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INFORMATION MODEL FOR IMPROVING ACCOUNTING AND ANALYTICAL SUPPORT FOR ECONOMIC POTENTIAL MANAGEMENT

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Abstract. The relevance of the study is conditioned by the need to strengthen the management function of an agricultural enterprise that focuses on the principles of sustainable development and aims to modernise accounting and analytical support for managing economic potential. The purpose of the study is to form a strategy for the desired improvement of accounting and analytical support of the enterprise with an emphasis on: reporting on sustainable development; expansion of the analytical complex of indicators of economic potential, capacity and performance of an agricultural enterprise; improvement of accounting and analytical support of enterprises using this information model through updating the documentation of control and audit. The theoretical and methodological basis was formed by scientific methods based on the dialectic of knowledge and objective laws of the development of the economy, nature, and society. Economic and mathematical modelling, systematisation and synthesis helped to develop a strategy to improve accounting and analytical support for managing the economic potential of agricultural enterprises, taking into account the principles of sustainable development. This type of modelling can help to effectively modernise accounting and analytical support for managing the economic potential for agricultural enterprises. The developed information model of selective adaptation helps managers of various levels to monitor the implementation of business processes for improving accounting and analytical support for economic potential management, assess the degree of achievement of priority goals and compliance with the principles of sustainable development. One of the steps of long-term modernisation of accounting and analytical support for agricultural enterprises through the introduction of sustainable development reporting is proposed, which should include indicators and documents on managing the economic potential, economic capacity, and performance of agricultural enterprises. The advantage of this information model is the ability to calculate the complexity index of transformation of accounting and analytical support for economic potential management using the principles of sustainable development, which shows the level of complexity of future modernisation of these aspects

Keywords: economic power, efficiency, enterprise potential, agricultural production, agricultural organisations, agricultural sector



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INTRODUCTION

The process of shifting the priorities of agricultural production towards the principles of sustainable development covers more and more large and medium-sized agricultural enterprises in Ukraine. This thesis is confirmed, in particular, by the fact that information about the environmental and social activities of the enterprise appears in such reporting documents as the "Annual report" or "Management Report", as well as independent internal and external socio-environmental management reports. At this stage of development of the reporting system in Ukraine, there are clear standards for financial reporting: the composition of indicators, structure, metrics, etc. Therefore, reports related to aspects of sustainable development are classified as management non-financial reporting.

Speaking about the latest studies on the topic of non-financial reporting, in the context of sustainable development, there is an increase in the number of publications. In particular, it is worth noting the study by J.R.R. Tolkien., C.T. Oyadomari, B. Duque, E.K. Nisiyama, R.G. De Dultra-De-Lima, O.R. Mendonça Neto [1], which analysed the impact of the quality of non-financial reporting on management's perception of information and management decision-making. A similar study was conducted by W. Klinphanich [2], which determined the impact of the corporate governance reporting on the effectiveness of decisions made by an independent board of directors. Of particular note are such authors as N. Jaffar, A.S.M. Nor, Z. Selamat [3], C. de Villiers, E.R. Venter, P-C.K. Hsiao [4], whose work was devoted to the problems of integrated reporting, in particular its impact on increasing transparency, confidence, and value creation. The problems of economic potential and corporate social responsibility are considered in the works of Ukrainian scientists: T. Gagalyuk, V. Valentinov, F. Shaft [5], O.Yu. Yermakov [6], V.K. Savchuk [7], V.V. Prohorova, O.B. Bozhanova [8], L.M. Taranyuk [9].

Considering the problems of developing accounting and analytical support for managing the economic potential of agricultural enterprises, it can be noted that in the case of liberalisation of financial reporting forms, such data as integral indicators of economic potential and economic power can be placed in such a financial report as Form No. 2 "Statement of financial results (statement of comprehensive income)". If the trend in the development of reporting of agricultural organisations in Ukraine is aimed at strengthening the components of non-financial reporting, then a separate report can be devoted to the problem under study, including as part of the sustainable development reporting.

The expansion of the composition of non-financial reporting to reflect the activity of the enterprise in the social and environmental planes is considered by large latifundists of Ukraine as an option to improve their own reputation since in foreign practice the stability and success of the enterprise are associated not only

with its economic indicators. The reputation of agricultural enterprises also depends on their use of technologies that harm the environment as little as possible. In addition, it is important to take care of local communities and their social needs. The need for such reports is also conditioned by the need for investment in Ukrainian enterprises, since investors are guided by an open business with minimal risky practices and production circumstances.

The purpose of the study is to form a strategy for the desired improvement of accounting and analytical support of the enterprise with an emphasis on reporting on sustainable development, expanding its analytical set of indicators of economic potential, capacity and effectiveness of an agricultural enterprise, as well as improving accounting and analytical support of enterprises using this information model through updating the documentation of control and audit.

The aim of the study provides for the development of recommendations for improving accounting and analytical support for managing the economic potential of agricultural enterprises aimed at activating their economic, socio-environmental activities.

