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ACCOUNTING OF THE VALUE ADDED FORMATION AT THE MICRO LEVEL

Д This article discloses the process of the value added formation at the micro level and describes methods of its accounting, including monetary backing accounting, for the purposes of business cycles analysis.

К Accounting, analysis, value added, accounts receivable, accounts payable.

ОБЛІК ФОРМУВАННЯ ДОДАНОЇ ВАРТОСТІ НА МІКРОРІВНІ

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Д Стаття розкриває процес формування доданої вартості на мікрорівні й описує методи його обліку, включаючи облік грошового забезпечення, для цілей аналізу бізнес-циклів.

К Бухгалтерський облік, аналіз, додана вартість, кредиторська заборгованість, дебіторська заборгованість.

УЧЕТ ФОРМИРОВАНИЯ ДОБАВЛЕННОЙ СТОИМОСТИ НА МИКРОУРОВНЕ

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Д Статья раскрывает процесс формирования добавленной стоимости на микроуровне и описывает методы его учета, включая учет денежного обеспечения, для целей анализа бизнес-циклов.

К Бухгалтерский учет, анализ, добавленная стоимость, кредиторская задолженность, дебиторская задолженность.

Introduction

In recent years, there has been an increased interest in the usage of such an indicator of economic turnover as value **added** in analysis practice of organizations. From our point of view, such trend seems to be quite relevant, as this indicator simultaneously meets two requirements: 1) it adequately reflects financial results of a business as a process of tangible and human capital interaction, and therefore harmonizes interests of the business process participants, who directly create value added and have direct financial stake in business (owners and employees – business agents) [1]; 2) it acts as a link in evaluating economic development rates of individual organizations and national economy on the whole, which allows to establish a direct system continuity in managing financial flows at micro- and macro-level. However, especially in the Republic of Belarus, there is an obvious lack of theoretical and methodological elaboration into aspects of accounting and analysis of value added. In our opinion, the major

shortcoming of the approaches suggested in scientific publications is that value added is not subject to system accounting, but is calculated on the basis of accounting and statistical reports. The latter, from our point of view, is not acceptable at all, since it is not a secret that when compiling data of statistical reports organizations frequently disregard the accuracy requirement in favor of the speed of compilation. In addition, at present nobody is satisfied with generalized information in reports. Under swift advance in information technologies that allow swift transfer of business information at any distance, even monthly financial statements are not prompt enough; consequently, there is a need for improving accounting techniques, reconsideration of particular elements of accounting procedures, ways to systematize and generalize accounting information as well as the methods of its analysis. Thereupon we suggest developing a model of economic accounting that includes “in-built” elements of analysis (e.g. analyzing monetary backing of assets, elements of owner’s

equity, income, expense), that directly uses the data of entries (*accounting analysis*) [5]. The model concerned is based on objective laws of capital turnover, personification of financial interests of business participants, fundamental accounting equation (Assets = Owner's Equity + Liabilities + Income – Expense), and also the need of obligatory accounting and analysis of real monetary backing of major economic turnover indicators and financial results of organization's activity.

Research methods of value added at the micro-level

The essence and novelty of the techniques developed is the successive disclosure of the information about value added and other indicators of economic turnover (intermediate consumption, fixed capital consumption), as well as the financial results of economic activities within the organization's accounting-analytical system: a) together with the steps of capital transformation (e.g. identification of the non-produced value added (in the net cost of work in process), produced but unsold value added (in the net cost of finished units in stock), value added sold (in the income earned) and value added sold and backed by money (in the income earned in money); b) in terms of the real monetary backing of indicators; c) based on the differentiated approach to the contents of basic indicators of economic turnover required for managerial purposes at the micro and macro-levels.

The developed techniques are computerized in the "Accounting" application on the basis of "1C: Enterprise 8.2" platform.

The economic turnover indicators required for the above-mentioned methods are elements of capital (intermediate consumption, fixed capital consumption, value added), that characterize cost flows of economic turnover and provide the information links for managing them at micro and macro-levels.

Intermediate consumption is the cost of production inputs used up in the business process.

Consumption of fixed capital is a partial cost of means of production used up in the business process.

Value added is the value newly produced by a business.

Let us specify the list of indicators of economic turnover for the purposes of economic accounting and accounting analysis at the micro-level.

