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## THE INTERRELATION OF A COMPANY'S BUDGET EXECUTION CONTROL SYSTEM AND MOTIVATION SYSTEM

### ВЗАЄМОЗВ'ЯЗОК СИСТЕМИ КОНТРОЛЮ ВИКОНАННЯ БЮДЖЕТУ КОМПАНІЇ ІЗ СИСТЕМОЮ МОТИВАЦІЇ

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*Давидюк Т.В., Чижевська Л.В., Кузнецова С.О. Взаємозв'язок системи контролю виконання бюджету компанії із системою мотивації. Науково-методична стаття.*

У статті визначено перелік бюджетних показники, що підлягають обов'язковому контролю, встановлено алгоритм розробки ефективної системи мотивації працівників підприємства, проаналізовано взаємозв'язок бюджетних цілей, визначених власниками компанії та показниками для конкретних структурних підрозділів. В контексті розробки системи стимулювання для працівників підприємства запропоновано структуру щомісячної оплати праці кожного співробітника у відповідності до системи бюджетування, що представлена у вигляді трьох складових. На прикладі структурних підрозділів торговельної компанії представлено перелік ключових показників, що дозволяють оцінити їх ефективності за результатами року. Встановлено перелік проблем, з якими може зіштовхнутися керівництво підприємства у процесі розробки системи ключових показників.

*Ключові слова:* бюджетування, система мотивації, контроль виконання бюджету, управлінський облік, планування, преміювання

*Davyduk T.V., Chyzhevska L.V., Kuznetsova S.O. The Interrelation of Company's Budget Execution Control System and Motivation System. Scientific and methodical article.*

The article defines the list of budgetary indicators subjected to mandatory control, establishes an effective developing motivation system for an enterprise employees, and analyzes the relationship between budgetary goals determined by the enterprise owners and the indicators for the specific structural units. In the context of developing the labour incentive system for the enterprise employees, proposes the structure of the monthly salary for each employee in accordance with the budgeting system which is presented in the form of three components. Using the example of structural divisions of a trading company, a list of main indicators is given, which allows to evaluate their efficiency based on the results of the year. A list of problems that the enterprise management may face in the process of developing a system of key indicators has been established.

*Keywords:* budgeting, motivation system, budget execution control, management accounting, planning, awarding

The budgeting system is not only an important tool for implementing the company's strategy but also a flagship of its success. The strategic goals formulated by the enterprise owners and managers determine which indicators will be included in the budgets. For the company in the budgeting system, the process of planning budget indicators is important, and the extent to which the budgets are justified, realistic, and achievable. However, it is important for the company management to monitor the budgets implementation, to know the reasons for the actual indicators deviations from the planned ones, to be able to explain them.

In order for the budget execution control system to be full-fledged, it is necessary to develop the system of motivating the company's employees for the planned indicators fulfillment. That is why the study of the relationship between the company's budget execution control system and motivation system is relevant, as it affects the increase of employee's interest in the company's activities results.

#### Analysis of recent research and publications

Both domestic and foreign scientists were engaged in the study of theoretical aspects of the enterprise budgeting system. Thus, in S.I. Tsiolkovskaya's study [1] among the main budgeting functions of agribusiness enterprises, such as forecasting the activities results; resources allocation; activities coordination; authorization; activity results

evaluation; analysis and control of activity efficiency, staff motivation was also highlighted. Studying the budgeting organization at the enterprise A.V. Tirynova established in her research that budgeting makes it possible to motivate employees to implement budgets [2]. T.P. Basiuk conducted a quite timely study of theoretical aspects of the budgeting process at food industry enterprises in the conditions of the martial law economy [3]. V.M. Namiashenko, studying aspects of improving the enterprises efficiency, emphasizes the budgeting problems [4]. The study conducted by O.V. Storozhuk and O.V. Zaiarnik is very interesting in terms of studying issues related to the company's staff motivation in the context of building a talent management system [5]. Yenni Carolina's publication analyzed the budgeting practice of banking sector companies from the viewpoint of impact on the employees' motivation and analyzed the impact of the employee's motivation on the budget indicators performance [6]. Foreign scientists conducted the study of functional relationship between budgetary approaches and employee motivation in the Nigerian hospitality industry [7].

### Unsolved aspects of the problem

Despite numerous publications on the budgeting system as a component of the enterprise management accounting, the practical aspects of evaluating the budget execution control system and its impact on the enterprise personnel motivation system require further research.