In order to establish accounting and analytical support for managing economic potential and economic capacity, a model of selective adaptation of improving such support is proposed. The developed model of managing economic potential and economic capacity in compliance with the principles (and reporting) of sustainable development will help to form an approximate composition of expenses of an agricultural enterprise depending on the size, complications of its current business conditions and strategic priorities, which wants to improve accounting and analytical support for its activities. If there are several options for implementing changes in business processes at the enterprise, managers need to assess the complexity of their implementation. Thus, an additional advantage of this approach is the ability to calculate the complexity index of transformation of accounting and analytical support for managing economic potential and economic capacity, taking into account the principles of sustainable development, which shows the level of complexity of future modernisation of these aspects. The proposed forms of working documents for conducting procedures for optimal control over the indicators of economic potential, economic capacity and economic effectiveness and their reflection in the sustainable development report (or similar documents) will help to identify inaccuracies or deliberate distortions of indicators and avoid negative consequences if such events are detected.

MATERIALS AND METHODS

The theoretical and methodological basis was formed by scientific approaches based on the dialectic of knowledge and objective laws of the development of the economy,

nature, and society. Economic and mathematical modelling, systematisation and synthesis helped to develop a strategy to improve accounting and analytical support for managing the economic potential of agricultural enterprises, taking into account the principles of sustainable development.

The classification of enterprises according to Article 2 of the law "On accounting and financial reporting in Ukraine" (Table 1) was used. In accordance with the requirements of the above-mentioned Law, a management report must be submitted and published by medium and large enterprises.

Table 1. Classification of the size of agricultural enterprises

Business categories	Classification criteria	
	Number of employees	Net income of the enterprise, euro (in UAH equivalent)
Microenterprises	up to 10	up to 700 thousand
Small enterprises	up to 50	up to 8 million
Medium-sized enterprises	up to 250	up to 40 million
Large enterprises	more than 250	up to 40 million

Source: [10]

According to the guidelines for drawing up a management report, it is recommended to create it in the following areas:

- 1) organisational structure and description of the company's activities;
- 2) performance results;
- 3) liquidity and liabilities;
- 4) environmental aspects;
- 5) social aspects and personnel policy;
- 6) risks;
- 7) research and innovation;
- 8) financial investments;
- 9) development prospects;
- 10) corporate governance [11].

The recommendations indicate that the list provided is not exhaustive, which allows managers of enterprises to expand it at will or as needed. This means that this instruction reveals the possibility of involving in such reporting a developed analytical set of indicators of economic potential, economic capacity and economic efficiency, which will effectively complement the business card of an agricultural enterprise for potential stakeholders. Due to the fact that the information model should be unified and contain possible options for improving accounting and analytical support for various agricultural organisations, it can be built using the principle of the "tree of goals (decisions)" method. This tool helps to determine possible directions for further development of the enterprise, or options for solving problems that arise during its activities [12].

A goal tree is a visualisation of relationships that reflects the division of the main objective into goals, tasks, and related individual actions. This tool can also be used by adding quantitative indicators that effectively complement the analysis process during decision-making. For the current model, the proposed tool is an opportunity to link the goals set with activities that need to be implemented in the framework of tactical planning [13, p. 136].

To strengthen the management function of an agricultural enterprise that focuses on the principles of sustainable development and aims to modernise the accounting and analytical support for managing economic potential and economic capacity, it is proposed to apply process-oriented management tools. This type of modelling can help to effectively modernise the accounting and analytical support for managing economic potential at agricultural enterprises. The proposed model helps managers of various levels to monitor the implementation of business processes for improving accounting and analytical support for managing economic potential and economic capacity, assess the degree of achievement of priority goals and compliance with the principles of sustainable development.

One of the steps of long-term modernisation of accounting and analytical support for agricultural enterprises through the introduction of sustainable development reporting is proposed, which should include indicators and documents on managing the economic potential, economic capacity, and performance of agricultural enterprises. To help agricultural producers, this study offers a model for improving accounting and analytical support for managing economic potential and economic capacity in compliance with the principles of sustainable development.

Model was tested in two agricultural enterprises. The main motivation for using the proposed model for the first mini-enterprise, farm "ORKHIDEYA-2006" was the desire of its manager to strengthen the composition of management tools, which has not changed for a long time, as well as to expand the array of business information about the enterprise with an emphasis on their environmental practices.

The next enterprise that decided to apply the developed model was the medium-sized agricultural enterprise LLC "Podillya+". The main goal of the policy of improving the accounting and analytical support of this enterprise is to develop a process for drawing up

a management report. In addition, it was decided to adapt the proposed idea of expanding the report with the help of an analytical set of indicators of economic potential, economic capacity, and economic efficiency.

RESULTS AND DISCUSSION

Development of an information model for improving accounting and analytical support for economic potential management

Since 2016, a new generation of modular standards for non-financial sustainable development reporting has been in effect, which are targeted by more than 5,000 companies from all over the world. 33 updated standards help to better adapt reports to the industry specifics of the enterprise, which is very important for agricultural producers. The largest agricultural holdings of Ukraine in 2018-2019, in accordance with the current legislation, reporting on various aspects of their activities in the form of a "management report" and other formats, including through the concept of sustainable development [14].

The current trend in management reporting on sustainable development is an increase in the integration rate of such reports, which may also mean the prospect of including indicators of economic power and economic potential in them. With an integrated management report rich in financial and non-financial information, which presents in detail and illustrates current achievements, the management model, the agricultural enterprise distinguishes itself favourably from its competitors. A structured description of the achievements and strategies of an agricultural producer in the economic, social and environmental spheres in the short and long term effectively reveals its real principles of operation and opens the way for cooperation with relevant partners and consumers [7].

