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MANAGEMENT OF PRODUCTIVE CAPITAL OF COGNAC INDUSTRY ENTERPRISES OF UKRAINE

The current economic situation in Ukraine is marked by uncertainty and inconsistency, which is why arise scientific discussions on advanced concepts of economic development of domestic enterprises. Even under conditions of sufficient elaboration of theoretical and methodological approaches to the assessment of development of enterprises and forecasting future trends of the external and internal environment, scientific problems of justification of the concepts of enterprise management in the aspect of its growth strategy are actual. The methodological basis of modern management concepts should be formed taking into account accumulated practical experience in strategic management.

At the present stage of development of the methodology of the financial analysis the capitalization of the enterprise is the indicator of economic efficiency of its activity. The lack of a single approach to the management of the process of capitalization of enterprises complicates the justification of effective administrative decisions concerning the growth of its cost and increase its capitalization. For these reasons, particularly relevant are the works of scientists, aimed at solution of the problems of development and implementation of specific mechanisms to control the process of capitalization of the enterprise. The above mentioned implicitly indicates the timeliness and the scientific importance of the chosen theme for research.

The effectiveness of the enterprise activity in any industry is largely determined by its capital value and dynamics which determine the size of an enterprise and stability of its operations. Therefore, an important characteristic of an enterprise quality management system is its capital.

Kirsanova T. and Koljada I. solve the problem of effective management of an enterprise capital by determining the optimal capital structure, which refers to a ratio of equity and debt that maximizes the market value [1, p. 61]. However, these researchers hold positions of importance of preserving and enhancing equity.

Some problems of managing enterprise capital structure, namely the optimization of capital structure, described in the writings of many other researchers:

Korzh R. worked out the capital structure of companies in the current economic conditions based on systematic guidelines static and dynamic theories of capital structure optimization [2];

Chyzh N. compared to previous scholars, narrowing a range of analyzed companies, highlights the problems of forming the optimal structure of its own enterprise capital [3];

Piletska S. for the grant of recommendations in relation to the construction of equity structure proves feasibility of controlling the structure of equity and debt businesses on a definition of subordinated capital by providing opportunities to use additional capital as a part of its own and a bill of credit, a bond is as a part of a debt [4];

Shevchenko N. offers to determine the optimal capital structures of stock companies by minimizing debt values guards and increase the values of their own, and proves that effective methods of optimizing the capital structure is to use a loan and lease issuance of preferred shares [5];

Obuschak T. focuses on the optimization of the equity and debt capital on a multiobjective basis, but emphasizes the need to ensure the lowest possible cost of capital components [6];

Shpak N. and Rudnytska A. support the partaking of new capitals at the obligatory condition of development of the system of indexes of the status and use of enterprise capital, and they emphasize that there is an optimal capital structure, which will help to minimize the weighted average cost of capital and at the same time support the credit reputation of an enterprise [7];

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Semenov G. and Peleshko A. offered an approach to determine the optimal capital structure according to method of the combined effect of maximizing the return on equity growth and the level of financial stability that, in their opinion, enables rapid and optimal capital structure, and predict the maximum increase in return on equity and financial viability in the future [8]. The results of research done by Semenov G. and Korol S. a set of criteria for return on equity and the level of financial stability criterion is added to minimize the level of financial risk on the basis of which the stages of optimization capital structure have been determined [9];

Perederiyenko N. and Lespuh A. solve the problem of optimizing the capital structure and conclude that the structure of equity and loan capital «не є сталою, може змінюватись у відповідь на зміну умов виробництва і реалізації, але в кожний момент менеджери повинні мати чітке уявлення про цільову структуру і всі фінансові рішення підпорядковувати завданню досягнення такої структури капіталу»[1] [10, p. 184]. It is very important to consider the comments of these authors concerning the variability index of the target capital structure dynamics, that is why it is necessary to identify the factors of index changes to ground its periodic adjustment;

Grinkevich S., Saldan P. and Melnichenko I. consider approaches to determine the nature of capital structure and optimal capital structure and focus their research on the grounding for the choice of financial development strategy based on the model of the structure of its capital. Because of different economic conditions different industries in the economy of various countries agree with the conclusion of these scholars about the impossibility to find a single approach to determine the optimal ratio of capital items, which proves the necessity of deploying other areas of study of conditions for companies' capitalization we consider one of the most original search conditions is formation of capital and industrial – enterprises separately formation of productive capital [11].

