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Increasing the Efficiency of Raw Materials Supply Management in Oil Enterprises with The Development of The Digital Economy

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Abstract: In this article, the issues of increasing the efficiency of raw material supply management in oil enterprises are discussed. Also, the value of some imported vegetable oil and the value of some imported vegetable oil of the countries of the world have been widely analyzed under the conditions of the coronavirus pandemic prevailing all over the world. In addition, in order to provide the population with high-quality food products in our country, the economic indicators of JSC "Tashkent oil-oil" and JSC "Yangiyol oil-oil" with the participation of foreign investors were analyzed and evaluated. Production costs of JSC "Tashkent Oil-Oil Combine" in the form of a joint venture and JSC "Yangi'ol Oil-Oil" with the participation of foreign investors and raw materials of JSC "Tashkent Oil-Oil Combine" in the form of a joint venture and JSC "Yangi'ol Oil-Oil" with the participation of foreign investors extensive analysis of resource consumption has been carried out. In addition, conclusions and proposals were developed on the research conducted to improve the efficiency of raw material supply to the enterprise.

Keywords: Digital economy, digital technologies, transformation process, oil enterprises, efficiency of management, supply of raw materials, "Tashkent oil-oil" JSC, "Yangiyol oil-oil", foreign investors, oil-oil products.

Introduction: Today, the countries of the world are going through a difficult test in the conditions of the coronavirus pandemic, which is prevailing all over the world. In the current situation, the ability of each

country to regularly provide its citizens with essential food products forms the capacity of these countries to easily adapt to the new international and economic conditions that will arise after the pandemic and shows their readiness for any emergency situations. At this point, the measures implemented in the Republic of Uzbekistan show that during the fight against the spread of the coronavirus in our country, all opportunities are being mobilized to provide the population with quality food products, especially oil products [1].

Studies show that due to the pandemic, there are a number of difficulties in the production and delivery of oil products. Including [2]:

Barriers being erected in the transport sector can lead to disruptions in oil supply chains;

transport restrictions and quarantine measures can prevent farmers from going to markets, limiting their production capacity and selling their products;

labor shortages may hinder the cultivation and processing of products, especially manual labor-intensive oilseeds;

The leading countries that grow oilseeds can impose restrictions on the export of oilseeds to ensure food safety in their domestic market or for other purposes.

According to the American Bloomberg agency, in March 2020 itself, a number of cases indicating the beginning of these problems were observed. In particular, on March 16, 2020, Kazakhstan, one of the largest exporters of wheat flour, banned the export of this product, restrictions were also imposed on the export of sunflower oil, sugar and vegetables, including onions, carrots and potatoes. On March 30, Kazakhstan lifted the export ban and switched to the quota system, reducing flour exports by 47% compared to February [3].

Vietnam, the world's third-largest rice exporter, suspended rice trade contracts in March. In Russia, the Ministry of Agriculture and Water Resources reported that they are negotiating a draft government decision to impose restrictions on the export of wheat flour and a number of other food products [4].

Also, the board of the Eurasian Economic Commission approved the export of a number of food products, including some types of flour products, garlic, turnips, millet, grain, buckwheat and soy products outside the territory of the Eurasian Economic Organization (Russia, Belarus, Kazakhstan, Kyrgyzstan and Armenia) in 2020. made a decision on the ban from April 10 to June 30. Of course, the above-mentioned restrictions were established by all countries in order to ensure their economic security and the provision of quality food to the population [5].

In the 3rd quarter of 2020, the price of vegetable oil increased by 15-20% on the world market and the volume of sunflower grain cultivation in the Russian Federation decreased by 15-18%, which led to an increase in the price of vegetable oil in the republic by 35-40%.

According to the data of the State Statistics Committee of Uzbekistan, in March 2020, the prices of food products increased by 1.9% compared to February, which is 0.4% more than in March 2019, and on an annual basis, food products increased by 16.4%. increased in value. For comparison, according to Wind Data Service, an organization specializing in financial news, food prices in China increased by 21.2% in the same period (January-February) compared to January-February of the previous year [6].

In our country, a number of decisions and programs have been adopted in order to provide the population with quality food products, in particular, the decision of the President of the Republic of Uzbekistan No. Resolution No. 251 dated August 29, 2015 "On approval of the concept and complex of measures to ensure healthy nutrition of the population of the Republic of Uzbekistan in the period of 2020" is a confirmation of our opinion[7].

