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**DEVELOPING A METHODOLOGICAL APPROACH
TO COST MANAGERIAL ACCOUNTING**

The article considers the issues of developing a methodological approach to cost and management accounting. Methodological approach ensures efficient organization of cost and management accounting at poultry enterprises, the formation and accounting of variable, fixed and transaction costs and losses, as well as the formation of economic (real) organization profit. Presented in this paper methodological proposals on accounting process automatization of transaction costs will increase the efficiency of their formation and accounting.

Keywords: cost and management accounting; responsibility center; variable, fixed and transaction costs.

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ФОРМУВАННЯ МЕТОДИЧНОГО ПІДХОДУ
ДО УПРАВЛІНСЬКОГО ОБЛІКУ ВИТРАТ**

У статті розглянуто формування методичного підходу до управлінського обліку витрат. Методичний підхід забезпечує ефективну організацію управлінського обліку на птахових підприємствах, формування та облік змінних, постійних, транзакційних витрат та втрат, а також формування економічного (реального) прибутку організації. Представлені в роботі методичні пропозиції щодо автоматизації облікового процесу транзакційних витрат підвищать оперативність їх формування та обліку.

Ключові слова: управлінський облік витрат; центри відповідальності; змінні, постійні, транзакційні витрати.

Форм. 4. Табл. 2. Рис. 3. Літ. 20.

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К УПРАВЛЕНЧЕСКОМУ УЧЕТУ ЗАТРАТ**

В статье рассмотрено формирование методического подхода к управленческому учету затрат. Методический подход обеспечивает эффективную организацию управленческого учета на птицеводческих предприятиях, формирование и учет переменных, постоянных, транзакционных затрат и потерь, а также формирование экономической (реальной) прибыли организации. Представленные в работе методические предложения по автоматизации учетного процесса транзакционных издержек повысят оперативность их формирования и учета.

Ключевые слова: управленческий учет затрат; центры ответственности; переменные, постоянные, транзакционные затраты.

Problem statement. Crisis management of agricultural organizations is a difficult task, especially since there is a need for timely delivery of information for managerial decision-making. Effectiveness of agricultural organizations depends on quickly and completely provided information. Under such circumstances management accounting is the key instrument for managing organizations and business. High-quality management accounting system is required to all organizations, including poultry enterprises, as it helps making right economic decisions that contribute to

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successful work under market uncertainty. Technological features of the poultry industry, and insufficient development of organizational and methodological principles of management accounting system complicate the formation of necessary information on costs, revenues, reduce the effectiveness of management of entire organizations. Thus, managerial accounting plays a crucial role for poultry enterprises' management cycle. It is the management accounting system that generates information on enterprise costs; these costs are the main subject of management accounting. At present, cost and management accounting at poultry farms is neglected; in this regard, we can identify a number of problems: many poultry farms have no established system of management accounting; there is no clear account costs classification used in this industry. Fixation of information on the costs of poultry production by the place of their origin does not allow control and regulation of this process, as there are no responsible persons for adherence to production conditions, its technology, as well as for costs and their value. Use of wrong methods in cost accounting at poultry farms can lead to losses of relevant information on the costs and also can provoke inaccurate costs. Because of this, there is a need for methodological support of cost managerial accounting at poultry farms.

