

CONCEPT MODEL OF INFORMATION INTEGRATED SYSTEM ACCOUNTING, ANALYSIS AND AUDIT

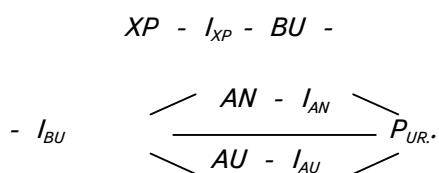
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The author considers and analyses approaches, methods and models of information software integration that provide the support of decision making in the process of improving company management. The model of cognitive and integrated system of accounting, analysis and audit is suggested based on mutual knowledge exchange necessary for solving economic and managerial problems.

The notion “information space of accounting, analysis and audit” is larger than the notion “information accounting space”. In this case information space represents information used in the sphere of accounting, analysis and audit, and the system of relations concerning the formation of the anticipated space for every user - accountant, analyst, auditor and other users having the limited access to accounting and audit information.

Since the information period has appeared, "natural" relations between the economic process (XP) and accounting (BU) are being changed. The improvement of management system causes the necessity to organize the collection, transfer and placement of full and reliable accounting information. Economic process is adequate to the information it provides (I_{XP}) that corresponds to the data shown in accounting (I_{BU}). Having $I_{XP} \in XP$ it is possible to consider the following assumption $I_{XP} > I_{BU}$. This means that from the whole aggregate of information depending on the aims of accounting a number of elements included in accounting are selected. Additional part of data I_{AN} , I_{AU} is introduced for selective analysis (AM) and audit (AU), necessary for making managerial decisions (P_{UR}). Consequently, the scheme of information interrelations between the economic process, accounting system, analysis, audit and managerial decision making will be the following:



The efficiency of the decision made provides the quality of accounting information and its adequate reflection in financial reports. The control over the reliability of accounting data is given to audit activity.

It is common knowledge that in management theory the term “information integration” is widely used, it means the integration of separate differentiated parts and functions of a system, as well as the process leading to such condition is considered. In order to accomplish the analysis of economic activity of the enterprise, accounting and executing audit functions, it is necessary to have knowledge about the methods and therefore there is a necessity to integrate knowledge for their joint use in accounting, analysis and audit

The joint use of knowledge (Z_{BU} , Z_{AN} , Z_{AU}), represented in the scheme as a formal model is the source of increasing the efficiency of the functioning of the information system of accounting, analysis and audit. The implementation of the procedure of the support of decision making can be considered as an intellectual system.

$$XP - I_{XP} - BU - (I_{BU} +$$

$AN - (I_{AN} + Z_{AN})$

$+ Z_{BU}) \quad \begin{matrix} \nearrow \\ \searrow \end{matrix} \quad AU - (I_{AU} + Z_{AU}) \quad \begin{matrix} \searrow \\ \nearrow \end{matrix} \quad P_{UR} .$

The formal model of subject sphere contains many basic elements, syntax rules, axioms and the rules of conclusion. Having such description intellectual system implements the conceptual model of the subject sphere of economics. Conceptual model consists of the list of

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notions used for the description of subject sphere, their characteristics, the classification of these notions according to types, situations, features in this sphere and the laws of its processes. The presence of notions and characteristics reflecting the content of subject spheres is the basic demand to the concept of the model.

The implementation of the unique concept model is based on the following points:

- ◆ theory and logic of the process of finding solutions to the problems of accounting, analysis and audit;

- ◆ complex approach to computerization with the elements of cognitive integration;

- ◆ formal representation of the theory and logic of problem solving in the systems of processing accounting and analytical information;

- ◆ maximum integration of the interests of the users of accounting, analysis and audit systems;

- ◆ convenient environment of the interaction of user with a system.

The ideas of the formed information cognitive and integrated system of accounting, analysis and audit is based on mutual exchange of results, documents, conclusions about effective decision-making among the users.

1. Information systems and technologies in economics and management./ Edited by Prof. V. V. Trofimov. - Second edition. - M.: Higher education, 2007.

2. Karminskiy A. M., Chernikov B. V. Information systems in economics: Part 1. Methods of creation. - M.: Finance and statistics, 2006.

3. Kuter M.I. Accounting theory. - 3-rd edition. M.: Finance and statistics, 2008.

4. Rozhnova O.V. Financial accounting: The concept of information space. - M.: Finance and statistics, 2001.

5. Chistov D.V. Intellectual technologies of accounting - M.: Perspective, 2001.

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