*The aim of the article is* to determine the list of indicators that are subject to budgetary control in the enterprise budgeting system, to analyze the directions of introducing the motivation system through changing components of the enterprise employees' monthly remuneration in accordance with the budgeting system, to develop key indicators for evaluating the effectiveness of structural units in connection with the bonus fund of the enterprise.

### The main part

Budgetary indicators, which are subject to mandatory control by comparing the actually achieved values with the planned ones, can be divided into groups:

1. Resulting indicators of activity, the analysis of which will allow to establish whether the desired results were achieved by the company as a whole. This group of indicators includes sales revenue, cost of manufactured and sold products, net profit, as well as such basic production indicators as: volume and structure of production, percentage of completion of the production programme, volume of work-in-progress and finished products, etc.

2. Strategic indicators, the analysis of which will make it possible to establish whether the company's strategic goals have been achieved. However, the list of these indicators depends on the defined strategic goal, for example, if the company seeks to enter new sales markets, then the sales volume should be considered in terms of sales markets, and if the production expansion is planned, then it is worth

evaluating the amount of investment in the production expansion, the volume of manufactured products, including in terms of product types, etc.

3. Key factors, the analysis of which should be carried out every quarter, since even a slight change in them can significantly affect the company's performance. The list of these indicators depends on the type of enterprise activity, its strategy, and the chosen economic model. So, for example, we can talk about such indicators as the price of a certain type of raw material (for companies in the oil sector), exchange rates (for investment companies and organizations engaged in foreign economic activities), etc.

4. The most significant items of expenses and income of the enterprise budget. Attention should be paid to the budget items that make up a significant part of the total amount of the company's income or expenses. For example, a rule can be established: items whose volume is at least 10% of the amount of income or expenses are subject to control. Using the principle of large items, the company controls all budget items that are significant for it, without wasting time on insignificant indicators.

Every company has a system of its employees' motivation, in most cases such a system should not be complicated, since employees must understand the volume and quality of their work, which will allow them to receive the desired amount of remuneration. However, it should be noted that the employees' motivation system should also be closely interconnected with the budgeting system. The success of implementing the latter depends on the developed incentive system before the beginning of the process of planning the company's indicators for the budget period. It is a misconception that the motivation system should cover only production workers, because in this case, other workers will not be interested in improving their work results, and therefore, improving the company's efficiency as a whole will remain in the management's plans.

The motivation system development algorithm can be presented as follows:

- to plan indicators of operational budgets for all the enterprise units, and then for these units' employees, who are determined to be responsible for the formation and implementation of their units' budgets.
- in accordance with the planned indicators of operational budgets, to form a rewards scale for their implementation for the relevant units and all staff of these units;
- to establish a certain bonuses scale for administrative and management personnel, but in connection with the indicators performance of the enterprise financial budgets.

The developed employee motivation system linked to the budgeting system will be effective if, firstly, the budget indicators are achievable, and secondly, the proposed rewards system will be linked to the indicator of the company's profit amount.

An effective staff motivation system development should begin with a clear formulation of the budget

goals set by the company's owners, their detailing according to the functional responsibilities of the company's existing units, and end with the definition of criteria for the company's staff motivation system

development. An example of what target indicators can be formulated for a specific unit of the enterprise (using the example of a trading company) is given in Table 1.

Table 1. Budgetary Goals of the Company's Units for a Budget Year

Unit	Indicators
Purchasing department	Average delay of payments to suppliers (days)
Sales department	Product sales volume(thousand UAH), sales profitability (%), average payment delay from buyers (days), ratio of overdue receivables to product sales volume (%)
Logistics department	Commodity stocks turnover period (days), use of transport
HR department	Staffing (%)
Financial service	The ratio of operating expenses to revenue (%), the ratio of overdue receivables to the product sales volume (%),
Administration	The average cost of loans (thousand UAH), business profitability (%)

Source: authors' own development

There are no universal recommendations regarding the personnel motivation system, since such a system should take into account the industry specifics in which the enterprise operates, its financial capabilities, the average level of wages in the foreign labour market and, of course, the strategic goals of business development.

In order to increase the staff interest in the budget plans implementation, it is worth paying attention to the observance of the following principles:

- the wage growth dynamics in the company should not outpace the growth dynamics of its financial result;
- the planned indicators of the company's operating and financial budgets should be neither too low nor too high
- the premium part for achieving budget indicators in the general wage fund should be significant (at least 30%);
- the motivation system should also contain information on additional incentives for exceeding the employee's personal budget plan;
- the motivation system should provide for deprecation for non-fulfillment of budget plans. However, in the developed motivation system, the company can foresee redistributing this money in favour of those employees who have better coped with the budget goal

Financial incentives in the form of bonuses and various additional payments are useful from the viewpoint of attracting and keeping the best employees in the company. In the motivation system, it is worth considering not only the material component, but also the non-material one. The personal trust given to the employee by the enterprise director or the department head is also a rather strong side of motivation. We fully agree with the Czech researchers' opinion who note that it is also important for an employee that he is trusted [8].