Recent research and publications analysis. Problems in theory development, methodology and organization of managerial accounting are shown in the works of famous Russian economists: I.V. Averchev (2011), D.Ts. Dorzhiev (2011), G.V. Goncharenko (2013), E.A. Kiryanova (2012), D. Lysenko (2009), V.A. Manyeva (2011), B.G. Maslov (2009), E.E. Podsevalova (2009), M.L. Voytenko (2009) etc. Foreign experience in accounting, including the managerial one are generalized by the following authors: K. Drury (1997), T. Horngren and J. Foster (2009) etc. Among all the costs of poultry organizations, we can define specific costs that are transaction costs, the report of which is currently relevant and meaningful. Foreign economists such as J. Commons (1931), R. Coase (1988), P. Milgrom and J. Roberts (1990), D. North and R. Thomas (1973) and others study these costs. Among Russian economists, the problems of institutional economics and transaction costs accounting are studied by V.V. Lesnyh (2010), I.G. Panzhenskaya (2009), M.Y. Vinogradova (2002) etc. It should be noted that, despite the attention from scientists to the problems of cost accounting, cost managerial accounting and transaction costs accounting process in the poultry industry is insufficiently studied. Changes in the poultry industry require additional research of cost managerial accounting, identification of new methods for cost accounting and cost calculation of poultry products, accurate classification of costs, identification of specific costs – transaction costs, and determination of major ways of problem solution in this field.

The purpose of the research is the development of a methodological approach to cost managerial accounting at poultry enterprises.

Key research findings. The methodological approach to cost managerial accounting means a collection of methods and techniques of accounting and organizational models in managerial accounting of poultry organizations combined for best managerial decisions-making. Formation of a methodological approach to cost managerial accounting at poultry enterprises has several stages. Cell chart of methodological approach formation is represented in Figure 1.