In addition, the current harmonisation of Ukrainian legislation with European legislation is in favour of further development of sustainable development reporting in the context of structured reports with the inclusion of such management blocks as indicators of the agricultural enterprise potential. It was as a result of the activation of the harmonisation process that the management reporting was adapted for Ukrainian enterprises in 2018, which allowed Ukrainian companies to reveal their strengths to a wide range of users of management information [8].

High and stable indicators of the economic potential and economic capacity of the agricultural enterprise, its socio-environmental responsibility, designed in an optimal way and placed in the public domain for all interested – this is a tool for establishing an open and mutual dialogue with partners, investors, as well as local communities. The last point is particularly important for large and medium-sized agricultural producers in Ukraine, given the implementation of the first steps to lift the moratorium on the free sale of agricultural land. Small agricultural

enterprises also pay attention to non-financial reporting, since the open and understandable profile of the farm allows attracting the attention of cooperative activists, grant donors and public organisations, which are very important for small communities [6].

A separate issue of management and sustainable development reporting is its verification, i.e. verification by investors and auditors. Major agricultural producers of Ukraine have also begun to carry out the process of verifying such reports, in particular the "Astarta" agricultural holding [15; 16]. Verified non-financial reporting provides a significant competitive advantage for agricultural organisations, since important social and environmental aspects of their activities are certified by independent specialists. It minimises the possibility of information distortion to maintain an exceptionally positive image of the producer and attract promising investment projects.

It is worth noting that the presence of new types of reporting at the enterprise leads to such difficulties in the work of employees involved in its organisation:

- attracting additional resources for data collection and analysis and filling out new reporting forms;
- a large amount of data, reports on the management and sustainability of large companies can last more than 250 pages;
- the requirements for such reporting change dynamically depending on the tactical goals and strategic characteristics of the enterprise, and so on.

Since resources for full-fledged management reporting, including sustainable development reporting, are essential, small agricultural organisations, family and private farms need to make a balanced decision in order to join the new trend and not waste resources that would help in the main production.

Thus, taking into account previous studies, it is logical to assume that one of the steps of promising modernisation of accounting and analytical support for agricultural organisations is the introduction of sustainable development reporting. It may include indicators and documents on the management of the economic potential and economic capacity of agricultural enterprises. However, different agricultural producers have different requests for the accounting and analytical support system at their enterprises and can allocate different amounts of resources to meet such needs. Accordingly, managers should make an informed and balanced decision to improve the choice of reporting system. To help agricultural producers in the outlined range of tasks, this study offers an information model for improving accounting and analytical support for managing economic potential and economic capacity in compliance with the principles of sustainable development.

Substantiation of the choice of improving such accounting and analytical support is relevant, since the manufacturer of agricultural products should update it in such a way that the proposed changes in the future

will bring positive effects. In particular, this includes improving the management analytical activities of the enterprise, contacts with new partners, improved marketing of products and services through reaching a new level of information content of the enterprise's activities [17].

In the conditions of the current crisis, the search for new forms of management, in particular, measures to improve accounting and analytical support for managing economic potential and economic capacity with the involvement of the principles of sustainable development, can give the agricultural organisation a competitive advantage that will help to stand out among similar enterprises, attract additional investment and generate additional income by accumulating the effects of changes in production and management spheres of activity [18].

In the context of dynamically changing business conditions, the principles of balanced economic, environmental and social activities and, accordingly, inevitable changes in the accounting and analysis processes are indicated by active trends in the world economy regarding the greening of production and transparent management of business entities at various levels. The "Green" movement in agricultural production in Ukraine has been developing by the activists since the mid-1970s. In particular, the study highlights the activities of the manufacturing department "Agroecologiya" of the Shishatsky district of the Poltava Oblast, which conducted experiments with land cultivation techniques to reduce the negative impact on the soil [19].

And already in 2007-2010 in Ukraine, there was a massive spread of various alternative agricultural technologies aimed at reducing the use of pesticides and mineral fertilisers in crop production and aggressive drugs in animal husbandry. Farmers have also started using plant-based alternatives to chemical plant protection products. Among the most popular alternative agricultural technologies in Ukraine, organic, biodynamic, biological and natural technologies are being developed. As of 2020, there were 500 operators of organic agricultural production and sale of organic products in Ukraine [20, p. 63].

As for the transparency of agricultural enterprises' activities, as a result of the evolution of business conditions, the composition of management and non-financial reporting has expanded. As a result, Ukraine introduced recommendations, and after the pilot period, the obligation to disclose certain aspects of the activities of agricultural enterprises in the management reporting. The main purpose of implementing and developing this type of reporting is to supplement the annual reporting

with information that describes in detail the working conditions, location of production facilities, risks and other significant circumstances of the enterprise's activities.

The planned model of improving the accounting and analytical support for managing economic potential, as well as economic capacity with the involvement of the principles and reporting of sustainable development helps to reasonably form a strategy for changes in the agricultural organisation, which wants to improve the accounting and analytical support of its activities, depending on the size, complications of its current economic conditions and strategic priorities.

The overall process of improving the accounting and analytical support of agricultural enterprises can be represented in the form of a multi-level comprehensive transition from an outdated version to an updated one. This transition covers:

- identification of signs of agricultural organisation that are essential from the standpoint of regulation of updated aspects of accounting and analytical support;
- selection of the structure and content of changes in accordance with the goal of improving the accounting and analytical support of agricultural enterprises;
- selection of forms for implementing planned changes, in particular, software [8].