For a clear understanding of the incentive system developed for the company's employees in accordance with the budgeting system, the monthly salary of each employee can be presented in the form of three components:

1) permanent part, i.e. fixed sums, which include salaries according to hourly rates, as well as additional payments (for example, for combining positions) or compensation of a fixed amount (compensation for travel, apartment rent, etc.);

2) the first premium part, i.e./ bonuses for the fulfillment of the company's financial budgets and the budgetary goals of the unit where the specialist works;

3) the second premium part, i.e. bonuses for achieving personal budget goals and payments for personal achievements that affected the overall performance of the company or a specific unit.

However, the staff motivation system and the ratio of parts of the motivational model for each unit should be set individually, taking into account the specifics of each unit's activity. As an example, we can offer an incentive system for financial service employees:

- 1) fixed part of the salary – 50%,
- 2) the first premium part – 25% (including bonus for fulfilling the company's budget –15%; services – 10%);
- 3) the second premium part – 25% (including bonus for fulfilling personal budget goals – 20%; other bonuses and additional payments – 5%).

Participation in budgeting has a positive effect but is not significant for individual efficiency. After all, work motivation can strengthen the internal control system and participation in the budgeting of individual results.

The research presented in Mertayani Sari Dewi's article [9] shows the significant influence of the budgets internal control system on the individual efficiency of the employee and the close relationship with the motivation system implemented in the company as a moderator. The foreign author emphasizes that when developing a motivation system, it is necessary to take into account the degree of influence on the budget indicators achievement of various categories of company employees. As for processes that the employee can directly influence, he should be given a higher percentage of additional

payments than for the results of processes he is indirectly involved in.

Using the example of the trading company, we will formulate how the key performance indicators for the relevant units can look like (Table 2).

The indicators list for each company unit should be as detailed as possible, therefore, when defining them, it is necessary to involve these departments heads who will be responsible for their

implementation, it is also worth considering the amount of workload on personnel associated with the collection and processing of information necessary for these indicators calculation. Therefore, these indicators list should include only those that are really needed by the management for administration and will allow for assessing the degree of achievement of the set goals by this or that unit and the company as a whole.

Table 2. Key Performance Indicators of the Company Units for a Year

Aim	Indicator	Rating, %	Target values	Bonus, % bonus fund
Purchasing department				
To process applications on time	Applications percentage processed on time	50	<40%	0
			40-90%	1-29
			>90%	30
To submit documents to the accounting department within 5 working days after the reporting period	Documents percentage submitted on time	35	<80%	0
			80-99%	1-19
			>99%	20
To avoid shortages and defects	The number of requests for defects	15	0	10
			1-9	1-9
			>9	0
Sales department				
To execute the sales plan	Deviations from the sales plan	40	<1%	30
			1-10%	29-19
			>10%	0
To ensure sales growth	Percentage of growth	30	<25%	0
			>25%	30
To increase the number of new customers	New customers' percentage from the working customers' total number	30	<25%	0
			>25%	10
Logistics department				
To deliver cargo on time	On-time delivery percentage	40	<40%	0%
			40-90%	1-39%
			>90%	40%
To adhere to the deadlines for the invoices transfer	Timely transfer of all invoices	20	Not on time	0%
			On time	10%
To maintain transport in working order	The number of unscheduled repairs carried out	20	0	10%
			1-9	1-9%
To deliver cargo in the integrity	Amount of damaged cargo	20	0	10%
			1-9	1-9%
HR department				
To close company vacancies	Vacancy closing period	10	<2 weeks	10
			2-3 weeks	7
			> month	0
	Recruitment costs	15	within the budget	15
			> budget	0
	Percentage of closed vacancies	15	100-80%	15
			79-60%	10
			<60%	0
	The employees' percentage who successfully completed the probationary period	10	100-80%	14
			79-60%	10
<60%			0	
To motivate employees	Personnel turnover	20	<70%	15
			>70%	0
	The staff motivation plan Implementation	10	<70%	7
			>70%	0
Train employees	The number of trained employees	10	According to the plan	7
			<plan	0
	Personnel training costs	10	Within the budget	7
>budget			0	

Source: authors' own development

The algorithm for calculating each of these indicators should be clearly defined and understood by managers at different levels of the company, therefore, for each indicator it is possible to develop a certain information card that will contain data on the main parameters of this indicator, the method description of its calculation, the calculation frequency and review by the person responsible for it calculation, etc.

