Analysis of Modern Instruments for Strategic Management Accounting at Agricultural Enterprises

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Abstract. In modern realities of enterprises functioning, methods that keep management records play an important role. Therefore, it is always relevant to assess effectiveness of existing methods, find opportunities for their improvement or consider new accounting instruments. In this work, the emphasis is on the analysis of strategic management tools within the framework of the Republic of Tajikistan and the country's agricultural sector, the reason for which is its significant role in the effective development of the state's economy. Thus, the purpose of the work is to show the principles of choosing strategic accounting tools at agricultural enterprises in Tajikistan and to assess their effectiveness. Analysis was the main research method in the research; in addition, modelling, abstraction, historical approach and other tools played an important role. The work analysed the main features of accounting in the Republic of Tajikistan in the context of modern strategic management at agricultural enterprises. The article also briefly describes the current state of the agricultural sector, its role in the functioning of the country's economy and its development prospects. In addition, the features of three main strategic methods of cost management were analysed, namely, "standard costing", "direct costing" and Activity Based Costing; the work describes advantages and disadvantages a company can receive using one of these methods. The article adds new knowledge to the concepts of modern strategic management, in particular in the context of agricultural enterprises, and also allows better understanding of the peculiarities of Tajikistan's economic development and methods of accounting in this country.

Keywords: agricultural sector, the economy of Tajikistan, accounting, cost calculating systems, entrepreneurship.
INTRODUCTION

Due to the abundance of economic crises in the last few years, international economic processes, as well as functioning of each individual economic system, have undergone huge changes (Guenette et al., 2022; Jackson et al., 2021). Therefore, it is not surprising that irreversible developments have also affected the economy of Tajikistan, which has undergone significant changes in recent years, affecting almost all spheres of economic activity. These changes require a review of the principles of economic management at companies, including agricultural enterprises, and cause the need to improve the means and methods of managing them. Under modern conditions, the main task of managing agricultural enterprises is to increase profits and achieve the highest efficiency of agricultural production. Agricultural sector is dominant in the national economy of the Republic of Tajikistan; therefore well-being of the country’s population depends to a greater extent on the state and efficiency of economic entities in this sector (Khushvakhtzoda & Oyev, 2020).

Economists agree in their reasoning that accounting, and in particular, management reporting, is required not only for the state (to evaluate the enterprise regarding the legality of its activities and levying taxes that are fair, in the opinion of the state), but also for the company itself, which thus gets the opportunity to monitor development and make management decisions during its activity (Ystrom, 2019; Gardi et al., 2021). Thus, discussion of modern strategic management tools at agricultural enterprises of the Republic of Tajikistan remains important. A significant number of scientists have worked on the analysis of this and related problems. In particular, K. Pawlak and M. Kolodziejczak (2020) described the peculiarities of preparation of accounting statements in the Republic of Tajikistan, pointed out disadvantages of the existing reporting system, and also emphasized the importance for the country to transition to international financial reporting standards in their work. In turn, T.F. Plotaeva and V.A. Yakushina (2013) worked on studying the advantages and disadvantages of the “direct costing” system. In their work, they described the features of this system in sufficient detail, and also emphasized the purposes which it is best used for. C. Ratnasih and R.A. Sulbahri (2022) also worked on this matter, focusing on the effectiveness of this model based on empirical indicators at Indonesian enterprises. At the same time, W.K. Shihab (2022) describes the ABC (Activity Based Costing) system in the same manner outlining its positive and negative features.

The objective of the research is the overview of enterprises of the agricultural sector as such, as well as their methods for choosing tools of strategic management accounting. The novelty of the work consists in a detailed coverage of the features of the main cost accounting systems at enterprises (“standard costing”, “direct costing” and ABC), as well as in description of the benefits and negative effects received by companies from their use.

Thus, the purpose of the work is to analyse the methods of choosing strategic management tools for enterprises in the agricultural industry, and to determine the principles of this choice.