Accordingly, the proposed model for improving accounting and analytical support for economic potential management in compliance with the principles of sustainable development will have the following comprehensive direction of improvement: introduction of a set of indicators of economic potential, economic capacity and economic effectiveness within the framework of the introduction of sustainable development reporting, in particular the management reporting. This information model will include the following stages of decision-making on accounting and analytical support:

- filter according to the size of the enterprise and determination of the need for a management report;
- number of areas to disclose in the management report;
- option to attract the developed set of indicators of economic potential, economic capacity, and economic efficiency;
- creation of internal analyst working papers on reporting on sustainable development and indicators of economic potential, economic capacity and economic efficiency;
- form of implementation of innovation;
- terms of adaptation of improvements [5].

A graphical view of the information model is shown in Figure 1.

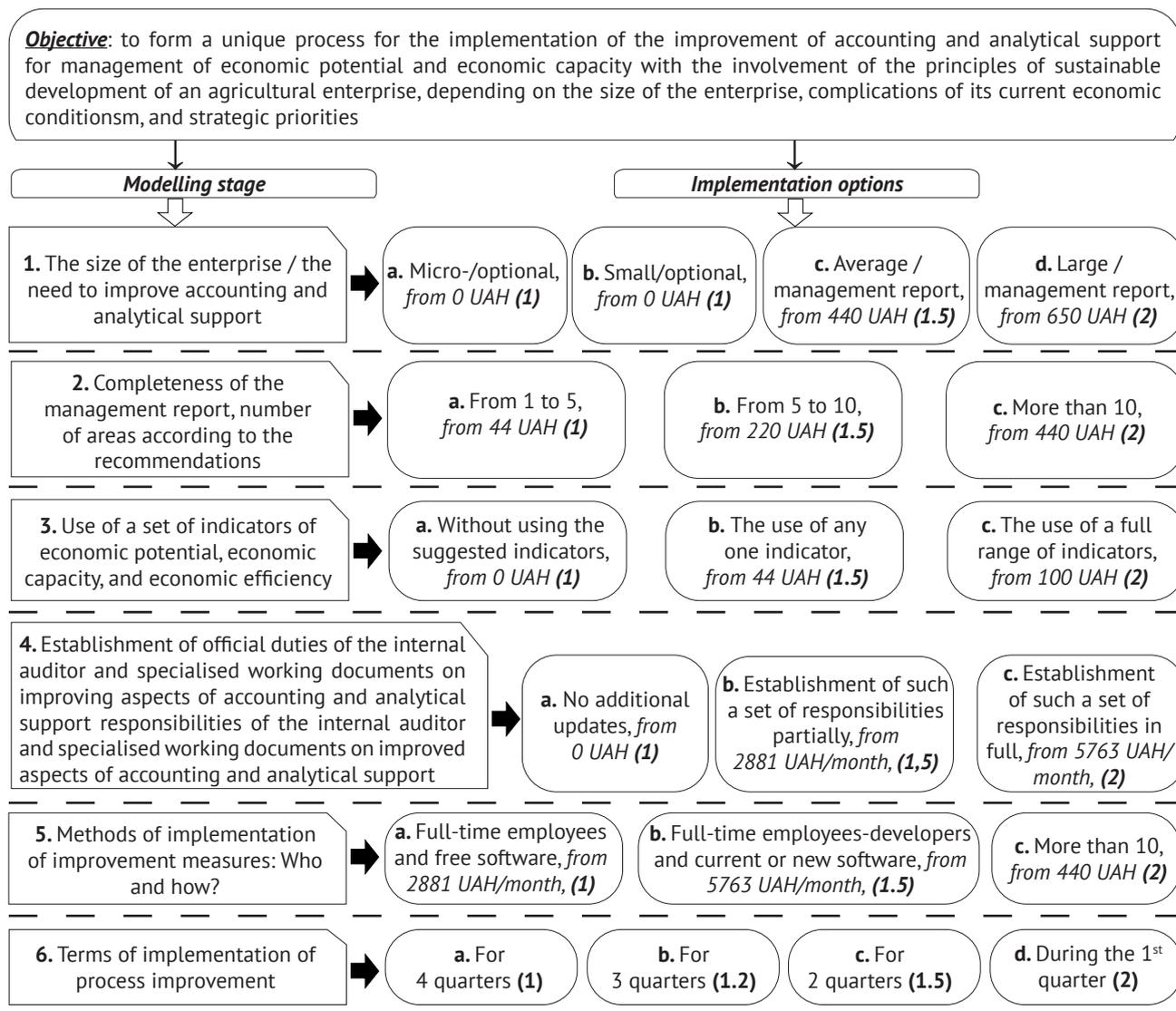


Figure 1. Structure of the information model for improving accounting and analytical support for managing economic potential and economic capacity with the involvement of sustainable development reporting

When implementing the proposed information model for the needs of the current study, the following decision-making stages and possible options were obtained:

- at the stage of filtering the studied enterprises according to the size of the enterprise and establishing the need to draw up a management report, you can offer 4 options to choose from: microenterprises or small agricultural formations that voluntarily introduce updates to the accounting and analytical support of their activities, as well as medium or large enterprises, as well as those that, according to the current legislation, must update it;
- according to the guidelines for filling out a management report, there is an approximate list of 10 areas that enterprise managers need to disclose in such a report, but it is not final and enterprises can add other information. And enterprises that make up this report on their own will can choose only a few areas from the proposed list. As a result, this stage will have the following options: from 1 to 5; from 5 to 10; and more than 10 areas;

- at the next stage, it is necessary to choose whether the company will attract the developed set of indicators of economic potential, economic capacity, and economic efficiency in whole or in part;

- next, it is necessary to choose whether to create an additional business process for the internal controller (auditor) and specialised working documents on inspections of reporting processes on sustainable development and indicators of economic potential, economic capacity, and economic efficiency. At this stage, the options are no additional updates, creating a full or partial set of responsibilities and specialised documents;

- at the stage of implementing innovations, it is necessary to decide who will perform it and how: employees of the enterprise in free software, full-time employees-developers using current software, or outsourcing companies;

- depending on the content of measures to improve accounting and analytical support, such a process can take place over one, two, three or four quarters. Such

time periods are proposed due to the continuous nature of accounting, so the main set of updates should be performed without interfering with accounting and reporting processes [17].