The self-determination theory authors note that rewards can have a positive effect on motivation if their informational aspect is enhanced [10] and if the remuneration system is perceived as fair [11].

In the process of developing a system of key performance indicators, the enterprise management may face a number of problems, in particular: the employees' resistance; the need to adjust the accounting policy for the purposes of financial and management accounting; ensuring the collection of necessary data for the selected key performance indicators calculation, etc. In order to avoid such problems, the company's management should discuss in advance the issue of introducing a system of key performance indicators with the company's staff and explain how the salary will be formed, prepare staff documents (employment contracts, staffing schedule, etc.), to agree on the relevance of the organization and financial accounting methods to the management, to think about the management reporting formation on this performance indicators implementation of the company's units.

The management report is needed in order to control the accrual and payment of bonuses to the company's employees, as it should be formed in such a way that it combines information on the number and

composition of the enterprise structural unit, the wage fund, and the method of calculating bonuses. It can also be supplemented with performance indicators, the percentage of their completion, graphs, and charts.

Before implementing the motivation system, it is necessary to test it for several months in several units of the enterprise, so that it is possible to identify possible shortcomings of this system or difficulties that the enterprise personnel may face, and therefore to make timely adjustments before the full implementation of the motivation system at the enterprise.

### Conclusions

Thus, the employees' motivation system development in close connection with the company's strategy and the system for monitoring the budget indicators performance will allow to: motivate the staff, broadcast the company's priorities and tasks, monitor their work effectiveness, use the wage fund optimally, attracting and retaining high-quality specialists. After all, all this will allow creating the company a system of work effectiveness indicators that is understandable for the management, to delegate responsibility to a wide range of managers.

We consider a promising direction of further research on aspects of the budgeting system in the analysis and comparison of approaches to the budget control implementation, in particular, the study of advantages and disadvantages, as well as the feasibility of using a simple analysis of deviations, oriented to the subsequent plans correction, as well as in the analysis of the deviations, oriented to further managerial decisions and in the analysis of deviations under uncertainty conditions.

### Abstract

The budgeting system is not only an important tool for implementing the company's strategy but also a flagship of its success. The strategic goals formulated by the enterprise owners and managers determine which indicators will be included in the budgets. For the company, in the budgeting system, not only the process of planning budget indicators is important, but also the extent to which budgets are justified, realistic, and achievable. However, it is important for the company's management to monitor the budgets implementation, to know the reasons for the actual indicators deviations from the planned ones, and to be able to explain them.

In order to the budget execution control system will be complete, it is necessary to develop the motivation system for the company's staff to fulfill the planned indicators. That is why the research of the relationship of controlling the implementation of enterprise budget and the motivation system is relevant, since it affects the increase of the staff interest in the results of the enterprise activities.

The aim of the article is to determine the list of indicators that are subject to budgetary control in the enterprise budgeting system, to analyze the directions of introducing the motivation system through changing components of the enterprise employees' monthly remuneration in accordance with the budgeting system, to develop key indicators for evaluating the effectiveness of structural units in connection with the bonus fund of the enterprise.

The motivation system for the enterprise staff in accordance with the budgeting system can be presented in the form of the following components: permanent part is fixed amounts that include wages; the first premium part includes premiums for the implementation of the company's financial budgets; the second premium part contains bonuses for achieving personal budget goals.

Therefore the employees' motivation system development in close connection with the company's strategy and the system for monitoring the budget indicators performance will allow to: motivate the staff, broadcast the company's priorities and tasks, monitor their work effectiveness, use the wage fund optimally, attracting and retaining high-quality specialists. So, all this will make it possible to create in the company a system of work effectiveness indicators that is understandable for the management, to delegate responsibility to a wide range of managers.