MATERIALS AND METHODS

As part of the research, great attention is paid to the problems of choosing cost accounting systems at agricultural enterprises. In particular, the “standard-costing”, “direct-costing” and ABC systems are considered. Such choice was made because the system of instruments of strategic management accounting itself is quite extensive. This makes it almost impossible to consider all its components in one paper. Thus, it was decided to concentrate only on one of its components.

The main sources for writing the article were the works of other authors. In addition, some statistical sources were used, among which it is worth highlighting the Statistical Yearbook of the Agency on Statistics under President of the Republic of Tajikistan (2022). An important role was also played by regulatory acts used in the work: Order of the Ministry of Finance of the Republic of Tajikistan No. 124 “On Approval of the Instruction on the Procedure for Filling in the Forms of Quarterly and Annual financial statements by business entities” (2001), Resolution of the Government of the Republic of Tajikistan No. 210 “On Approval of the Regulations on Calculating the Cost of Products (works, services) at enterprises and organizations of the Republic of Tajikistan” (1999) and Order of the Ministry of Finance of the Republic of Tajikistan No. 41 “On Approval of the Chart of Accounts for Accounting of the Financial and Economic Activities of Economic Entities and the Guidelines for the Application of the Chart of Accounts for Accounting of the Financial and Economic Activities of Economic Entities” (2011).

Thus, theoretical abstract-logical methods of research became the basis of the work. The main method was analysis, the reason for which is the data processed in the work and used in the formation of the main conclusions of this research. With the help of modelling, the influence of different types of cost accounting on the development of the enterprise to determine their advantages and disadvantages was formed; abstraction was also used to achieve the same goals. Also, the work uses the method of deduction, which allows forming a complete vision with the help of individual data on the state of the strategic management accounting instruments in Tajikistan. Historical method, which made it possible to assess the history of the development of the agricultural sector in the country, was used as well. In addition, a significant number of statistical research methods were used, among which it is worth highlighting the graphic one, allowing qualitatively demonstrating, order and analysing disarranged data sets.
Therefore, the entire work can be divided into several main stages. The first one briefly describes the general current state of the economy of Tajikistan, namely, the country’s agricultural sector. At the second stage, the features of the operation of the three main methods of cost accounting (“standard costing”, “direct costing” and ABC) when using them during enterprise accounting are described; possibilities of cost estimation at companies are analysed, based on the features of accounting in the country. At the third stage, the obtained results were compared with data from the works of other scientists.

**RESULTS**

Effective functioning of a modern agricultural enterprise implies a combination of various interrelated production sectors and farms (crop production, animal farms, processing of uncultivated agricultural products) (Ninson, 2020; Liu, 2021). In some cases (for example, when summarising and presenting statistical information on certain macroeconomic indicators), hunting, forestry and fisheries are added to the agricultural sector. Today, agricultural enterprises of the Republic of Tajikistan are a key link in the process of food production and play an important role in ensuring the food security of the country. This trend can be seen below in Figure 1.

![Figure 1. Share of the main industries in the production of gross domestic product of the Republic of Tajikistan, %](image)

*Source: compiled by the author based on data from the Statistical Yearbook of the Agency on Statistics under President of the Republic of Tajikistan (2022)*

As can be seen from Figure 1, the country has a significant share of all agricultural products in the structure of gross domestic product (GDP) production. So, if in 2020 the volume of GDP production in the country amounted to 82543.0 million somoni, then 18659.8 million somoni of this (or 22.6%) falls on the agricultural sector and production areas close to it (hunting, forestry and fisheries). With the increasing importance of agricultural production in the national economy, special attention is paid to improving the management system of agricultural enterprises (Ferreira et al., 2022; Fan & Rue, 2020). Working in difficult market conditions, agricultural enterprises are trying to ensure the efficiency of their production through the use of modern management tools. As evidenced by the experience of management activities in the country and abroad, one of the factors that most influence the efficiency of the production activities of agricultural enterprises is the cost of their products (Kumudasari & Saroso, 2020). The quality, timeliness and relevance of information on the cost of production used to manage agricultural enterprises affect all indicators of their performance (Dagmara & Cichoń, 2017; Sener et al., 2019). Reliable and timely information on the expenditures and costs of agricultural production determines the validity of management decisions made by managers of agricultural enterprises, and also contributes to an increase in the overall efficiency of their production activities. Such information is formed in the management accounting system, one of the most important components of which is strategic accounting.