In the presence of several options for implementing changes in business processes at the enterprise, managers need to assess the amount of resources needed for their implementation. Thus, an additional advantage of this information model is the ability to calculate the index of resource intensity of the process of improving accounting and analytical support for managing economic potential and economic capacity with the involvement of the principles of sustainable development (IP), which estimates the approximate amount of resources for future modernisation of these aspects. This index helps to navigate the scope of work at each stage of implementation of planned measures to improve the accounting and analytical support of the agricultural organisation and approximate the amount of resources for their implementation. Such an index is calculated by multiplying the coefficients shown in parentheses at the end of the description of each option.

These coefficients are determined based on the practical observations during the study. They have values from 1 to 2 for each option, and as a result of the calculation, an index from the minimum value can be obtained. It will be equal to 1, and up to the maximum, which will be equal to 64.

An index with a value from 1 to 12 indicates a low amount of resources attracted to implement the selected improvement strategy, an index value from 13 to 32 illustrates the average amount of resources attracted to implement such a strategy, and an index from 33 to 64 indicates a high amount.

The minimum level of complexity of implementing measures to improve accounting and analytical support within the current model means that a mini-enterprise can partially use elements of the management report during the year and with minimal funds without indicators of the developed set of economic efficiency. In other words, the company can gradually update the reporting system over the course of a year, taking into account the principles of sustainable development, revealing up to 5 areas recommended by law with minimal monetary costs.

The maximum level of the index means that a large agricultural enterprise, in accordance with the requirements of the current legislation, makes a full management report, disclosing information in more than 10 areas, including those that were independently added by the managers of the studied enterprise. In addition, non-financial reporting will include indicators of economic potential, economic capacity, and economic efficiency. The implementation of such improvements should take place within one quarter by employees

of the outsourcing company at market prices. Intermediate values of the index indicate various options for implementing improvements in accounting and analytical support of the studied enterprises, which will be considered using examples during testing.

The mechanism of using the developed information model by the studied agricultural enterprises to form a plan for improving accounting and analytical support for managing economic potential and economic capacity with the involvement of the principles and reporting of sustainable development has certain features. First, an enterprise interested in updating its accounting and analytical support package must decide on the specific purpose of such an update, as well as the amount of resources that it can allocate for the implementation of improvements.

The range of material costs for implementing steps to improve accounting and analytical support was determined based on monitoring data on market prices, working time costs and the minimum wage in Ukraine as of the beginning of 2020.

At Stage 1, when determining the size of the enterprise, it can be found that the amount of expenses of this stage is affected by the fact that it is necessary to draw up a management report and the approximate minimum wage for drawing up sections of the report. The amount of expenses may consist of the minimum payment of the accountant's salary for 10 hours of work (according to the number of areas of the report), payment of the unified social contribution (ESC) and other expenses, in particular for electricity and software. The option with an initial cost level of 0 UAH means that the company may not update anything at the current stage, or the update may take place within the current accounting process without attracting significant additional costs.

At the second stage, the cost of completing the task is associated with the same factors as at the first stage. The costs that the company will incur at the third stage, as well as at the previous two, depends on the time during which the responsible employee will study the methodology, make calculations, and draw up documentation on a set of indicators of economic potential, economic capacity, and economic efficiency, the level of his salary, as well as other additional costs.

The implementation of the fourth stage of the developed model is associated with the emergence of a new list of job responsibilities in accounting and auditing areas, where the minimum amount of expenses is half of the minimum wage of an employee who will perform all tasks for conducting analytical procedures. In particular those related to reporting on sustainable development and indicators of economic potential, economic power, and economic efficiency, ESC and additional costs.

The implementation of the existing concept of improvement, which was chosen by the company, is the fifth stage of the model of improving accounting and analytical support, which is being developed. The amount of costs that the enterprise will incur at this stage of the model may be the largest in the framework of its implementation process. Audit and control procedures are extremely important for maintaining the quality of accounting and analytical support for agricultural enterprises, so the cost of professional work and modern software is high. Thus, the costs of this stage include the salaries of professionals and modern software for performing work, drawing up final reports on the results of inspections. According to the results of market monitoring, the services of outsourcing companies can be the most expensive option for implementing improvements [9].

The last stage of the model is not directly related to monetary costs, but it indicates the time of implementation of changes, which means the intensity of resource outflow for the implementation of such changes. Focusing on the pace and structure of the work of most accounting services of agricultural organisations in Ukraine, it was decided that the most intensive improvement can be completed in one quarter, and the longest – in four. But in practice, such terms of implementation of the project to improve accounting and analytical support may change, since the enterprise operates in constantly changing conditions.