The problem of managing its capital structure is observed in the works of national scientists-classical Afanasiev A. [12], Balitska V. [13] and Blanc I. [14]. But they are focused on the invention of the optimal ratio of equity and debt capital. However, according to the obtained results of during research, it is the financial capital is not a significant factor in the capitalization of the companies of some branches of economy, which is why there is the need to analyze the contribution of other types of capital.

Management of capital structure is in the focus of researches of leading foreign scientists. Kehinde James Sunday, PhD of Lagos State University Ojo (Nigeria), by examining the characteristics of Small and Medium Scale Enterprises (SMEs), concluded, that it was capital management ensures continuous operation of the enterprise in the market, its growth and solvency [15, p. 271].

Romano C. A., Tanewski G. A. and Smyrnios K. X. invented the relationship between firm size and the importance of managing its capital, namely: managing capital is a significant factor in the growth of the effectiveness of large and medium-sized enterprises than of small ones [16].

Baral J. K. as a result of constructing regression models found that the size, growth rate and earnings of the enterprise are significant determinants of its capital structure [17].

Khrawish H. A. and Khraiwesh A. H. A. focused attention on the invention of impact the ratio of short-term and long-term debt in the capital structure on its profitability [18].

Given a large number of scientific papers on managing capital structure it is possible to make a remark that the formation of an effective mechanism for managing the capitalization of industrial enterprises should be based on consideration of mandatory industry-specific requirements for raw materials, technologies, machines of all logistics and personnel, especially the specialization, a process of manufacturing and production technology. Semenov A., Plaksiuk A. and Jaroszewska O. support the positions which deal with the formation of aggregate enterprise capital and argue that «this issue requires only an individual approach. It is impossible to determine a single optimal approach of capital ratio of structural elements for different compa-

[1] «is not constant, can change in response to changing conditions of production and sales, but managers should always be clear about the target structure and all financial solutions to subordinate the task of achieving such a capital structure»

nies or one company for the entire period of its operation» [19, p. 140].

The optimal capital structure of the enterprise is usually achieved through the attainment of the chosen optimization criterion. Researchers usually choose one out of the three criteria of optimizing the capital structure of the enterprise [9, p. 140]:

1. value of the enterprise as a whole;
2. maximum share price of the company;
3. optimal ratio of return on equity and financial viability.

Thus, it is evident that much of the attention of researchers focused on studying the impact of the management financial capital of enterprise on its economic efficient. But at the same time the question arises: is it sufficient to choose one of the above criteria and how to ensure a more rational choice of optimality criterion by defining the specific features of the investigated companies. Also need to determine whether enough only solution to the problem of optimization of capital structure.

The purpose of this article is to determine the impact of capital structure on the company capitalization rate of the enterprise of the full-cycle production of cognac in Ukraine and to evaluate the possible directions of improving the management of their own productive capital. Some results of the research were represented in the article [20].

Table 1 shows the amount of capital involved in the production process of Odessa Cognac Factory, and some financial indicators of its activity.

Table 1

The volume of capital and results of operation at Odessa Cognac Factory *

Years	Non-current assets (f.1, line 080), ths UAH	Long-term liabilities (f.1, line 480), ths UAH	Share of non-current assets	The share of long-term commitments	Net Profit, ths UAH	EBITDA, ths UAH	EVA, ths UAH
2004	136,047	28334	0,83	0,17	1302	20732	
2005	129,587	30667	0,80	0,20	6173	28862	17056,38
2006	152,769	83548	0,65	0,35	490	23962	13819,04
2007	122620	34539	0,78	0,22	2256	26996,6	13357,02
2008	122,978	106,171	0,54	0,46	2126	34164	7322,479
2009	112,602	35185	0,76	0,24	2024	26306	4943,463
2010	103,259	0	1	0	2215	20585	8608,442
2011	96465	362,513	0,21	0,79	1476	25133	13844,3
2012	93425	362,443	0,20	0,80	6489	28939	13316,97

* Composed and calculated by the author according to the Financial Statements of Odessa Cognac Factory «Shustov».

EBITDA - Earnings Before Interest, Taxes, Depreciation and Amortization.

EVA - Economic Value Added.

Velnampy T. and Aloy Niresh J., Professors from Sri Lanka, on the basis of correlation analysis revealed relationships between a capital structure and profitability - namely, between the ratio of borrowed and equity and return on equity [21].

As it can be seen from the data given in table 1, there is a chaotic dynamics of the financial results of operating capital in Odessa Cognac Factory and the tendency of development of indicators EBITDA and EVA is not clear. For this situation, there is an assumption that it is the result of unstable capital structure.