Literature review

Issues of enterprise raw material management foreign scientists D. Bowersox, D. David Kloss, M. Christopher, D. Lambert, Dj. Stock, Michael R. Lindere, E. Harold, C. Skowronek, Thomas T. Stollkamp, D. Waters, D. Hadley, T. Whitin, E. Mate and others have been reflected in scientific research [8,9,10,11].

B. Anikin, V. Bautin, I. Bogomolova, D. Gavrilov, K. Kuznetsov, V. Lukinsky, E. Makarov, Yu. Nerush, V. Nikolaychuk, B. Plotkin, Yu. Salikov, V. Sergeev from the scientists of the CIS countries and others have made significant contributions to the study of raw material inventory management. D. R. Stock and D. M. Lambert believes that supply chain management is "the integration of key business processes that encompass all suppliers of goods, services, and information that add value to consumers and other stakeholders, from the end user"[12,13,14,15]. In our republic, a number of positive works are being carried out to improve the management system of oil enterprises. In particular, in the action strategy for the five priority directions of the development of the Republic of Uzbekistan in 2017-2021, it is stated that "Construction of new processing enterprises equipped with the most modern high-tech equipment for the deep processing of agricultural products, production of semi-finished and finished food and packaging products , implementation of investment

projects for the reconstruction and modernization of existing ones" are defined as important tasks[16]. By 2023, as a result of the widespread introduction of modern information technologies into economic sectors, including the introduction of a complex of information systems in production management, and the widespread use of software products in financial and economic activity reporting, the share of the digital economy in the country's gross domestic product will double [17].

METHODS

Systematic analysis, expert evaluation, synthesis, comparison, statistical analysis, SWOT-analysis, economic-mathematical modeling and econometric analysis methods were used in the research work.As can be seen from Table 1 below, in 2015, a total of 147.6 mln. USD worth of vegetable oil was imported, of which USD 10,989.0 thousand cotton, USD 130,704.1 thousand sunflower oil and USD 5,949.8 thousand soy oils were imported. In 2020, 213038.7 thousand US vegetable oil was imported. Including cottonseed oil 6115.7 thousand US dollars, sunflower oil 194932.6 thousand US dollars and soybean oil 11990.3 thousand US dollars. In 2020, cottonseed oil to the republic decreased by 4873.275 thousand US dollars, we can see that sunflower oil increased by 64228.5 thousand US dollars and soybean oil by 6040.5 thousand US dollars [18].

Table 1

Value of some vegetable oil imported to the Republic (thousands of US dollars)

Name	2015 y.	2016 y.	2017 y.	2018 y.	2019 y.	2020 y.
Soybean oil	5949,8	14559,8	15247,1	19152,4	10802,1	11990,3
Sunflower oil	130704,1	116854,3	91461,6	121958,9	175615,0	194932,6
Cottonseed oil	10989,0	13888,0	2891,5	4807,60	5824,5	6115,7
Total	147642,9	145302,1	109600,2	145918,9	192241,6	213038,7

We can explain the decrease in cottonseed oil imports as a result of the increased demand for sunflower oil. Studies have shown that the oiliness index of cotton seed is 18-20% and the yield is 18 tons/ha. The oiliness index of sunflower grain is 40-45% and the yield is 25-30 tons/ha. soybean oil content is 18-20%, productivity is 30-35 tons/ha.As can be seen from Table 2, vegetable oil obtained from the sunflower plant is distinguished by the abundance of oils obtained from other types of oil plants. It follows that if the sunflower plant is properly cared for in accordance with the rules of agrotechnology, it can replace the yield of the product obtained from other types of vegetable oil (Table 2) [19].

Table 2

Oiliness, yield indicators of some oil plants

№	The name of the plant	Fat index (in percent)	Productivity is 1 ts/ha.	1 ga. tons of vegetable oil produced from
1.	cotton	18-20	18	0,34
2.	Sunflower	40-45	25-30	11,25
3.	shade	18-20	30-35	0,54

This, in turn, today, in our republic, the organization of clusters of oil-oil enterprises based on the needs of the times allows to increase the activity of these enterprises and to fully utilize the production capacity, as well as to provide the population with cheap oil-oil products [20].