This information model was presented by various agricultural entities that are planning or have already taken into account the sustainable development goals, and are also trying to improve their own market positions not only at the expense of the production component. Aspects of accounting and analytical support for economic potential management also interested enterprise managers, in particular as another area of information disclosure in the management report. To test the developed model the studied enterprises used the following mechanism for its use:

- establishment of the company's goal in the context of improving its accounting and analytical support system;
- establishment of a strategy for implementing the improvement of its accounting and analytical support system in accordance with the established goal, using the proposed model;
- implementation of the selected strategy and its adjustment as needed.

Information model for improving accounting and analytical support for managing the economic potential of small farms "ORKHIDEYA-2006"

After getting acquainted with the details of modeling, which coincides with the development interests of several enterprises studied, managers tried to use this model to plan updates to their accounting and analytical systems.

The main motivation for using the proposed information model for the first mini-enterprise, farm "ORKHIDEYA-2006" was the desire of its manager to improve the composition of management tools, which has not changed for a long time, as well as to expand the array of business information about the enterprise with an emphasis on their environmental practices.

The main areas of activity of this enterprise are crop production, provision of services and advice in the field of agronomy, selection of grain and vegetable crops. Accounting and control procedures were carried out by a part-time manager and accountant, since the number of operations at the enterprise is small, except for seasonal peaks that are traditional for growing grain and vegetable crops. An important aspect of the work of this farm is the involvement of alternative technologies in the cultivation of vegetables: the absence of mineral fertilisers and the use of plant protection products of natural origin. It is this aspect that has led to the need for additional analytical tools and publication of the results of greening the company's activity.

Reformulating such a request within the framework of the proposed model, the goal of the strategy for improving the accounting and analytical support of a small agricultural enterprise was obtained: to additionally analyse activities using an indicator of economic potential and regularly publish the results of the analysis and features of activities in a publication similar to a management report. The manager does not want to draw up a full-fledged management report, since according to the law, his company does not have such an obligation, and accordingly, there is no need to spend resources on a full-fledged report. In addition, there is a need to create forms for analysing and monitoring the indicator of economic potential, which will be performed by the manager independently. The report on the ecological and economic features of production will be compiled by a full-time accountant. As a result, the following model for the small farm "ORKHIDEYA-2006" is obtained (Fig. 2).

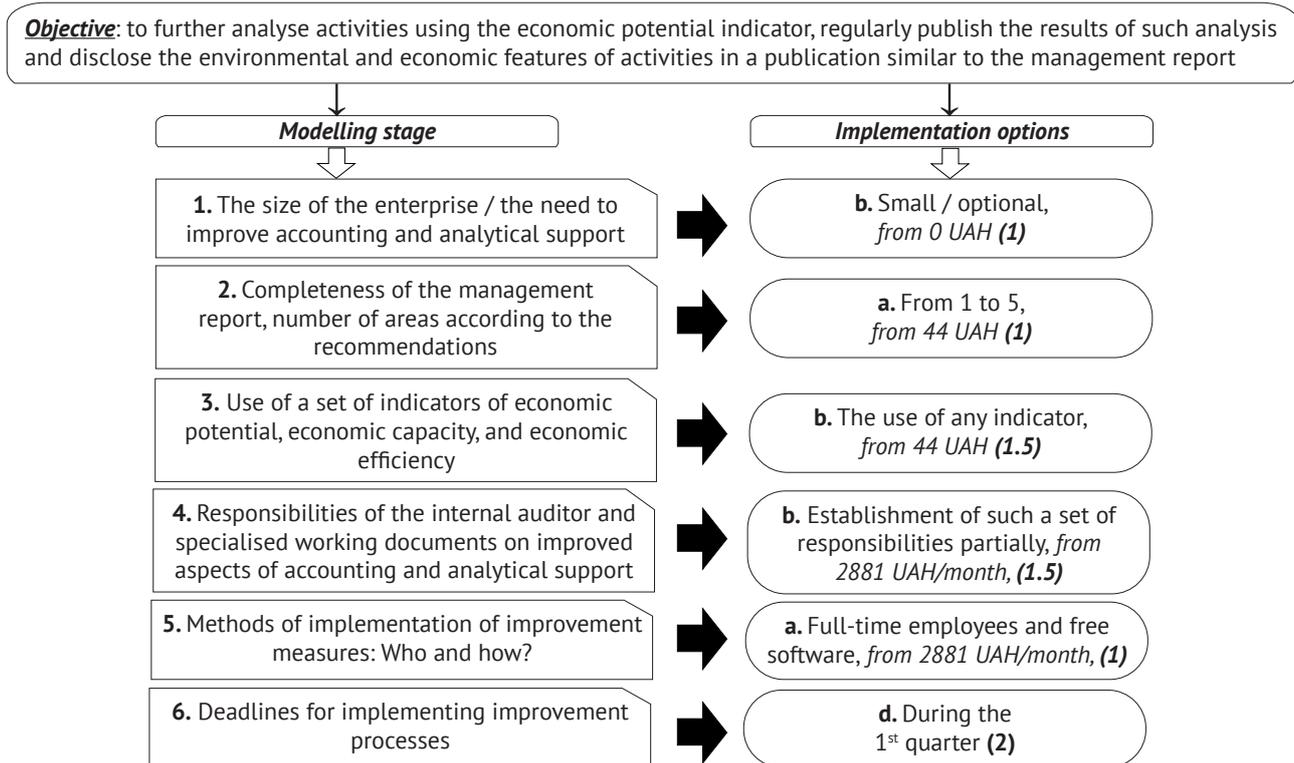


Figure 2. Information model for improving accounting and analytical support for economic potential management with the involvement of the principles of sustainable development, developed by the author for small farm "ORKHIDEYA-2006"

Source: developed by the author of this study

The combined strategy for improving accounting and analytical support for economic potential management with the involvement of the principles of sustainable development, developed for the small farm "ORKHIDEYA-2006" has the following form:

$$1b-2a-3b-4b-5a-6d,$$

and Index:

$$I_p = 1 \times 1 \times 1.5 \times 1.5 \times 1 \times 2 = 4.5;$$

which indicates a relatively small amount of resources attracted for the implementation of the planned improvement in accordance with model 2.