Strategic management accounting provides directors and managers of modern agricultural enterprises with an effective and diverse toolkit, among which the leading place is occupied by methods and tools for accounting and managing production costs (Nik Abdullah et al., 2022). At the same time, the choice of the most appropriate methods and means from the totality of the proposed tools is a serious problem of strategic management accounting in modern conditions. The quality of the information base for strategic planning, control and analysis, and, consequently, the level of efficiency of the entire system of strategic management accounting depend on the optimality of this choice (Shalaeva, 2014). Special literature on management accounting discusses the means and methods, realisation of which can technically implement various accounting procedures for preparing information for cost management in strategic management accounting (Pronyaeva & Fedotenkova, 2015). The methodology of strategic management accounting in terms of managing expenditures and product costs can be implemented on the basis of traditional elements of the accounting method (documentation, inventory, accounts and double entry, balance
sheet generalisation, evaluation, costing), economic analysis (grouping, comparison, vertical analysis, horizontal analysis, factor analysis, coefficient analysis) and management (planning, forecasting, development and application of norms and limits, control, regulation, etc.) Strategic management accounting, applying and adapting these methodological components, creates its own methodological toolkit, its choice of elements depending on the set management goals and specific management tasks to be solved. Traditional accounting, economic analysis and management play a key role in the formation of management accounting tools.

After having explored the literature on management accounting, as well as taking into consideration the peculiarities of the organisation of production in the agricultural sector of the Republic of Tajikistan, the following conclusion was drawn: the basis for the development of modern tools for strategic management accounting at agricultural enterprises in order to manage the cost of agricultural products and analyse the behaviour of costs in this industry can be integration of positively proven management accounting systems. Among such systems, the systems of "standard costing" (normative cost accounting), "direct costing" (accounting for direct variable costs) and ABC (Activity Based Costing) or "activity based costing", etc. can be considered. The cost accounting system "standard-costing" is a system for calculating the cost at standard expenditures (Eisenberg, 2016). The term standard costing means "pre-set cost" and the cost accounting method based on it is that the accounting reflects not what actually took place, but what should happen (Avdeeva et al., 2020). When it is applied, deviations of actual costs from normative (standard) are separately reflected in accounting. All costs incurred in accounting are correlated with the normative; an analysis of the identified deviations is carried out when comparing the actual costs with the normative ones. The purpose of this cost accounting system is to identify losses and deviations in the profits of the enterprise. The system is based on the preliminary rationing of costs for the manufacturing of products.

The essence of the "direct costing" system is the division within its framework of all costs of the enterprise into fixed and variable (Caril & Canavari, 2013). In it, fixed costs (related to the reporting period and not dependent on production volumes, sales or other variable indicators) are not included in the cost of manufactured products, and when calculating the cost price, only variable costs are taken into account (directly dependent on the volume of output, sales or other variable indicators). Finished goods and work in progress are taken into account only in the amount of variable production costs; the fixed costs of the reporting period are generally attributed to the financial result of the enterprise and are not allocated to specific types of products (Prüggler et al., 2011). Under the conditions of using the "direct costing" system at agricultural enterprises, the scheme for constructing a profit or loss statement becomes multi-stage. A distinctive feature of this cost accounting system is that it makes it possible to explore the relationship between production volume, costs and profit. The problem of using the "direct costing" system is the difficulty in identifying and differentiating variable and fixed costs due to the difficulty of assigning them to a specific category of costs.

According to the national accounting rules (Order of the Ministry..., 2001; Resolution of the Government..., 1999) and in accordance with the chart of accounts for the financial and economic activities of economic entities of the Republic of Tajikistan (Order of the Ministry..., 2011), all variable costs of an agricultural enterprise (wages of workers associated with the production of agricultural products, costs of raw materials, other materials, etc.) are accumulated on the synthetic account 10730 "Work in progress" and then, as products are released, they are attributed to the balance of finished products and work in progress. Agricultural enterprises can also record variable expenses in the accounts of category 55100 "Expenses for the production of biological assets", depending on the types of agricultural activities, types of biological assets and the harvested crops.