Analyzing the above data, it can be concluded that today the demand for sunflower oil among the population is increasing sharply. In this regard, in order to provide the population with high-quality sunflower oil, it is necessary to expand sunflower cultivation areas in the republic, and there are several reasons for reaching such a conclusion [21]:

First, 2281,000 were consumed in 2015-2020. tons (of cottonseed oil, sunflower oil and soybean oil) of vegetable oil, 833.6 thousand tons, i.e. 36.5% corresponds to sunflower oil;

secondly, of the 899,000 tons (of cottonseed oil, sunflower oil and soybean oil) imported in 2015-2020, 743,900 tons, i.e. 82.7 percent, correspond to sunflower oil;

thirdly, we can see that 609.7 thousand tons, or 57.3

percent, of the 1064 thousand tons (of cottonseed oil, sunflower oil, and soybean oil) imported in 2015-2020 corresponded to sunflower grain.

Based on the results of the research, it is appropriate to define a number of tasks in order to increase the efficiency of oil enterprises, including [22]:

first of all, it is necessary to increase the area of oil crops, and for this purpose, the lands that are out of use and have underground water reserves are brought back into use on the basis of agrotechnical measures, and based on the natural soil and climatic conditions, sunflower seeds are planted;

to plant the specified sunflower crop during land use, to create jobs, to give preferential right to extend the land use period to business entities that have paid rent expenses on time;

it is necessary to improve the safety of food products and consumption ration, to ensure the production of the required amount of food products [23].

RESULTS

It reflects the economic relations related to the formation, distribution and use of cash reserves and other financial resources to ensure the conditions of reproduction of the enterprise, to realize its goals and tasks, as well as to fulfill the financial obligations of the enterprise to its employees, the state and other enterprises, and to develop production. also serves its purpose. We analyze the economic indicators of JSC "Tashkent Oil and Oil Combine" in the form of a joint venture in 2015-2020 based on the data presented in Table 3[24].

Table 3

Economic indicators of JSC "Tashkent oil-oil" joint venture and JSC "Yangiyol oil-oil" with the participation of foreign investors (in millions of soums)

Indicators	2015 year	2016 year	2017 year	2018 year	2019 year	2020 year	Change in 2020 compared to 2015
JSC "Tashkent Oil-Moy" in the form of a joint venture							
Net profit	2296,2	6231	3093,8	2314,6	2592,4	2799,8	121,93
Net income from product sales	10445,8	13130,2	15317,7	17512,8	19151,8	20683,9	198,01
Cost of goods sold	46870,6	50721,5	70774,5	81377	84114,7	88320,4	188,4
Income tax	480,8	593,8	633,4	741,4	833,7	892,1	185,5
The price of the product sold individually, soum	21,73	22,11	24,18	23,62	22,97	24,6	113,1
JSC "Yangiyol Yog-Moy" with the participation of foreign investors							
Net profit	11204	12732	14147	8010	8971,9	9689,7	86,5
Net income from product sales	18077	19028	20030	25560	28372	30641,5	169,5
Cost of goods sold	59297	62418	65703	72450	78970	82918,6	139,8
income tax	2272	2392	2518	1244	1062,1	1136,4	50,0
The price of the product sold individually, soum	21,5	21,9	22,3	22,8	22,3	23,9	111,0

Table 3 presents the economic indicators of JSC "Tashkent oil-oil combine" JSC in the form of a joint venture and "Yangiyol oil-oil" JSC with the participation of foreign investors in the period 2015-2020. In 2015-2020, the net profit of JSC "Tashkent oil-oil combine" in the form of a joint venture was 2799.8 mln. to soums (121.9 percent), the net profit of JSC "Yangiyol Yog-Moy" with foreign investors increased to 9689.7 mln. The net income from the sale of products of JSC "Tashkent Oil and Oil Combine" in the form of a joint venture decreased by 20,683.9 million soums (13.5 percent). to soums (198.0 percent), the net income from product sales of "Yangiyo'l Yog-Moy" JSC with the participation of foreign investors is 30,641.5 mln. to soums (169.5 percent), the cost of sold products of JSC "Tashkent Oil and Oil Combine" in the form of a joint venture is 88320.4 mln. to soums (188.4 percent) the cost of sold products of "Yangiyo'l oil-moy" JSC with the participation of foreign investors is 82918.6 mln. soums (188.5 percent), "Tashkent oil-oil combine" JSC 892.1 mln. paid income tax of 1,136.4 mln. paid income tax of soums[25]. We can see that the cost of sold products of JSC "Tashkent oil-oil combine" in the form of a joint venture increased by 113.1%, while the cost of sold products of "Yangiyol oil-oil" JSC with the participation of foreign investors increased by 111.0% [26]. As a result