As for the costs of such an update, the main part of them will be spent on the accountant's salary, contributions to state funds, and utility costs, since the company already has accounting software suitable for the planned changes. According to preliminary estimates, such expenses amount to no more than UAH 175 per working day (or no more than UAH 3,500 per month, provided that there are 75-100 operations per month).

The results of such improvement, in accordance with its goal, should be to improve the image and identify reserves for strengthening the potential of the enterprise. Conclusions on the results of improvement will be drawn after the end of the production cycle of the enterprise, conducted with changes. It was decided to limit the implementation period of these changes to one quarter, since, according to the outlined plans, this time is sufficient to implement the planned improvement of accounting and analytical support.

Information model for improving accounting and analytical support for managing the economic potential of LLC "Podillya+"

The next enterprise that decided to apply the developed model was the medium-sized agricultural enterprise LLC "Podillya+". This company uses about 5 thousand hectares for growing such cereals and oilseeds as wheat, sunflower, barley, and rapeseed. In addition, the company is engaged in poultry farming. Taking into account the requirements of the law of Ukraine "On accounting and financial reporting in Ukraine", this company must prepare and publish a management report, which has already been done in 2020, but the process of forming such a report still has shortcomings.

The main goal of the policy of improving the accounting and analytical support of this enterprise is to develop a process for drawing up a management report. In addition, it was decided to adapt the proposed idea of expanding the report with the help of an analytical set of indicators of economic potential, economic capacity, and economic efficiency. This format of the management report will help not only to effectively present the company's work, but also to demonstrate the levels of potential and capacity of the agricultural enterprise (Fig. 3).

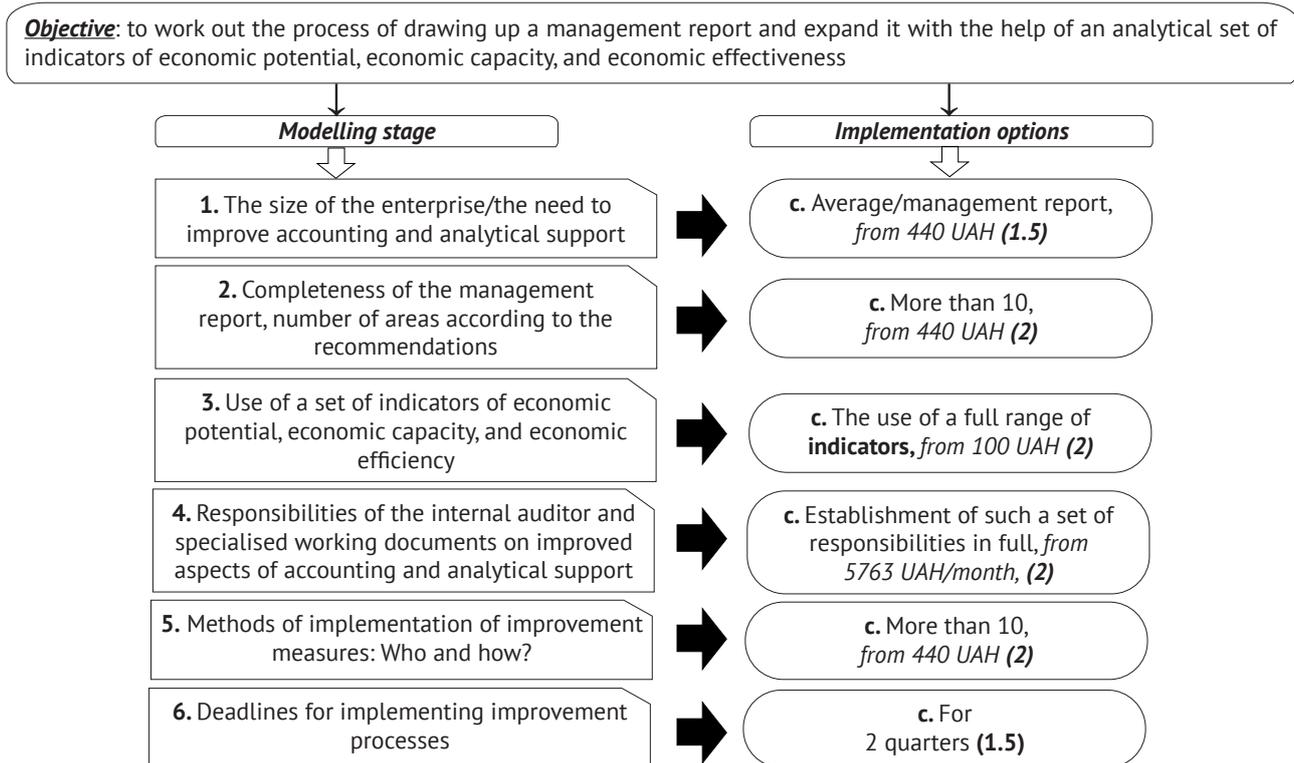


Figure 3. Information model for improving accounting and analytical support for economic potential management with the involvement of a sustainable development reporting, developed by the author for a medium-sized agricultural enterprise LLC "Podillya+"