The lack of stable tendency to attract long-term bank loans can be attributed to two factors:

1. Odessa Cognac Factory uses bank loans to purchase foreign cognac required for blending. But determining the required amount of loan capital, should take into account in an agreement between the plant and the Bank on especially favorable credit conditions at 10% per annum.

2. Fall of credit used in 2008 to zero in 2010, after which the revival of lending is seen, due to the overall situation in the banking sector of Ukraine, when banks stopped lending altogether individuals and businesses due to the financial crisis, but in 2011 they restored it.

To justify recommendations for the management of its capital structure, the relationship between the financial capital operating results (EBITDA and EVA) and the share of long-term liabilities of Odessa Cognac Factory was invented. However, the relationship between EBITDA and the share of long-term debt in the capital structure of the enterprise is very weak (coefficient of determination 0,1826), and as far as the rate of EVA is concerned such a relationship is absent (coefficient of determination is almost zero – 0,0588).

In this respect, the relationship between EVA and the share of long-term liabilities at Odessa Cognac Factory was checked; as a resalt, it was found that the dependence with lag 2 (coefficient of determination 0,4677) is a bit bigger, but still there is no reason to argue that at the studied enterprise the financial results are determined by the structure of capital involved. To test this assumption we checked the dependence of net income on the capital structure of the plant and it has found that the relationship between the net profit of the plant and the percentage of a long-term debt (even lags) are virtually absent. According to the results of finding the relationships between the key financial indicators of enterprise performance and the share of long-term liabilities a final conclusion can be made: the structure of the capital involved is not the determining factor for predicting capitalization of Odessa Cognac Factory. So it is possible to formulate the following hypothesis: factory capitalization is determined by its productive capital. In other words: for the capitalization of Odessa Cognac Factory «Shustov» it is necessary to focus on the management of formation and utilization of productive capital, which is based on grapes planting.

Areas of land occupied by grape bushes in Odessa Cognac Factory during 2000-2012 years can be described as unsteady.

Climatic features and characteristics of the soil near the town Feodosiia led to the fact that to produce cognac of Odessa Cognac Factory «Shustov» such sorts of grapes as Rkatsiteli, Silvaner, Aliquot, Sukholimansky White, Chardonnay, Riesling, Sauvignon Blanc, Pinot Blanc are grown.

As can be seen from the data given in table 2, the acidity of grapes and its sugariness, the range of values is determined by the variety and actual values – by weather conditions and sunlight access to vines, the company keeps these factors constant by controlling the density of vines planting. The dynamics of areas of a particular grape variety depends on weather conditions and pests, namely: 1. due to a very cold winter (below 30° C) vineyards can die out, which took place in 2010; 2. Feodosiia soil isn't resistant to the main pest of grapes - phylloxera.

The main characteristics of the varieties of white grapes that are grown for the production of cognac of TM «Shustov» are as follows:

acidity (over 6-6,5 g / l), which determines the taste and after taste of the finished drink - cognac;

sugar content (usually more than 20 %), which determines the potential amount of cognac spirit. Sugar content of grapes and cognac spirit are proportionally dependent parameters, that's why white grapes with high sugar content index are used to produce large amounts of alcohol.

Gross harvest of grapes for making cognac of TM «Shustov» for the same period can also be characterized as an uncertain size, which firstly depends on the area of vineyards, and secondly, competent preparation of vines when cutting vines after harvest in the fall. Even if there is a close connection between indicators of vineyard area and total grape harvest (coefficient of determination is very high - $R^2 = 0,9237$), it can be argued that the analyzed parameters are random variables.

Peculiarities of cognac production mean pressing of harvested grapes rather than pressing of each type separately, the white grape varieties are interchangeable, and therefore we can forecast the potentially optimized distribution of a land area under vineyards of any particular type. Based on the importance of the sugar content of grapes for the volume of spirit production, it is reasonable to carry out further calculations, based on getting the maximum amount of harvested sugar.

Index of gross yield of sugar from the grape harvest of Odessa Cognac Factory (Table 2) is characterized by an accident. It does not reflect the dynamics of the fluctuations in the

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overall yield rate of 1 ha (figure for all grades). It is obvious that a constant yield of 1 hectare at the factory reaches at the expense of proper pruning of grapes in autumn and adjusting the density of planted vines (at a distance of 2,5 - 3 m between them).