of the formation of the organizational and economic mechanism of the management of the production process with raw materials, the net profit of the joint venture "Tashkent Oil and Oil Combine" JSC in 2019 compared to 2018 was 2592.4 mln. to soums (112.0 percent), net income from product sales to 19,151.8 million soums (109.4 percent), cost of sold products to 84,114.7 million soums (103.4 percent), income tax payment amount to 833.7 million soums (112.4 percent) increased and the cost of the sold products decreased by 22.97 soums (2.8 percent). In 2019, the net profit of the company "Yangiyol Oil-Moy" JSC with the participation of foreign investors was 8971.6 mln. compared to 2018. to soums (112.0 percent), the net income from product sales increased to 28,371.8 million soums (110.1 percent), the cost of sold products increased by 78,970 million soums (109.0 percent), and the amount of income tax payment increased to 1,062.3 million soums (14 .6 percent) and we can see that the cost of a single sold product decreased by 22.34 soums (2.0 percent) [27].

Table 4

Production costs of joint venture "Tashkent oil-oil combine" JSC and "Yangiyol oil-oil" JSC with participation of foreign investors (in million soums)

Indicators	2015 year	2016 year	2017 year	2018 year	2019 year	2020 year	Change in 2020 compared to 2015, %
JSC "Tashkent oil-oil combine" in the form of a joint venture							
Total number of employees	1002	945	951	882	852	825	-17,3
Production costs mln. soum	42870,5	64847	72437,7	64291,3	70720,5	79207	184,8
The initial value of fixed assets is mln. soum	57065,4	35309,8	41699,7	64899,9	71389,7	78528,7	137,6
Return on Cost %	5,36	5,61	4,27	3,60	3,66	3,95	-26,3
JSC "Yangiyol oil-moy" with the participation of foreign investors							
Total number of employees	830	794	775	767	730	700	-15,7
Production costs mln. soum	6794,6	9580,4	8034,4	7315,4	7492,2	8316,34	122,4
The initial value of fixed assets is mln. soum	21108,6	22586,2	26620,3	26660,2	28972	31869,2	151,0
Return on Cost %	5,70	5,91	4,72	4,30	4,14	4,4505	-21,9

According to the data of Table 4 above, in 2020 compared to 2015, production costs (184.8 percent) and depreciation of fixed assets (137.6 percent) increased along with the income of joint venture "Tashkent Oil and Oil Combine" JSC, but the number of workers (17.3 percent) and cost efficiency (32 percent) decreased [28].

DISCUSSION

From table 5, we can see the dynamics of changes in the production costs, the volume of manufactured products and the consumption of raw materials per unit of finished product in the years 2015-2020 of joint venture "Tashkent Oil and Oil Combine" JSC and "Yangiyol Oil and Oil" JSC with the participation of foreign investors. . First of all, the amount of raw materials and the energy consumption used for the manufactured product are directly related to the increase in the production volume. Because the more the product is produced, the more energy and raw materials are required for it [29].

Table 5

Consumption of raw materials of JSC "Tashkent Oil-Oil Combine" as a joint venture and "Yangiyol Oil-Oil" JSC with participation of foreign investors

Indicators	2015 year	2016 year	2017 year	2018 year	2019 year	2020 year	In 2020 compared to 2015 (+/-), %