Intermediate consumption includes material costs, non-material services (payment for communication and computer center services, for product quality control, research and development, payments to educational institutions involved in employee training and included in the product costs, payments to healthcare institutions for medical checkup, vaccination, etc., rental and

utilities payments, payments for legal, marketing services, licensing, product certification, payments for fire prevention and security, copying, ticket booking, etc.); business travel expenses including cost of travelling and residence, payments for one-off jobs and to freelancers.

In contrast to the approach used in the national economic accounting (NEA), we suggest excluding payments for borrowed capital (loan interest) from intermediate consumption for managerial purposes at micro- and macro-levels because this capital takes an equal part in creating value added along with equity capital, which means that interest payments on loans should be included in the value added.

Consumption of fixed capital includes depreciation of fixed assets and intangible assets charged during the current fiscal year. The suggested method presumes that fixed capital indicator for financial management should be considered separately from the intermediate consumption or value added.

For the national bookkeeping purposes this research has developed a special method of reporting, which includes making special adjustments to the value added in accordance with the NEA requirements.

Value added as an object of economic accounting for managerial purposes has a double nature: firstly, its size embodied in current assets is the sum of expenses incurred (salaries and social payments in the cost of unfinished products and inventories), which is expected to turn into profits (when the finished products are sold); secondly, value added embodied in the funding source of assets constitutes the past time profits, that will partially turn into expenses (included in accounts payable connected with salaries).

At the production stage at every single instant one part of the created value added is embodied in the unfinished product, and another is embodied in the finished product. As the owners' profit is added to the newly created value only at the instant of selling, the value added at the production step includes only wage costs. Wage costs are integrally connected with social payments and health insurance payments the amount of which depends on the wages of an employee of particular category. Hence these payments should also be included into value added.

Thus, the suggested techniques require that the analytical accounting for income and expense accounts, finished products and costs should be arranged in such a way as to generate the information in conformity with the economic turnover indicators and their monetary backing. The same principle should be used for arranging the information on those accounts that contain separate objects continuously used in creating the elements of economic turnover indicators

(inventory accounts, fixed assets, intangible assets, wage accounts, etc.)

The model of economic accounting and value added analysis at micro-level

Let us list the mandatory criteria of clusterization for analytical accounting in the framework of the suggested method (in addition to the criteria to be observed to obtain relevant information for other management purposes, different from managing the major indicators of economic turnover): 1) according to economic turnover indicators (for the accounting units comprising value added, intermediate consumption and fixed capital consumption); 2) by individual items that give grounds for forming cost and expense components of economic turnover indicators (e.g. source documents for calculation of payments to contractors); 3) in terms of monetary backing; 4) by kinds of products (services).

Below the practical implementation of the given methods is described in brief.

Every item in the “Materials” stock-list in the accounting application has its unique code. Every analytical account for accounts like “Materials”, “Primary production”, “Finished goods”, “Operating income and expenses”, etc. is related to the corresponding stock item code in the “Materials” directory.

If another lot of materials is delivered, an accountant is to make an entry to capitalize its cost (presented in a simplified way): Debit ‘Materials/backed by accounts payable’ – Credit ‘Payments to suppliers and contractors’.

On paying to the supplier an accountant fills in a special line for the ‘Bank statement’ in the application which displays the cash flow in the bank account. Every line of the statement contains a different sub-account in conformity with the purpose of payment. A subaccount should contain the information about the cash flow source documents: a receiving report, report of completion, business account, etc. While entering the corresponding line of the ‘Bank statement’ the application accesses the source document, showed in subaccount.

In case of full amount payment for the delivered materials indicated in the source document, the app matches the subaccount balances to the code corresponding to the code of stock-list item marked in this document in the following sequence: 1) “Operating income and expenses” (and other accounts of income and expenditure), 2) “Finished goods”, 3) “Primary production” (and other cost accounts), 4) “Materials”, i.e. in the sequence “expenses – costs – assets.” Suppose that after the materials were received there were no changes in the corresponding stock-list directory

line. Then alongside the entry reflecting the transfer of funds to the supplier, the following entry should be made to post under the cost of materials: Debit “Materials/Paid” – Credit “Materials/Backed by accounts payable”.

If the changes in the directory occurred before the payment was made, an accountant should make a similar entry “Paid” and “Backed by accounts payable” in sub-accounts of the proper accounts in the sequence “expenses – costs – assets.”

If the payment for the delivered materials was not made in full amount, the app will determine the so-called “fraction of the cost” for each commodity item in a credit document, then distribute the amount of payment according to the items in proportion to the calculated share and finally perform the posting to sub-accounts “Paid” and “Backed by accounts payable” of the appropriate accounts in the sequence “expenses – costs – assets.”