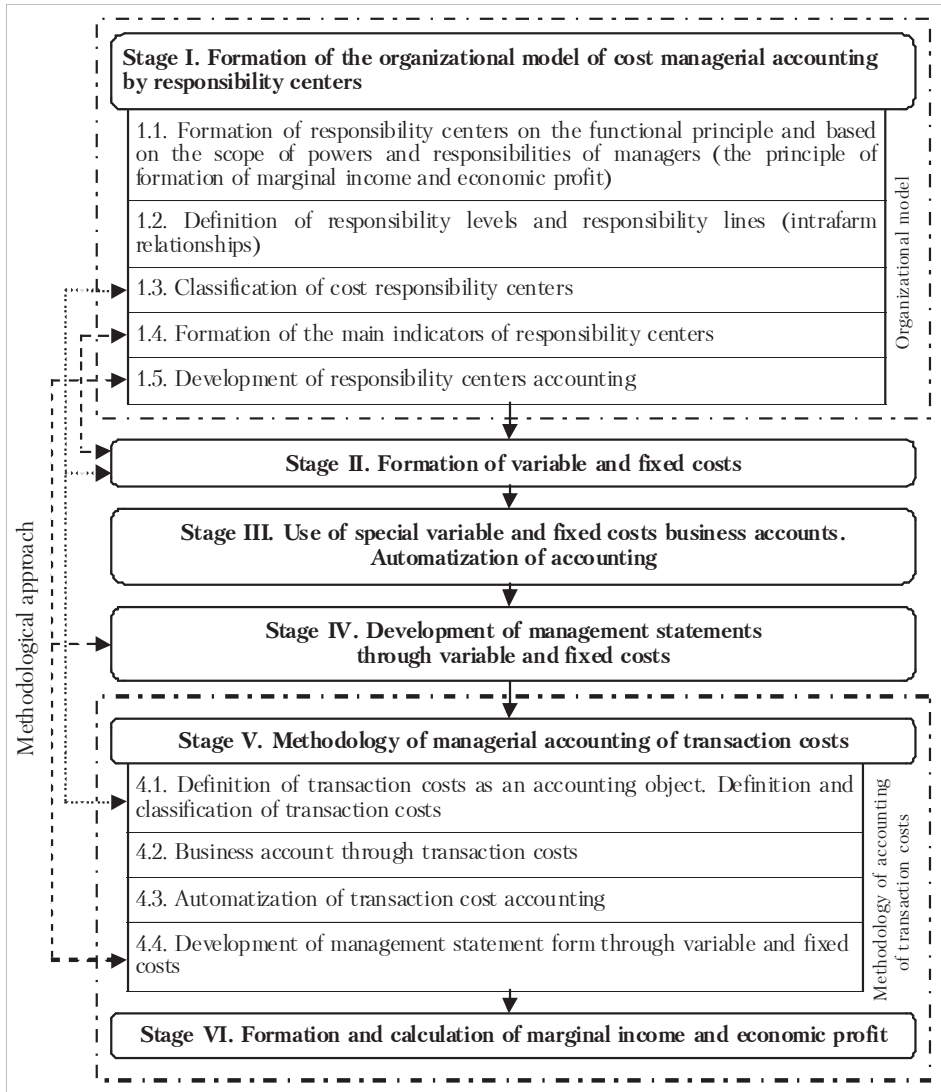


Figure 1. Cell chart of methodological approach to developing of cost managerial accounting at poultry enterprises, authors'

Realization of the developed methodological approach comprises the following steps:

1. Formation of the organizational model of cost managerial accounting by responsibility centers.
2. Formation of variable and fixed costs, evaluation of the influence of these costs on profits.
3. Use of special variable and fixed costs business accounts. Automatization of accounting.
4. Development of management statements through variable and fixed costs.

5. Methodology of managerial accounting of transaction costs.
6. Formation and calculation of marginal income and economic profit.

At the first stage of this methodological approach the organizational model of cost managerial accounting by responsibility centers is developed.

In the organizational model, responsibility centers are formed along functional lines (production, non-production, management responsibility centers). These centers are arranged on the basis of the scope of powers and managers' responsibilities (profit center, distribution center, the center of marginal income, sales center, the center of semivariable costs, center of direct and indirect variable costs, the center of semi-constant costs, the center of transaction costs, the center of nonmanufacturing costs). In the organizational model, we distinguish the levels of responsibility and intrafarm relationships. In the responsibility centers the costs are formed according to clarified and supplemented cost classification at poultry enterprises. In the given responsibility centers indicators reflected in internal managerial accounting are formed.

At the second stage of the methodological approach, it is necessary to distinguish variable and fixed costs. Variable costs are those costs, the amount of which depends on production volumes. Fixed costs are those costs, the value of which does not depend on production volume. For the determination of variable and fixed costs, different methods are used: algebraic, graphical, statistical, based on correlation and regression analysis, informative, built based on the analysis of each item and cost elements. When analyzing poultry organizations' costs and their division into fixed and variable costs we use informative and algebraic methods (Table 1).

Table 1. Determination of variable and fixed costs value of poultry products (for the joint stock company "Siberian poultry farm"), 2011, authors'

Index number	Eggs	Poultry meat and meat products in processed form
Rate of variable costs per unit of output	2.445 RUB/pieces	3.661 ths RUB/dt.
The volume of production (sales)	2385 ths of pieces	505120 dt.
Total production costs, ths RUB	13466.1	1943231.9
fixed costs	7633.1	94141.9

The total cost in the presence of fixed and variable costs can be represented by the following equation:

$$y = a + bx, \quad (1)$$

where y is the sum of production costs; a is the amount of fixed costs; b is the rate of variable costs per unit of output; x is the output (sales) of products.

At the third stage of the methodological approach to variable and fixed costs, accounting is provided to open special accounts. Variable costs should be recognised in the account 30 "Variable costs", fixed costs are in the account 31 "Fixed costs". For direct and indirect variable costs accounting to the account 30 "Variable costs" one should open the following subsidiary accounts: 30-1 "Direct variable costs" and 30-2 "Indirect variable costs". Analytical account of 30 "Variable costs" and 31 "Fixed costs" accounts should be done in the context of responsibility centers (producing authorities, departments, services, business units). Thus, using established accounts for variable and fixed costs will enable determining the their value and dynamics in the context of responsibility centers, executives will be able to control, and hence

affect (reduce) the total value of direct variable, indirect variable and fixed costs. Variable and fixed costs accounting can be conducted on the basis of regulatory accounting in accounting program "1С. Accounting of poultry farm".