The fixed costs of an agricultural enterprise (rent of fixed assets, interest on a bank loan, advertising and sales promotion expenses, etc.) are reflected in the accounts of the category 55200 "Sales expenses", 55300 "General and administrative expenses" and are debited at the end of the reporting period debit account 70000 "Summary of income and expenses". The results of the activities of agricultural enterprises are recognised at fair value less the estimated costs of selling finished products and are reflected in the accounts of category 10750 "Agricultural products from biological assets" (10751 “Finished crop production”, 10752 “Finished livestock products”, 10753 “Finished industrial products”, 10754 "Finished products of auxiliary production and other agricultural services", 10755 "Products purchased from the population") and the corresponding accounts of category 11400 "Biological assets" (11410 "Animals – consumable biological assets", 11420 "Animals – fruit-bearing biological assets", 11430 "Plants – consumable biological assets", 11440 "Fruit-bearing plants", etc.). The difference between identified amount and the cost of identified biological assets – profit or loss from agricultural activities is reflected in the accounts of category 44100 "Income from biological assets" (44110 "Profit (loss) from the initial recognition of biological assets, 44120 "Income from the collection of agricultural products", 44130 "Profit (loss) from changes in the fair value of biological assets" (Order of the Ministry..., 2011).

Today, many agricultural enterprises, when calculating the cost of production, face a significant problem in choosing the method of allocating overhead (indirect) costs between types of products (Lizot et al., 2021). For a long time, in their management accounting
system, they have been accepting direct labour costs for the production of a unit of output as the basis for the distribution of overhead costs. However, in modern market conditions, this procedure has lost its effectiveness, and agricultural enterprises resort to finding a new procedure for distributing overhead costs. The prerequisites for the search for new methods of distribution of overhead costs were the following circumstances:

- expansion of the range of types of agricultural products and crops produced, as well as an increase in the volume of products and costs for their production;
- a decrease in the share of direct labour costs in the cost structure and a proportional increase in indirect overhead costs as a result of greater involvement of mechanisation and automation in the production of crops and products;
- an increase in the expenditure of costs not related to the production activities of agricultural enterprises (costs for logistics, advertising and sales promotion, costs for the preparation, adjustment and maintenance of mechanisation and automation).

In addition, the use of computer technology and new technology for processing accounting information has made it possible to apply more advanced and sophisticated methods for processing primary accounting information. The above circumstances were the reason for the use of ABC system in cost accounting and calculation of the cost of agricultural products. This system implies that production costs arise as a result of performing certain types of activities or works (operations). At the same time, it is considered that products are not the cause of costs, but the cause of operations or works that result in costs (Egorova & Yudanova, 2015). Manufacturing of each product requires performance of certain operations (works) that demand certain resources. This circumstance contributes to the cost accounting methodology based on the process approach. It is the processes that help to objectively evaluate and explore the relationship between output and costs. The main difference between ABC system and other cost accounting systems is the special procedure for distributing indirect (overhead) costs. Under the conditions of application of this system, the cost of agricultural products is defined as the cost of direct expenditure plus the share of indirect expenditure of each type of activity included in the cost of this product. In turn, the share of indirect expenditure is defined as the product of the of cost carriers value (cost carrier is an indicator of measuring the activity of a particular type of activity, reflecting the essence of this type of activity and interconnected with the object whose cost is being calculated) of this type of activity by its quantitative value, correlated with a specific object cost calculation.

**DISCUSSION**

In general, as noted in the work of I. Boryshevich (2014), the term "strategic management" came into use at the turn of 1960s and 1970s, to emphasise the difference between the current management at the production level and the control that was carried out at the highest level to predict various kinds of events affecting company development in the future. Thus, this phenomenon is relatively new in terms of modern business. In turn, interpretation of the concept of "strategic management accounting tools", which is one of the components of "strategic management", remains ambiguous, since it can be described differently by different scientists. A.V. Glushchenko and E.N. Samedova (2012) define it as a complex mechanism for coordinating and integrating specific tools for the formation of accounting and management information. Its variable use enhances the ability to achieve goals, and the tool as a means of practical implementation of one or a combination of its methods. As follows from this definition, the tools of strategic management accounting contribute to obtaining information that meets the management needs of various users about the production activities of an agricultural enterprise. Under the tools of strategic management accounting at agricultural enterprises is understood a set of means and methods for obtaining, processing, summarising and presenting information necessary for making valid and effective management decisions, as well as evaluating their implementation.

