Investment activity in conditions of automation use of budgeting system

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Abstract. The search of investments and ensuring their effective use is a problem in the agro-industrial complex. The structure of resources attracted to Russia by industries requires improvement. The main reason for this situation is the lack of an effective system of incentives to attract investment, their protection, guarantees of high-efficiency use and insurance. From these positions, in our opinion, the system of organization of production, accounting, control, budgeting of investment processes is of particular interest. Automation of budgeting in agro-industrial organizations will allow providing production efficiency and producing of competitive products. We suggest using the “1C: ERP Enterprise Management” application solution on the “1C: Enterprise 8” platform. This software product was tested in CJSC Glinki of the Kurgan region. Basic budgets were drawn up and financial reports were generated in an automated mode. According to the proceeds from the sale of a number of products, the deviation of the plan from the fact was not more than 5%. When building budgeting at the enterprise, the analysis of deviations of the budget items actual values from those planned showed that the permissible threshold was not exceeded. So, the work done on automation of budgeting with the help of a software product has brought a positive effect. We analyzed the economic effect of the software product according to public data for 2018 on 136 published implementation projects with economic indicators confirmed by 1C clients. There is a tendency to increase one or another indicator for all the criteria presented.

1. Introduction
The main purpose of investment policy of the organizations is to create conditions for effective investing and implementation of investments in the economy of industry [1]. Investments, which, besides to the risk fee, allow getting an acceptable economic benefit, understand as effective investments. The main criterion for the investor is the expected return on invested capital in comparison with the degree of risk [2, 3].

Investment activity in the Agro-industrial complex of the Kurgan Region requires growth. The priority investments in the region are those that enhance the access of the Kurgan Region to various export markets; introduce new technologies; create jobs for highly qualified staff; increase economic returns from the natural resources usage; improve economic infrastructure; develop links between economic entities of the Kurgan Region and research institutions; develop regional science and education system and other criteria [4, 5].

In February 2017, the state program of the Kurgan Region “Development of Agro-industrial complex in the Kurgan Region” was approved. The total amount of budget financing of the Program will amount to 3.3 billion rubles in 2017–2020, including 631 million rubles in 2018.
It is also necessary to identify more sources of investment. The state policy of attracting investments in the Agro-industrial complex industries bases on the need to solve such a goal function as the use of limited budget funds for its development [6,7]. For example, the possibility of attracting investment in the processing sector will have a positive impact on agricultural producers, as they provide the necessary resource base for the Agro-industrial complex as a whole [8, 9].

The basis of the economic growth of the organization is the development of innovations, the organization of account, the introduction of a budgeting system, the control and analysis of the investment processes effectiveness, the use of information technologies [10, 11]. Budgeting should be given an important place in the investment management system. Budgeting is a system that includes the integrated usage of budget planning elements, accounting for budget indicators, budgetary control of resources, activity results of financial responsibility centers and the organization as a whole, based on information, receiving from internal and external sources, and allows you to get a report on the execution of budgets, to conduct a budget analysis in order to make management decisions based on multivariate models (including transaction costs) [12, 13].

An important place in the system belongs to budget planning, from which, in essence, budgeting begins. Automation of the budgeting system in the organizations of the Agro-industrial complex is a problem today. From this point of view, the goal of the work is to analyze the use of the “1C: ERP Enterprise Management” configuration on the “1C: Enterprise 8” platform for budget planning.

2. Materials and methods

The budget planning process begins with forecasting the production and sales volumes for the coming period (year). The structure of budgets is formed on this basis.

The “1C: ERP Enterprise Management” application solution (configuration) on the “1C: Enterprise 8” platform is quite a powerful automated tool for budget planning, analysis and management at the enterprise [14].

In particular, this configuration allows you to: make budgets of various types on the basis of a universal or individual budget model; form budgets taking into account various options for the financial condition of the enterprise; apply generally accepted techniques of budget data formation; control the compliance of planned or actual indicators with established target values; conduct a multidimensional analysis of budget execution by articles, centers of financial responsibility, projects and other analytic measurements, identify deviations in absolute (monetary) and percentage terms; compare the actual data of several periods, thus analyzing the dynamics of changes in the financial condition of the enterprise; form the management balance of the enterprise; analyze planned or actual data for any period on the basis of groups of financial indicators for the following areas: liquidity and solvency, asset and liability turnover, yield and profitability of financial and economic activities, capital use efficiency; perform calculations of indicators of an arbitrary type based on planned or actual data[15].

You can create a structure of various budgets in the configuration “1C: ERP Enterprise Management”. For example, the revenue and expenditure budget (it is also called the “financial budget”) is the budget, which shows the ratio of the expected income from products sales with the expenses that the enterprise intends to incur in the budget period. The revenue and expenditure budget is usually compiled for the enterprise as a whole, and besides that, it can be compiled for individual business units, lines of business.

The difference between the income and expenses parts of the revenue and expenditure budget shows the intended financial result of the enterprise (profit or loss) in the budget period.

By entering budget items and budget accounts, the program actually defines the budget structure; it determines which lines will be present in the report and the order of these lines. The basis of the revenue part of the budget is the proceeds from the sale of products, and the expenditure part is the expenses that form the production cost of goods sold, commercial and administrative expenses.
“The budget report” is used in the configuration for enterprise budgets formation. Budgets are formed in the shape of reports on the basis of data entered on the items of turnover. Thus, using the same report, you can get both budgets themselves and the actual data report.

The next budget that can be generated in the configuration is the cash flow budget. This budget is needed to determine the size and structure of the receipt and expenditure enterprise funds in the budget period, as well as their distribution in time.