Table 2

Yield of sugar from 1 hectares, fi / ha

Years	Chardonnay	Riesling	Rkatsiteli	Silvaner	Aliquot	Suholymansky White	Sauvignon Blanc	Pinot B lanc
2000	14	16,9	19,4	16,3	23,8	20,5	8,7	12,0
2001	16	17,4	20,4	15,9	23,9	20,8	10,3	11,0
2002	14	18,0	20,8	16,7	22,6	21,0	10,0	12,8
2003	15	16,8	21,4	17,4	24,5	20,9	10,1	11,7
2004	16	16,8	19,9	17,5	22,6	19,4	10,6	12,1
2005	15	15,9	20,7	16,6	24,3	20,8	9,4	11,8
2006	15	17,4	21,5	17,1	23,4	20,3	8,9	11,4
2007	15	17,2	21,0	17,4	23,1	18,9	10,4	11,6
2008	15	17,1	20,6	17,1	24,9	20,1	9,5	12,4
2009	16	17,1	19,7	17,1	25,9	19,8	9,0	11,4
2010	15	17,8	20,5	17,2	25,3	19,6	9,7	11,1
2011	16	17,8	20,6	17,7	22,5	21,2	9,0	12,3
2012	15	18,4	21,7	17,3	23,2	19,5	10,0	12,1

During the research by the following laws were revealed:

First, the dynamics of the gross harvest almost follows the dynamics of the total vineyard area. For this reason, reaching the planned gross crop values determine the importance of managing the total area of vineyards.

Secondly, 2010 was characterized by a sharp reduction in the total area of vineyards due to their freezing after winter. In the same year there was a significant decrease in grape harvest.

Thirdly, even in periods 2000-2003 and 2005-2008 when the vineyard area was almost constant, fluctuations in gross harvest of grapes were observed, which confirms the fact that the harvest of grapes is also determined by weather conditions, such as special features of the summer months, when berries ripen.

The distribution of vineyards by types of grapes in Odessa Cognac Factory has historically background.

It's possible to increase the volume of harvested sugar by redistribution of areas between different grape varieties. For this purpose, we recommend to use sach mathematical tool of calculation as «efficient portfolio theory» [22-25].

While solving the problem, the structure of vineyards used for Odessa Cognac Factory was determined (Table 3, Fig. 1).

Changes that will occur in the structure of the distribution area between grape varieties are reproduced in Fig. 2.

Table 3

Structure of planted grapes of Odessa Cognac Factory

Chardonnay	Riesling	Rkatsiteli	Silvaner	Aliquot	Suholymansky White	Sauvignon Blanc	Pinot B lanc
for the minimum risk portfolio (in Fig. 1 - the lowest point)							
0,188	0,122	0,076	0,000	0,133	0,099	0,126	0,256
to maximize the value of gross yield of sugar from all areas of vineyards without limitation of risk (in Fig. 1 - This is an extreme point of the upper area, which corresponds to only one sort -Aliquot № 6)							
0	0	0	0	1	0	0	0
for the distribution of areas between grape varieties that is currently present at the factory (in Fig. 3 - a yellow dot is inside the area)							
0.171	0,165	0.157	0,144	0,123	0.114	0,080	0,048
to ensure maximum efficiency in existing (actual) risk levels (average volume of sugar yield from 1 ha)							
0,128	0,155	0.122	0,140	0,156	0,202	0,030	0,067