At the fourth stage of the methodological approach internal management statements through variable and fixed costs are developed. For general information formation about the value of variable and fixed costs of poultry farms, such report is required to be recognised in all information on costs: in what producing authorities, departments these costs appeared. Experienced programmer in "1С. Accounting of poultry farm" can form the basis for this accounting based on information data. Form of the "Accounting of variable and fixed costs formation" at poultry enterprises is developed and presented in Figure 2, as it was developed in "Microsoft Office Excel". Columns "cost", "unit", "product" can be filtered by type of costs, units and final products.

2	Затраты	Подразделение	Продукция	Затраты	План на эт	Факт	Откл
3	Переменные затраты всего:	Сортировка по возрастанию Сортировка по убыванию	Племенной молодняк кур- бройлеров				
4	прямые переменные затраты	(Все) (Первые 10...) (Условие...)					
5	косвенные переменные затраты	Участок выращивания ремонт Участок первичной и глубокой Участок по переработке отход Участок санобуа					
6	Постоянные затраты	Участок содержания родителей	Племенные яйца				
7	Итого затрат	Участок убоя и потрошения					
8	Переменные затраты всего:	Участок убоя и потрошения					
9	прямые переменные затраты	Цех выращивания бройлеров	Суточный цыпленок				
10	косвенные переменные затраты	Цех инкубации (Пустые)					
11	Постоянные затраты	(Пустые)					
12	Итого затрат						
13	Переменные затраты всего:	Цех инкубации	Суточный цыпленок				
14	прямые переменные затраты						
15	косвенные переменные затраты						
16	Постоянные затраты	Цех выращивания	Цыпленок				
17	Итого затрат						
18	Переменные затраты всего:						
19	прямые переменные затраты						

Table translation

2.	Costs	Subdivision	Product	Costs	Plan for...	...
3.	Entire variable costs:	...	Young breeder of broiler chicken			
4.	direct variable costs	...				
5.	indirect variable costs	...				
6.	Fixed costs	...	Breeder eggs			
7.	Cost summary	...				
8.	Entire variable costs:	...				
9.	direct variable costs	/Poultry slaughterhouse/	Baby chick			
10.	indirect variable costs	...				
11.	Fixed costs	...				
12.	Cost summary	...	Chick			
13.	Entire variable costs:	Incubation Section				
14.	direct variable costs					
15.	indirect variable costs					
16.	Fixed costs					
17.	Cost summary					
18.	Entire variable costs:	Growth Room				
19.	direct variable costs					

Figure 2. Form of "Accounting of variable and fixed costs formation at poultry enterprises "Microsoft Office Excel", authors'

At the fifth stage of the methodological approach the methodology of managerial accounting of transaction costs at poultry enterprises is offered. The offered methodology includes the following procedures: definition of transaction costs as an object of accounting; selection and classification of transaction costs; transaction costs through accounts; automatization of transaction costs; development of managerial accounting forms to recognise transaction costs. For transaction costs accounting it is proposed to introduce new accounts: account 24 "Transaction costs" for accounting obvious (recorded) transaction costs, account 015 "Losses" for accounting unobvious accounted and unaccounted losses. Accounting of transaction costs can be done in "1C. Accounting of poultry farm". Automatization of transaction costs accounting includes the selection of new transaction costs and losses accounting in chart of accounts, the formation of a new account cost (transaction costs), and the ways of these costs depreciation, development and formation of internal managerial accounting. Accounting form for the formation of transaction costs and losses is generated in "Microsoft office Excel", the columns "cost", "unit", "products" can be filtered by obvious and unobvious transaction costs of specific business units, departments and types of final products or semifinished products (Figure 3).

At the sixth stage of the methodological approach marginal income and economic profit are formulated according to available accounting records. Consequently, in management accounting the formula for calculating marginal income will be the following:

$$MI = C_{to} \text{ of account } 90-1 \text{ "Income"} - D_{to} \text{ of account } 30 \text{ "Variable costs"}, \quad (2)$$

where MI – marginal income; C_{to} – account credit turnover; D_{to} – account debit turnover.

