53	0,88496	269,96	135,87	-134,09
2021 year	220,71	283,54	0,78315	172,85	222,06	49,21
2022 year	140,22	448,63	0,69305	97,18	310,92	213,74
Total	665,98	885,70	-	539,99	668,84	128,86

Parameters for evaluating the efficiency of an investment project:
 $IRR = 60 + [(5,14 / (5,14 - (-4,62))) \times (70 - 60)] = 65,27 \%$;
 $MIRR = 1,10841 - 1 = 0,10841$ (10,841 %) from the equation: $539,99 = 735,331 / (1 + MIRR)^3$.
 $PI = 1,239$ (668,84 / 539,99).

Results of the discounted analysis of efficiency of realization of the project specify expediency of its realization: net discounted cost is defined at a rate of 128,86 thousand roubles; payback period of the project taking into account the discounted streams - 29,06 months (2,42 years), profitability index - 1,239; profitability of investments - 23,86 %; internal rate of return - 65,27 %; modified internal rate of return MIRR - 10,84 %.

V. Conclusions.

In the work the theoretical and practical aspects of the formation of information and analytical environment to identify the prospects for export-oriented production of JSC "BPC "Domochay" are studied. The geography of exports is represented by cities, regions and districts of the Russian Federation, countries that are not members of the Commonwealth of Independent States. The largest share of exports is to CIS countries, including the Russian Federation. The most promising direction of export potential development is increasing sales of confectionery products. As production reserves of increase in output of export-oriented products of JSC "BPC "Domochay" are established: reduction of working time losses and further increase of labour productivity, in particular, average hour output of workers as a result of automation of

production and reduction of labour intensity of technological operations of bakery and confectionery production; maintenance of positive proportions of labour productivity and wages growth in a context of expanded reproduction; elimination of losses of time; elimination of losses of labour productivity and wages.

As an effective tool of export-oriented production management BPC "Domochay" JSC considered an investment project that provides for implementation of production reserves identified in the analytical part. The purpose of the investment project of introducing an automated snack production line is to create conditions for increasing the output of export-oriented products. The source of investment financing in this project is ASB Leasing LLC. The economic effect is calculated in the following directions: increase of sales volumes in the domestic and foreign markets; expansion of sales geography, including the markets of Russia, Ukraine, near and far abroad; increase of loading of production capacities of the enterprise; decrease of raw materials intensity, energy intensity, labour intensity and accordingly direct material and labour costs as a part of production cost price as a result of use of progressive technological process and high-tech equipment. The estimation of economic efficiency of the project, made according to the international standards, has defined profitability of the project offered to realization.

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