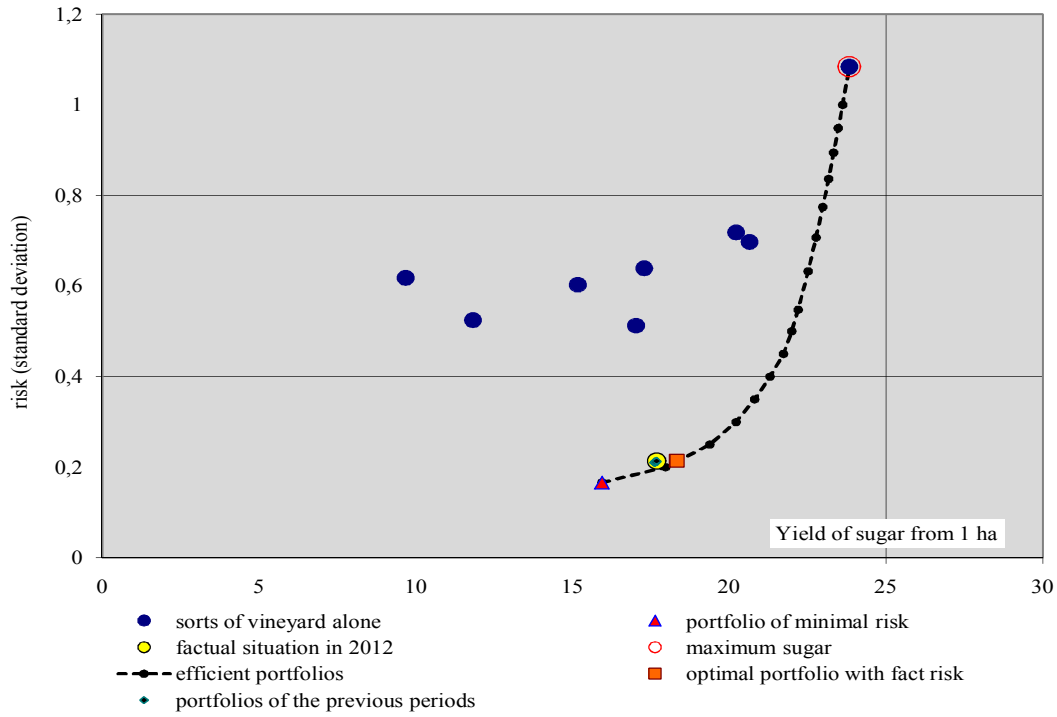
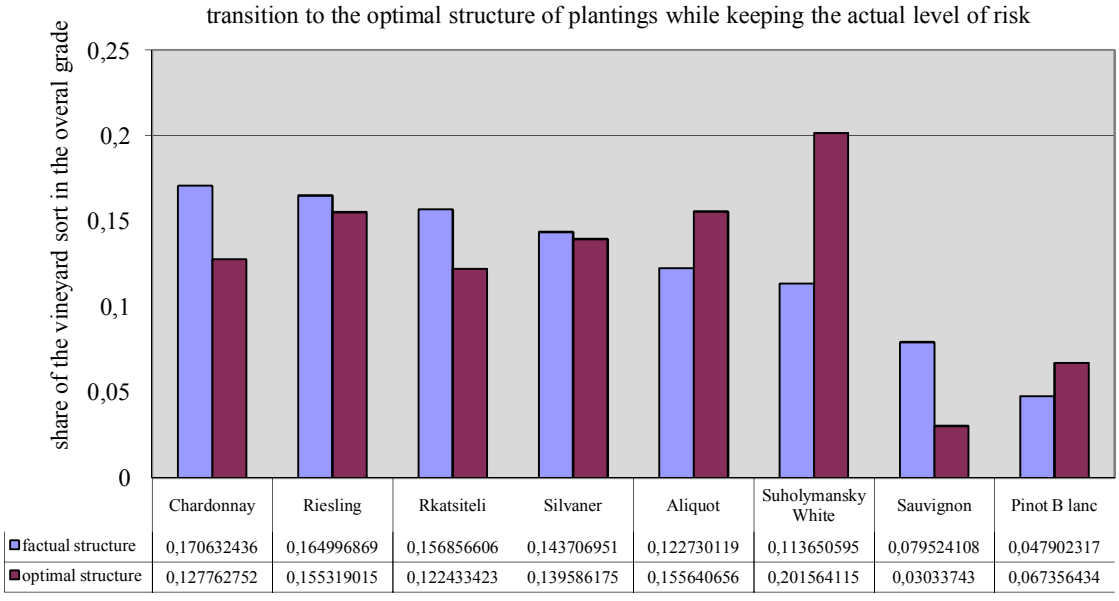


Fig. 1. Portfolios of distribution of areas between grape types



	Chardonnay	Riesling	Rkatsiteli	Silvaner	Aliquot	Suholymansky White	Sauvignon	Pinot B lanc
factual structure	0,170632436	0,164996869	0,156856606	0,143706951	0,122730119	0,113650595	0,079524108	0,047902317
optimal structure	0,127762752	0,155319015	0,122433423	0,139586175	0,155640656	0,201564115	0,03033743	0,067356434

Fig. 2. Changes in distribution of areas between the grape types under the actual level of risk

If you agree to the increase in risk, you can get any of the points of the right lower limit (shown by the dotted line in Fig. 1). Each higher point is reached by the corresponding changes in the structure of the distribution area. The dynamics of these changes is shown in Fig. 3.

However, EBITDA would increase from 33,903 thousand UAH to 43,330 thousand UAH, by 27,8 % (Fig. 4). The growth of EBITDA can be interpreted as the increase in capitalization of the factory under research.