## Список літератури:

1. Цюлковська С.І. Функції менеджменту та бюджетування в зовнішньоекономічній діяльності підприємств агробізнесу. *Бізнесінформ*. 2018. № 10. С. 69-74.
2. Тирінова А.В. Організація бюджетування на підприємстві як частина управлінського обліку. *Науковий вісник Херсонського державного університету. Серія: Економічні науки*. 2019. № 34. С. 149-152.
3. Басюк Т.П. Актуалізація процесу бюджетування на підприємствах харчової промисловості в умовах економіки воєнного стану. *Економіка та суспільство*. 2022. Випуск 42. [Електронний ресурс] – Режим доступу: <https://doi.org/10.32782/2524-0072/2022-42-1>.
4. Нам'ясенко В.М. Проблеми бюджетування (планування) в умовах ринкової економіки. *Економіка: реалії часу*. 2017. №5 (33). С. 35-41.
5. Сторожук О.В., Заярник О.В. Мотивація персоналу к основа талант-менеджменту в інноваційно-інтегрованих структурах. *Центральноукраїнський науковий вісник. Економічні науки*. 2019. Вип. 2(35). С. 115-123.
6. Yenni C. Participative Budgeting, Employee Motivation and Budgetary Slack in Private Sector in Indonesia. *Jurnal aset (akuntansi riset)*. 2020. No. 12 (2). P. 346-356.
7. Egbide B.-C., Agi-Iochi M., Madugba J., Taiwo A., Ayomide I. Budgeting approaches and employee motivation in the hospitality industry. *Problems and Perspectives in Management*. 2022. No. 20(4). P. 602-613.
8. Armstrong M., Taylor S. *Řízení lidských zdrojů: moderní pojetí a postupy*. 2015. Praha: Grada Publishing, 928 p.
9. Mertayani Sari Dewi. Motivation Moderates the Effect of Internal Control Systems and Budgetary Participation on Individual Performance. *International Journal of Social Science and Business*. 2020. Vol. 4, No. 1. P. 32-39.
10. Deci E.L., Olafsen A.H., Ryan R.M. Self-determination theory in work organizations: the state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*. 2017. Sv. 4, č. 1, P. 19-43.
11. Landry A.T., Gagné M., Forest J., Guerrero S., Séguin M., Papachristopoulos K. The relation between financial incentives, motivation, and performance: An integrative SDT-based investigation. *Journal of Personnel Psychology*. 2017. Sv. 16, č. 2, P. 61-76.

## References:

1. Tsiolkovska, S.I. (2018). The Functions of Management and Budgeting in Foreign Economic Activity of Agribusiness Enterprise. *Businesinform*, 10, 69-74 [in Ukrainian].
2. Tyrinov, A.V. (2019). Budgeting organization at the enterprise as the part of management accounting. *Scientific Bulletin of Kherson State University. Series "Economic Sciences"*, 34, 149-152 [in Ukrainian].
3. Basiuk, T.P. (2022). Actualization of the budgeting process at food industry enterprises in the conditions of the martial law economy. *Economy and Society*. Issue 42. Retrieved from: <https://doi.org/10.32782/2524-0072/2022-42-1> [in Ukrainian].
4. Namiasenko, V.M. (2017). The problems of the budgeting (planning) in a market economy. *Economics: time realities*, 5 (33). P. 35-41 [in Ukrainian].
5. Storozhuk, O.V., & Zaiarniuk, O.V. (2019). Staff Motivation as a Basis for Talent Management in Innovative and Integrated Structures. *Central Ukrainian scientific bulletin. Economic sciences*. Issue 2(35), 115-123 [in Ukrainian].
6. Yenni, C. (2020). Participative Budgeting, Employee Motivation and Budgetary Slack in Private Sector in Indonesia. *Jurnal aset (akuntansi riset)*, 12 (2), 346-356 [in English].
7. Egbide, B.-C., Agi-Iochi, M., Madugba, J., Taiwo, A., & Ayomide, I. (2022). Budgeting approaches and employee motivation in the hospitality industry. *Problems and Perspectives in Management*, 20(4), 602-613 [in English].
8. Armstrong, M., & Taylor, S. (2015). *Human resource management: modern concepts and practices*. Praha: Grada Publishing, 928 p. [In Czech].
9. Mertayani Sari Dewi. (2020). Motivation Moderates the Effect of Internal Control Systems and Budgetary Participation on Individual Performance. *International Journal of Social Science and Business*. Vol. 4, No. 1. P. 32-39 [in English].

10. Deci, E.L., Olafsen, A.H., & Ryan, R.M. (2017). Self-determination theory in work organizations: the state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 1, P. 19-43 [in English].
11. Landry, A.T., Gagné, M., Forest, J., Guerrero, S., Séguin, M., & Papachristopoulos, K. (2017). The relation between financial incentives, motivation, and performance: An integrative SDT-based investigation. *Journal of Personnel Psychology*, 16, 2, P. 61-76 [in English].

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