Sales profit in managerial accounting is calculated as the following:

$$PrS = C_{to} \text{ of account } 90-1 \text{ "Income"} - D_{to} \text{ of account } 30 \text{ "Variable costs"} - D_{to} \text{ of account } 31 \text{ "Fixed costs"}, \quad (3)$$

where PrS – sales profit; C_{to} – account credit turnover; D_{to} – accounts debit turnover.

For the formation of economic (real) profit margin managers at poultry enterprise need the information on transaction expenses. Therefore, the formula of economic profit will be the following:

$$EP = (MI - D_{to} \text{ of account } 31 \text{ "Fixed costs"}) + C_{to} \text{ of account } 91-1 \text{ "Miscellaneous income"} - D_{to} \text{ of account } 91-2 \text{ "Miscellaneous costs"} - D_{to} \text{ of account } 99 \text{ "Wastes"} - D_{to} \text{ of account } 24 \text{ "Transaction costs"} - D_{to} \text{ of account } 015 \text{ "Losses"}, \quad (4)$$

where EP – economic (real) profit of organization; MI – marginal income; C_{to} – account credit turnover; D_{to} – accounts debit turnover.

Table translation

1.	Costs	Sub-division	Section production	Previous year costs	Plan for the current year with account for the inflation ratio	Actual costs	Deviation from Plan
2.	Entire transaction costs:	Rearing birds area	Young breeder of broiler chicken				
3.	transaction costs						
4.	losses						
7.	Entire transaction costs:	Parent flock area	Breeder eggs				
8.	transaction costs						
9.	losses						
12.	Entire transaction costs:	Incubation section	Baby chick				
13.	transaction costs						
14.	losses						
17.	Entire transaction costs:	Broiler growing section	Broiler chick				
18.	transaction costs						
19.	losses						
22.	Entire transaction costs:	Slaughter section	Dressed chicken ...				

Figure 3. Form "Report on formation of transaction costs and losses at poultry enterprises" in Microsoft Office Excel, authors'

Calculation of economic profit allows accumulating information about real available at the enterprise profit in order to determine the most advantageous behavior strategy of poultry enterprise in order to make efficient management decisions (Table 2).

So the accounting income during the reported period is 106348 ths RUB. After analyzing the level of costs at the poultry enterprise implicit transaction expenses have been identified – wastes, which amounted to 5435 ths RUB. Taking into account the identified wastes we calculate the economic profit of the poultry enterprise – 100913 ths RUB. Therefore, based on the analysis of transaction costs and wastes,

managers of the poultry enterprise are able to objectively evaluate the situation and profits, and as a result make more efficient managerial decisions. For the purpose of managerial decision-making and economic profit formation, new lines were added to the current report form on the financial results (Table 2). The report will allow users get an overview of possible changes in the financial state of an enterprise (in the long term), and also, to a high degree of accuracy, identify economic (real) profit margin.

Table 2. Formation of economic (real) profit in the report on financial outcomes, the study case of the poultry enterprise Private Joint-Stock Company "Irtyskoe", the RUB, authors'

Index	For the report period, 2011	For the report period, 2010
Profit	828372	742134
<i>Cost of goods sold at variable expenses^{a)}</i>	(429162)	(383099)
Marginal income (gross margin)	399210	359035
<i>Fixed costs^{a)}</i>	(229986)	(196862)
Sales profit (losses)	169224	162173
Profits from shares in other organizations	5	0
Interest receivable	5989	5302
Outstanding interest	(5597)	(8880)
Miscellaneous income	45526	27166
Miscellaneous costs	(30220)	(18291)
Transaction expenses (explicit^{a)})	(73449)	(59466)
Pretax profit (loss)	111478	108004
Current income tax	-	-
including permanent tax liabilities (assets)	-	-
Changes in deferred tax liabilities	-	-
Change of deferred tax assets	-	-
Other	(5130)	-
Net accounting income (loss)	106348	108004
Wastes (implicit transaction expenses)^{a)}	(5435)	(2973)
Economic (real) profit^{a)}	100913	105031

^{a)} new lines that are offered.