JSC "Tashkent Yog-Moy" in the form of a joint venture							
Energy consumption billion soums	34987	35310	41700	64900	72688	74869	214,0
Raw material consumption billion soums	26385	44761	54755	43211	48396	49848	188,9
Total costs	61372	80071	96455	108111	121084	126533	206,2
Raw material volume tons	51576	60530	49451	42260	50629	53160	103,1
The volume of produced products is tons	41580	41631	34749	33438	38191	40101	-3,6
Consumption of raw materials per unit of finished product, billion. soum	0,6	1,1	1,6	1,3	1,3	1,5	250,0
JSC "Yangiyol Yog-Moy" with the participation of foreign investors							
Energy consumption billion soums	32499	30278	42539	47644	55267	56649	174,3
Raw material consumption billion soums	30813	34161	49714	42326	47074	48721	158,1
Total costs	61176	70543	85170	96327	107281	111572	182,4
Raw material volume tons	53231	57672	56052	51678	53460	56133	105,5
The volume of produced products is tons	26139	28319	24516	22338	26472	27134	103,8
Consumption of raw materials per unit of finished product, billion soum	1,2	1,2	2	1,9	1,8	1,9	158,3

The production costs of JSC "Tashkent Oil and Oil Combine" in the form of a joint venture, energy consumption in 2015-2020 is 74868.64 mln. to soums (214.0 percent), consumption of raw materials is 49847.8 mln. to soums (188.9 percent) and the cost of raw materials for each finished product is 1.5 mln. we can see that it has increased to soums (250.0 percent). At the same time, we can see that the volume of raw materials decreased by 53,160.0 tons (103.1 percent) and the volume of manufactured products decreased by 40,100.5 tons (-3.6 percent). The increase in the amount of raw materials by 103.1% and the amount spent on it by 183.4% is explained by the sharp increase in the price of raw materials purchased by the enterprise [30].

Production costs of JSC "Yangiyol Oil-Moy" with participation of foreign investors, energy consumption in 2015-2020 is 56648.8 mln. to soums (174.3 percent), consumption of raw materials is 48721.1 mln. to soums (158.1 percent) and the cost of raw materials for each finished product is 1.9 mln. to soums (158.3 percent), we can see that the volume of raw materials has increased by 56133 tons (105.5 percent) and the volume of manufactured products has increased by 27134 tons (103.8 percent) 2018 of the Cabinet of Ministers of the Republic of Uzbekistan [31].

As a result of the decision No. 897 of November 1 "On gradual changes in the prices and tariffs of fuel and energy resources" as a result of the classification of the price of fuel and energy resources and a slight increase in the tariff for industrial enterprises, JSC "Tashkent Oil and Oil Combine" in the form of a joint venture and foreign investors Energy consumption of JSC "Yangiyo'l oil-moy" with the participation of 74869 mln. to soums (214.0) and 56649 mln. led to a sharp increase to soums (174.3). As a result, 60% of the production costs of joint venture "Tashkent oil and oil combine" JSC and 51.5% of JSC "Yangiyol oil and oil" with participation of foreign investors corresponded to energy consumption. Nevertheless, the production volume of the above-mentioned enterprises has been increased in 2020. In particular, the products produced in JSC "Tashkent oil-oil combine" in the form of a joint venture increased by a total of 14% in "Yangiyol oil-oil" JSC with participation of foreign investors by 18.5%.

CONCLUSION

In conclusion, it can be said that the research conducted on improving the efficiency of raw material supply to the enterprise allowed the author to obtain the following results:

1. The organizational and economic mechanism of enterprise management was formed by providing raw materials to the production process of JSC "Tashkent oil-oil combine" JSC and "Yangiyol oil-oil" JSC with the

participation of foreign investors.

2. The coefficients of the regression equation and its quality criteria were checked for the change of management efficiency of JSC "Tashkent oil-oil combine" JSC in the form of a joint venture and "Yangiyol oil-oil" JSC with the participation of foreign investors as a result of the influence of selected factors.

3. A multi-factor forecast of the management efficiency of the Tashkent oil-oil enterprise was made for 2021-2026. As a result of the multi-factor forecast of the management efficiency of the Tashkent oil-oil enterprise, in 2026, compared to 2021, the enterprise's management efficiency is expected to increase by 102.4%, production costs by 116.8%, energy consumption by 133.1%, and raw material consumption by 109%.

4. Integration of the supply chain concept, synchronization of plans at different levels, and planned parameters between enterprises participating in the chain were developed in the ERR system in the implementation of subsystems of planning raw materials and production management.

5. It was proposed to use resource, process, and technological perspectives in parallel to determine resource costs, identify reserves, and more fully assess the impact on their use.

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