Value added of sales (or the financial results of a business from the point of view of its agents) is revealed on the so-called screen sub-accounts “Value added of sales” and “Financial results of business” specially introduced for this purpose on “Operating income and expenses” account. In order to do it, the revenue (in terms of monetary backing level) is compared to the total value of intermediate consumption and consumption of fixed capital (also in terms of monetary backing). The difference between revenue and the sum of intermediate consumption and consumption of fixed capital is recorded under the “Operating income and expenses” account: Debit subaccount “The financial results of business” – Credit subaccount “Value added of sales”.

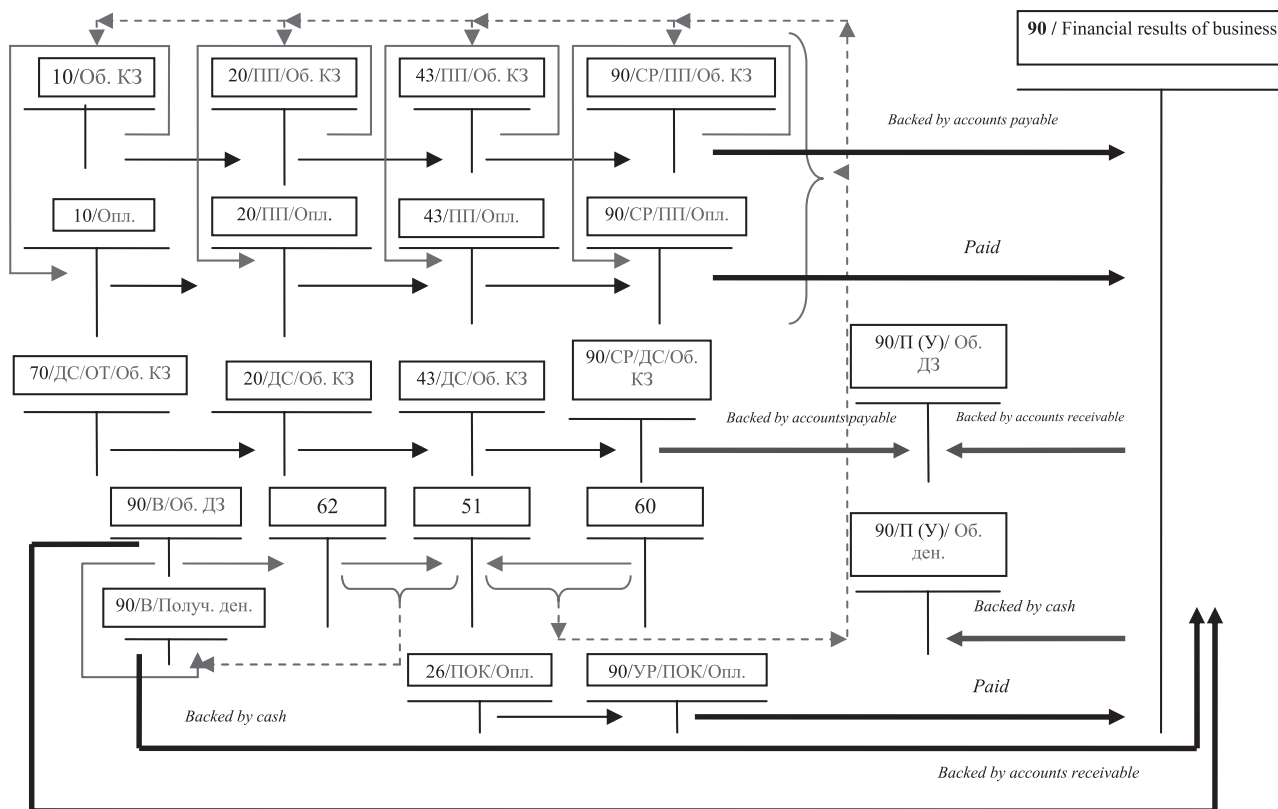
Profit or loss from current business activities can be found by comparison of value added of sales (value added in revenues) and value added as part of the full cost of sales on the “Profit (loss) from sales” subaccount of the “Operating income and expenses” account.

Figure 1 shows a scheme of the process of the value added formation and accounting analysis of its monetary backing.