Just as the revenue and expenditure budget, the cash flow budget has the income and expenses parts. Therefore, when forming the structure of the cash flow budget in the “1C: ERP Enterprise Management” configuration, it is necessary to organize two groups: “Cash inflow” and “Cash write-off” in the list of articles.

The basis of the enterprise cash receipts are the receipts from buyers and customers for the sold products. The amount of these receipts can be determined by calculation, depending on the volume of proceeds and the terms of the contractual relationship with customers.

Having established in the configuration the dependence of the receipts from the buyers on the revenues, we get an automatic calculation of the turnovers for the corresponding items of the cash flow budget immediately at the moment of the input of the revenue data. Similarly, it is possible to organize data entry on other income and expenses items of the cash flow budget (on payment to suppliers, on labor payment, on taxes) in 1C: ERP Enterprise Management.

It should be noted that it is necessary to determine the posting on budgeting accounts for all the items of turnover that are present in the cash flow budget in order to calculate the planned cash balances correctly. Only in this case, you can see adequate planned balances in the cash accounts.

The program generates a report “Financial analysis of budgeting data”, which shows (reflects): the balance sheet of the company, the analysis of the liquidity and solvency of the company, or a profit and loss statement; analysis of asset and liability turnover; analysis of yield and profitability of financial and economic activities; capital efficiency analysis; the current period profit and the other periods profit comparison.

All the above data can be obtained both according to the plan (budgets) and according to the actual data. In particular, with the help of the report “Financial analysis of budgeting data” you can get both the balance sheet budget and the enterprise's balance sheet according to the actual data of management accounting.

When constructing budgeting at the enterprise, it is necessary to foresee and construct a system of monitoring budget execution. It consists not only in the timely presentation of budget data and the creation of budgets, but also in the analysis of deviations of the actual values of budget items from the planned ones. Appropriate management decisions are made on the basis of deviations analysis. The level of acceptance of these decisions depends on the deviation magnitude (for example, 5%, 10%, etc.), and this should be reflected in the regulations [12].

3. Implementation of ERP class configuration
An ERP class software product was tested in CJSC Glinki of the Kurgan region. Basic budgets were drawn up and financial reports were generated in an automated mode. According to the proceeds from the sale of a number of products, the deviation of the plan from the fact was not more than 5% (Table 1).

Table 1. Approximate format of reporting on the sales budget execution for the 1st quarter of 2018

| Product                      | Revenue, a thousand rubles | plan | fact | %  |
|------------------------------|-----------------------------|------|------|----|
| Milk 3.2% fat                | 2250                        | 2181 |      | +3 |
| Milk 2.5% fat                | 418                         | 446  |      | +5 |
| Kefir 2.5% fat               | 590                         | 803  |      | +3 |
| Sour cream 20% fat           | 1242                        | 1286 |      | -3 |
| Subtotal                     | 4613                        | 4831 |      | +4 |
When building budgeting at the enterprise, the analysis of deviations of the budget items actual values from those planned showed that the permissible threshold was not exceeded. So, the work done on automation of budgeting with the help of a software product has brought a positive effect.

The current trend in the field of information support for processes in the enterprise, including budget planning processes, is the introduction of an ERP class information system.

Choosing an ERP solution is an extremely difficult and complex task that requires a serious organization examination and a clear formulation of the corporate information system requirements.

Currently, the market of software products presents a variety of solutions fully or partially implementing the automation of budgeting and management accounting tasks.

To decide whether to implement an ERP-system, a preliminary assessment of the economic effect that will be obtained as a result of this implementation is usually required. Since quantitative assessment is difficult to determine, experts are trying to use the following qualitative characteristics to justify the need for a future ERP project: increasing business transparency; improving the quality of management decisions; reduction of the reports preparation period.

A preliminary assessment of the effectiveness makes it possible to calculate the budget of a future project and assess all the resources that will be required for its implementation.

Standard indicators for assessing the economic effect of an IT-project are: net present value; internal rate of return; payback period; discounted cash flow.

The economic effect of the ERP-systems introduction is estimated by indicators of revenue growth. The economic effect of public data for 2018 on 136 published implementation projects with economic indicators confirmed by 1C clients is presented in Table 2. There is a tendency to increase one or another indicator for all the criteria presented.

### Table 2. Economic effect of the ERP-solutions implementation on the “1C: Enterprise 8”

| Efficiency indicator                                      | Average value |
|----------------------------------------------------------|---------------|
| Reduction of material inventories volume                 | 24%           |
| Reduction of material resources costs                    | 17%           |
| Reduction of manufacturing costs                         | 16%           |
| Reduction of let out production cost price               | 9%            |
| Increase in volume of let out production                 | 36%           |
| Labor productivity growth in production                  | 33%           |
| Growth of warehouse stock turnover                       | 28%           |
| Reduction of receivables                                | 22%           |
| Acceleration order processing                            | 75%           |
| Reduction of order execution times                       | 26%           |
| Reduction operating and administrative costs             | 17%           |
| Profit growth                                            | 14%           |
| Reduction labor costs in various departments             | 29%           |
| Acceleration the management reporting receipt            | 2.9 times     |
| Acceleration regulated reporting preparation             | 2.8 times     |

### 4. Conclusion

Besides to using the functions of the enterprise resource management system itself, cost reduction and revenue growth of an enterprise also occurs through successful reorganization of business processes and increased control. The economic effect will be the most noticeable with the most efficient use of the implemented ERP-system. ERP is the most important factor of positive changes and improvements in the work of the enterprise, allowing achieving a powerful economic effect.

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