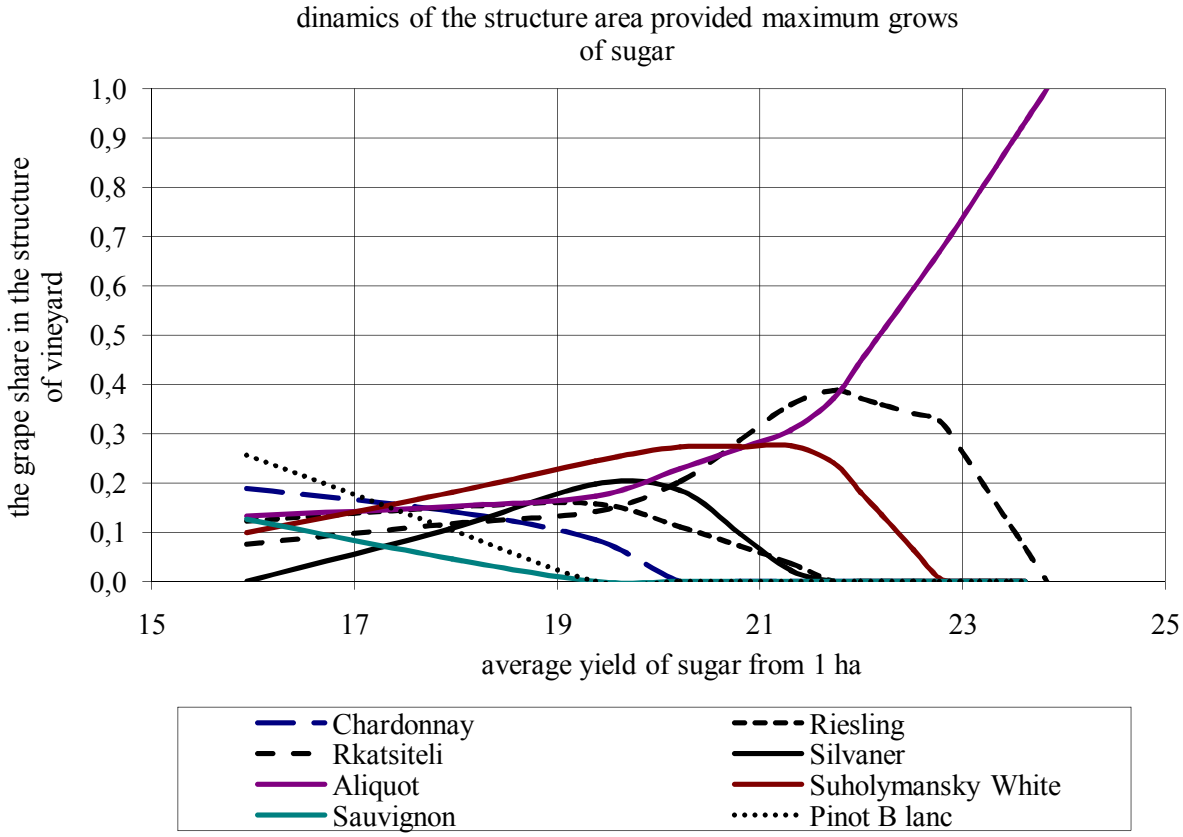


Fig. 3. Dynamics of structure of vineyard areas with the increase in maximum average volume of sugar yield from 1 ha

According to the calculations, it was determined that under optimal distribution of the structure of planted grapes to the produce of cognac alcohol at Odessa Cognac Factory «Shustov», the average volume of sugar harvested from the grape can be increased by 3,7 %. Thus, the redistribution of land between the grape varieties is the initial condition to improve operational performance through the better use of the available production capacity. But it should be noted that it will be observed in 4 years (lag = 4 while assessing the impact of gross volume of sugar from the harvested grapes on EBITDA). The plant management should accept recommendations on the optimal allocation of land area between the grape varieties while planning future business strategies to produce maximum yield of grapes.

Thus, by results of research, the impact of productive capital in the financial performance of the enterprise capitalization was found and the structure of productive capital was optimized. This article validates a new approach to the increase in the capitalization of an enterprise of a complete cycle of cognac production through organizational and economic transformations of the production capital as a resource base for the future capitalization when the industry characteristics and peculiarities of the production process are taken into account.

Further research is seen to be appropriate towards the invention of the influence of other factors on the enterprise capitalization. Necessary to determine how the value of the enterprise is influenced by such factors as the size of the enterprise, operating expenses, the composition of assets and its liabilities, growth in sales, business risk, debt service capacity, stability in cash flow and others.

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