Research Findings

The main research findings are the following:

1. The list of objects of bookkeeping records, financial reporting and accounting analysis has been expanded by including economic turnover indicators, in particular, a) the significance of value added is proved as an important object of accounting, financial reporting and accounting analysis, the disclosure of information about this object in microanalysis solving two problems simultaneously: firstly, it helps to reflect in an appropriate way the financial performance



Flows of Economic Accounting Data

Accounting analysis of indicator monetary backing

ПП — intermediate consumption; ПОК — consumption of fixed capital; ДС — Value added; Об. КЗ, Обеспечено КЗ — backed by accounts payable; Об. ДЗ, Обеспечено ДЗ — backed by accounts receivable; Получ. ден. — received in money; Обеспечено ден. — backed by money; Опл., Оплачено — paid; ДЗ — accounts receivable; КЗ — accounts payable; СР — cost of sales; УР — management expenses; П (У) — operating profit (loss); 10 — “Materials” account; 20, 26, 43 — accounts of production cost and finished products; 51 – account of cash assets on the bank account; 60, 62 — accounts payable and receivable; 90 — “Operating income and expenses” account

Fig. 1. Procedures of Recording Formation and Accounting Analysis of Value Added Monetary Backing
 The source: Developed by the authors

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of a business from the point of view of its agents (owners and employees), and consequently to harmonize their interests; secondly, it helps to provide the continuity in financial flow management at the micro- and macro-level; b) the significance of disposable income is grounded as an important analytical indicator, reflection of which in financial reporting will provide the owners with the data about capital maintenance and the amount of increase in business economic potential (in terms of owners’ equity).

2. Procedures for consecutive disclosure of the information about value added and other economic indicators in the framework of organization’s accounting system: a) in accordance with capital transformation steps; b) in accordance with real monetary backing; c) based on the differentiated approach to the formation of basic economic indicators depending on the managerial needs at the micro- and macro-level,

which allows, firstly, to form an absolutely new body of data for deeper analysis of the business system operation and hence helps to implement managerial functions more efficiently; secondly, provide coordination in the financial flow management at the micro- and macro-level.

Conclusion

The investigation solves the urgent problems which have so far been beyond the scope of organization’s accounting and analytical system (primarily because of the absence of a number of accounting objects), in particular, the problem of accounting for value added in contingency with capital movement steps and accounting analysis of its money collateral. The economic significance of the research findings involves the following: the techniques of economic accounting, financial reporting and accounting analysis for

THE SCHEME OF ACCOUNTING DATA ACCUMULATION ON THE "OPERATING INCOME AND EXPENSE" ACCOUNT

Table 1

"OPERATING INCOME AND EXPENSE" ACCOUNT							
DEBIT				CREDIT			
Cost of sales	Paid	Intermediate consumption in cost of sales	Product A	Sales proceeds	Received in cash	Product A	
			Product B			Product B	
		consumption of fixed capital in cost of sales	Product A		Backed by accounts receivable	Product A	
			Product B			Product B	
		Value added in cost of sales	Product A		X		
			Product B				
	Backed by accounts payable	Intermediate consumption in cost of sales backed by accounts payable	Product A				
			Product B				
		Consumption of fixed capital in cost of sales backed by accounts payable	Product A				
			Product B				
		Value added in cost of sales backed by accounts payable	Product A				
			Product B				
Management expenses	Paid	Intermediate consumption in management expenses paid					
		Consumption of fixed capital in management expenses paid					
		Value added in management expenses paid					
	Backed by accounts payable	Intermediate consumption in management expenses backed by accounts payable					
		Consumption of fixed capital in management expenses backed by accounts payable					
		Value added backed by accounts payable					
	Sales expenses	Paid	Intermediate consumption in sales expenses paid				
			Consumption of fixed capital in Sales expenses paid				
			Value added in sales expenses backed by accounts payable				
Backed by accounts payable		Intermediate consumption in sales expenses backed by accounts payable					
		Consumption of fixed capital in sales expenses paid					
		Value added in Sales expenses backed by accounts payable					
"Financial results of business"		Backed by cash			Value added of sales	Backed by cash	
		Backed by accounts receivable				Backed by accounts receivable	
Profit from current activities		Backed by cash			Loss from current activities		
	Backed by accounts receivable						

The source: Developed by the authors

formation and distribution of value added and other economic turnover indicators (intermediate consumption, consumption of fixed capital, consumption of disposable income) developed by the authors provide for: a) additional relevant information support for managerial decision-making at the micro-level; b) system continuity with the indicators of the national bookkeeping which allows to calculate gross domestic product in a direct and accurate way.

The social significance of the research findings rests on creation of conditions for the formation of a transparent information base for insuring convergence in managing economic development of individual organizations and the national economy on the whole.

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