Source: developed by the author of this study

The developed strategy for improving accounting and analytical support with the establishment of an updated management report within the model has the following form (the number is a step of the strategy, and the letter is a variant of its implementation):

$$1c-2c-3c-4c-5c-6c,$$

and the resource intensity index of this model:

$$I_p = 1.5 \times 2 \times 2 \times 2 \times 2 \times 1.5 = 36;$$

which indicates a high amount of resources required to implement the planned improvement in accordance with Model 3.

Since the enterprise under study is medium-sized with several production areas, accounting and control is handled by a separate accounting service consisting of four employees.

Every year, the company orders an external audit of its financial statements and publishes an audit report. Since the management report is not part of such reporting, the auditors disclosed information about such a report very briefly in the "Other information" section of the report. When compiling the management report in 2020, it was decided to order auditors to check the results of accounting and control operations disclosed in it. That is, the oriented amount of expenses for the development and implementation of improvement measures in accordance with the accounting and analytical support model consists of the costs of analysing and monitoring a set of indicators, their involvement in the updated management report, as well as the costs of the

audit. In addition, it is necessary to develop the concept of disclosing the necessary areas of the management report. Therefore, the following amount of work will be carried out: data analysis and control by an additional part-time accountant, which is about 7,500 UAH per month, as well as a range of services from the audit office in the amount of about 2,000 UAH in addition to the main fee for the annual audit. The structure of the management report will be finalised by an outsourcing company for UAH 3,600 (since the main body of work on developing the structure of such a report was already completed last year).

CONCLUSIONS

The developed information model of selective adaptation of accounting and analytical support for managing economic potential based on the principles of sustainable development reporting helps to reasonably form the approximate composition of expenses of an agricultural enterprise depending on the size, complications of its current business conditions and strategic priorities. If there are several options for implementing changes in business processes at the enterprise, managers need to assess the complexity of their implementation. Thus, an additional advantage of this approach is the ability to calculate the complexity index of transformation of accounting and analytical support for managing economic potential and economic capacity, taking into account the principles of sustainable development, which

shows the level of complexity of future modernisation of these aspects.

Therefore, it can be concluded that the proposed information model helps to form a strategy for the desired improvement of accounting and analytical support of the enterprise with an emphasis on sustainable development

reporting, expanding it with an analytical set of indicators of the economic potential, capacity and effectiveness of an agricultural enterprise. A separate issue of improving the accounting and analytical support of enterprises using this information model is updating the paperwork on control and audit.

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ІНФОРМАЦІЙНА МОДЕЛЬ УДОСКОНАЛЕННЯ ОБЛІКОВО-АНАЛІТИЧНОГО ЗАБЕЗПЕЧЕННЯ УПРАВЛІННЯ ЕКОНОМІЧНИМ ПОТЕНЦІАЛОМ

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Анотація. Актуальність дослідження пов'язана з необхідністю посилення управлінської функції сільськогосподарського підприємства, яке орієнтується на принципи сталого розвитку і хоче модернізувати обліково-аналітичне забезпечення управління економічним потенціалом. Мета наукової роботи заключається в формуванні стратегії бажаного удосконалення обліково-аналітичного забезпечення підприємства з акцентом на звітність зі сталого розвитку, розширивши її аналітичний комплекс показників економічного потенціалу, потужності та результативності сільськогосподарського підприємства, а також удосконаливши обліково-аналітичне забезпечення підприємств за допомогою даної інформаційної моделі через оновлення документального оформлення контролю та аудиту. Теоретико-методологічну основу склали наукові методи, що базуються на діалектиці пізнання й об'єктивних законах розвитку економіки, природи і суспільства, економіко-математичне моделювання, метод систематизації та синтезу допомогли розробити стратегію з удосконалення обліково-аналітичного забезпечення управління економічним потенціалом сільськогосподарських підприємств з врахуванням принципів сталого розвитку. З'ясовано, що такий тип моделювання може допомогти ефективно модернізувати обліково-аналітичне забезпечення управління економічним потенціалом для сільськогосподарських підприємств. Розроблена інформаційна модель селективної адаптації допомагає управлінцям різних рівнів здійснювати контроль за реалізацією бізнес-процесів удосконалення обліково-аналітичного забезпечення управління економічним потенціалом, оцінювати ступінь досягнення пріоритетних цілей і дотримання принципів сталого розвитку. Запропоновано один із кроків перспективної модернізації обліково-аналітичного забезпечення аграрних формувань через запровадження звітності зі сталого розвитку, що має включати показники та документи з управління економічним потенціалом, економічною потужністю та результативністю сільськогосподарських підприємств. Перевагою даної інформаційної моделі є можливість розрахунку індексу складності трансформації обліково-аналітичного забезпечення управління економічним потенціалом із залученням принципів сталого розвитку, який показує рівень складності майбутньої модернізації зазначених аспектів

Ключові слова: економічна потужність, результативність, потенціал підприємства, сільськогосподарське виробництво, аграрні формування, аграрний сектор