It should be also noted that the accounting reporting standards of Tajikistan are not effective enough, because they possess many attributes that have remained since the existence of the Soviet Union. Therefore, in Tajikistan, as in most post-Soviet states, an attempt was made to switch to International Financial Reporting Standards (IFRS). However, there were some problems. N.A. Prodanova et al. (2016) admit that, for a qualitative transition to new audit standards, the country lacks the knowledge and experience for such a transformation nationwide. In addition, there are financial, informational and resource shortages. In addition, entrepreneurs themselves lack motivation to shift to these standards. A serious problem also turned out to be the contradiction between the regulatory framework of Tajikistan and IFRS. However, in case of a gradual transition to the principles of international standards, the country's enterprises will not only be able to interact with creditors much easier, but will also receive new opportunities for more innovative accounting, which will increase their efficiency.

It was already mentioned that in the Republic of Tajikistan, agricultural sector played an important role for the functioning of the economy as a whole: this was due not only to macroeconomic indicators, but also to some others. In particular, S.A. Kurbonov (2011) argues that agriculture in the country remains and would probably remain the principal component in the structure of the economy along with industry and other sectors. The scientist describes the industry as very promising in the subsequent development of the country and believes that
it should become its basis. This is especially relevant in today’s realities, given the momentum the global famine problem is beginning to gain (Pollard and Booth, 2019). At the moment, there are many problems in the country’s agriculture. Without going into too much depth, entrepreneurs should probably focus on intensive expansion methods for their decisions, since, as K. Pawlak and M. Kolodziejczak (2020) note; such methods are more efficient than extensive. The work describes the essence of the functioning of several cost accounting systems, the first of which is the “standard-costing” system. During its analysis, conclusions were drawn that it had significant advantages, which were based on the timely identification and prevention of adverse events in the process of forming the cost of production and the profit of the enterprise. It should be noted that its effectiveness is noticed by some scientists from other countries using empirical data as an example. However, other scientists highlight some of the shortcomings of this system. In particular, Pyper et al. (2022) writes about the complexity of these standards (difficulties in determining the balance of finished products in the warehouse and work in progress in the workshops due to changes in market prices under inflationary conditions).

As for “direct costing” system, it also has its advantages and disadvantages in comparison with others. It should be noted that in general there are two varieties of this system: direct (basic, classical) “direct costing”, as well as developed, differentiated multi-stage “direct costing” (variable costing), however, it will be considered only their general features (Ratnasih & Subahri, 2022). T.F. Plotava and V.A. Yakushina (2013) evaluate the benefits received by the company when using direct costing system. Among them is the ability to quickly reorient production in response to rapidly changing market conditions and find the types of products or services with the highest profitability (thus getting the opportunity to switch exclusively to their production). In other words, a feature is the ability to calculate variable costs separately for each product. Scientists describe many other advantages of the system, as well as its disadvantages, but point out that they are few compared to the benefits. It can be only noted that the main disadvantage of this system is that it can be very difficult to accurately separate the variable and fixed costs at the enterprise, which is why the process of accounting formation can be laborious.