Conclusions. The use of the developed methodological approach for managerial costs accounting will allow regulating the amount of variable and fixed costs (including transaction costs) by accumulating them on separate accounts and cut down the labour required to calculate the above costs, control main aspects of responsibility centres, generate margin income and economic profit of poultry enterprises.

References:

- Аверчев И.В.* Управленческий учет и отчетность. Постановление и внедрение. – М.: Рид Групп, 2011. – 416 с.
- Аналитический материал о ситуации в птицеводстве / Российский птицеводческий союз (Росптицесоюз). – М., 2009. – 12 с.
- Виноградова М.Ю.* Формирование транзакционных издержек в логистике хозяйственных связей: Автореф. дис... канд. экон. наук: 08.00.05 / СПб. Гос. ун-т экономики и финансов. – СПб., 2002. – 17 с.
- Войтенко М.Л.* Развитие системы управленческого учета (на материалах предприятий нефтепродуктообеспечения): Автореф. дис... канд. экон. наук: 08.00.12. – Пермь, 2009. – 23 с.
- Гончаренко Г.В.* Совершенствование управленческого учета в молочном скотоводстве: Дис... канд. экон. наук: 08.00.12. – Челябинск, 2013 // www.diss.rsl.ru.
- Доржиев Д.Ц.* Управленческий учет затрат по стадиям биотрансформации биологических активов в прудовом рыбководстве: Автореф. дис... канд. экон. наук: 08.00.12. – М., 2011. – 25 с.
- Друри К.* Введение в управленческий и производственный учет / Пер. с англ.; Под ред. С.А. Табаиной. – М.: Аудит-ЮНИТИ, 1997. – 560 с.

Кириянова Е.А. Учетно-информационное обеспечение операций сельскохозяйственного страхования: Автореф. дис... канд. экон. наук: 08.00.12. – М., 2012. – 23 с.

Лесных В.В. Развитие теории трансакционных издержек при исследовании трансформации ОПК: Автореф. дис... канд. экон. наук: 08.00.05. – Екатеринбург, 2010. – 26 с.

Лысенко Д. Организация управленческого учета // Аудит и налогообложение.– 2009. – №2–4. – С. 1–15.

Маняева В.А. Методология управленческого учета расходов организации в системе стратегического контроллинга: Дис... докт. экон. наук: 08.00.12. – Самара, 2011 // www.diss.rsl.ru.

Маслов Б.Г. Теоретические аспекты понятия «себестоимость» для целей учетно-аналитической системы // Управленческий учет.– 2009.– №5. – С. 19–28.

Омский областной статистический ежегодник: Стат. сборник: В 2 ч. – Омск: Омкстат, 2011. – Ч. I. – 248 с.

Панженская И.Г. Методическое обеспечение финансового и управленческого учета трансакционных издержек // Вестник Адыгейского государственного университета.– Серия 5: Экономика.– 2009.– №1. – С. 91–98.

Подсевалова Е.Е. Проблемы внедрения системы управленческого учета на предприятиях // Финансовый вестник: финансы, налоги, страхование, бухгалтерский учет.– 2009.– №9. – С. 1–3.

Хорнгрен Ч.Т., Фостер Дж. Бухгалтерский учет: управленческий аспект / Пер. с англ.; Под ред. Я.В. Соколова. – М.: Финансы и статистика, 2009. – 416 с.

Coase, R.H. (1988). The firm, the market and the law. Chicago.

Commons, J.R. (1931). Institutional Economics. American Economic Review, 21: 652.

Milgrom, P., Roberts J. (1990). Bargaining costs, influence costs, and the organization of economic activity. In: Perspectives on positive political economy (P. 906). Ed. by J.E. Alt, K.A. Shepsle. Cambridge.

North, D.C., Thomas R.P. (1973). The rise of the Western world: a new economic history. Cambridge.

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