W.K. Shihab (2022) describes ABC costing system in great detail in his work. In the article, the scientist defines a whole set of positive and negative aspects of the system. Among the advantages, the scientist highlights the following: the system determines the goods and services that make the greatest or least contribution to the business, calculates costs more accurately, which gives greater control over indirect costs, provides information for making strategic decisions, is applicable to all types of organisations, allows linking costs with their cause, measuring the performance of both workers and departments, creating financial forecasts. Among the flaws, the scientist writes about the high level of the reliability of information role (much higher than that of others), possible difficulties in determining cost factors; in addition, the system requires primary cost sharing, is focused on cost optimisation, leaving aside the organisation’s systemic vision, and also does not adequately account for unforeseen expenditures in the cost. It is difficult to unequivocally answer what kind of cost accounting system at an enterprise as a whole can be the most effective for conducting agricultural business. Complicating this task is the fact that all methods have their strengths and weaknesses, many of which are important for the functioning of agriculture. However, according to the author, the ABC system can still be the most effective for companies, given the positive factors that it brings, in particular, the ability to regulate indirect costs, the ability to evaluate the performance of separate costs and departments, determine the type of product that brings the most business benefits (in this case, the type of culture), etc. It should be noted that among existing methods there is definitely no best one, since each of them can be more useful in different situations.

CONCLUSIONS

In the work, some features of submitting financial statements in Tajikistan were briefly considered, pointing out some of their shortcomings and the need for a subsequent transition to international auditing standards. In addition, the article describes the current state of the agricultural sector in the country. In the context of agriculture, it is noted that the sector is quite promising for subsequent progress in the country, and moreover, for becoming its foundation.

The article analyses three main types of cost accounting for products, namely, “direct costing”, “standard costing” and ABC. It was shown that all of them had their own strengths and weaknesses and were suitable for solving a certain range of problems. Thus, “direct costing” can be the best choice if the company wants to be able to accurately estimate the amount of costs per unit of production; ABC – to evaluate the performance of individual departments in the company; “standard-costing” – to evaluate deviations in the results obtained from the planned ones. Therefore, the choice of strategic management tools for effective cost accounting and calculation of production costs for a particular agricultural enterprise will depend depending on the goals pursued by the company. Many performance indicators of the company, as well as its ability to make the right management decisions, will depend on how correctly the management accounting tool is chosen. The system of cost accounting and calculation of the cost of production chosen by the enterprise should be fixed in the accounting policy of the agricultural enterprise. However, according to the author, in general, the most effective for companies in the agricultural
sector, among all the models described in the paper, is the ABC system. A promising direction for further research is the formation and compilation of practical advice for entrepreneurs in the agricultural sector to determine the optimal strategic management accounting tools for the most efficient enterprise management. In addition, it is important for future research to consider in more detail other components of the strategic management accounting toolkit.

REFERENCES

Аналіз сучасних інструментів стратегічного управлінського обліку на сільськогосподарських підприємствах

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Анотація. У сучасних реаліях функціонування підприємств важливе роль відіграють методи ведення управлінського обліку. Тому завжди актуальною є оцінка ефективності існуючих методів, пошук можливостей їх удосконалення або розгляд нових облікових інструментів. У даній роботі акцент зроблено на аналізі інструментів стратегічного управління в рамках Республіки Таджикистан та аграрного сектору країни, причиною чого є його значна роль в ефективному розвитку економіки держави. Мета роботи – показати принципи вибору інструментів стратегічного обліку на сільськогосподарських підприємствах Таджикистану та оцінити їх ефективність. Основним методом дослідження в роботі був аналіз, крім того, важливу роль відіграли методи моделювання, абстрагування, історичний підхід та інші інструменти. У роботі проаналізовано особливості бухгалтерського обліку в Республіці Таджикистан в контексті сучасного стратегічного управління на сільськогосподарських підприємствах. У статті також коротко охарактеризовано сучасний стан аграрного сектора, його роль у функціонуванні економіки країни та перспективи розвитку. Крім того, проаналізовано особливості функціонування в сільськогосподарських підприємствах, а саме: «стандарт-костинг», «директ-костинг» та «Activity Based Costing», описано переваги та недоліки, які може отримати підприємство, використовуючи один з цих методів. Стаття додає нові знання до концепції сучасного стратегічного управління, зокрема в контексті сільськогосподарських підприємств, а також дозволяє краще зрозуміти особливості економічного розвитку Таджикистану та методи ведення бухгалтерського обліку в цій країні.

Ключові слова: аграрний сектор, економіка Таджикистану, сільськогосподарський облік, системи калькулювання собівартості, підприємництво