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Using and Reporting Informal Knowledge in Accounting Information System

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Abstract

Accounting, considered as one of the key support functions of the business, is the center of in-house knowledge production and reporting. It is aimed to increase the productivity and profitability of business activities with qualified knowledge produced by the accounting information system. Essentially, the accounting information system is regarded as an information system that generates knowledge based on formal sources and standard reporting because of its legal obligations and traditional understanding. As a result of changing conditions and differentiation of knowledge requirements, the accounting information system is expected to make a greater contribution to the management and operating processes. It is demanded that the accounting information system be more functional and dynamic for the knowledge needs that will enable businesses to gain future insight and thus gain competitive advantage over uncertainty. In this respect, besides the formal structure of accounting which impersonate with financial accounting, an informal structure must also be open. The informal structures included in the system will also cause the differentiation of the produced and used knowledge, as well as improve the quality of the feedback and reports. This study aims to gain a new perspective to theoreticians and practitioners, in the direction of the mentioned targets, in order to enable the accounting information system to use informal knowledge as well as formal knowledge and thus to enlarge the scope of managerial reports. The study, which should be considered as a theoretical evaluation, leads to a topic that should not be ignored in the field of management accounting and which will be mentioned frequently in the future. Following the conceptual reviews of the informal knowledge and related subjects in the study, a general evaluation is made under the heading of informal knowledge use and reporting in the accounting information system.

Keywords: Accounting Information System, Management Accounting, Informal Knowledge, Feedback, Tacit Knowledge

1. INTRODUCTION

Accounting, considered as one of the key support functions of the business, is the center of in-house knowledge production and reporting. The accounting information system (AIS) is the dynamo of knowledge management system which has the most knowledge workers in the business, reaches great deal of data and information by the information technology infrastructure and data base, produce most knowledge and feeds other information systems. The changes and transformations that take place in business processes and applications in the knowledge era also change the expectations from the AIS. Especially in terms of management, AIS is thought to be inadequate in producing information that will keep up with the changes and uncertainties. Failure of managers to meet requests, budget, cost, lack of financial and non-financial knowledge can not be obtained when needed, time loss in analysis and reporting, inadequate status and performance evaluation, inconsistency

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and cumbersome structure are general criticisms to the system (Hacırüstemoğlu ve Şakrak, 2002, 6-7). On the other hand, accounting information is changing qualitatively. The importance of accounting knowledge, which is suitable for sustainable business structure, that is based on quality and customer satisfaction, which is the forefront of activities that contribute to strategic and value creating quality, has increased. According to this, it is expected from AIS to be more functional and dynamicand producing informal knowledge (IK) as well as formal knowledge (FK) in traditional structure. Expected and requested IK is fast, timeless, simple, and flexible knowledge, based on enterprise intelligence, produced with intensive worker input and intellectual intelligence, bringing intuitive and rational approaches to unexpected situations. This study predicts that AIS can be using IK as well as FK in order to be more effective and functional in the provision of qualified knowledge, to increase contribution to the decision making processes, and thus extend the scope of managerial reports. The study, which is prepared with a different point of view in the field of management accounting and AIS, aims to gain the concept of IK to knowledge management and accounting literature.

2. CONCEPTUAL FRAMEWORK

From a viewpoint of the knowledge management, knowledge is classified according to criteria. According to these are explicit and tacit knowledge (Awad ve Ghaziri, 2004), (Güçlü ve Sotirofski, 2006: 354), knowledge found in people, customers and processes depending on the nature and idealistic, systematic, pragmatic and automatic knowledge according to classification and usage (Barutçugil, 2002: 63). Within the subject classification IK can be regarded as a knowledge come up with in different structures requiring identification, organization and positioning for use. It can be accessed to the IK sometimes by conversioning of tacit knowledge to the explicit, sometimes by reaching to the knowledge that is existing in the supplier or the customer as not formatted or sometimes by identifying the internalized knowledge for actions carried out without thought. IK can be defined as the general provision of all qualitative knowledge which is obtained outside of formal knowledge management processes and which can be used in decision processes and which has the potential to create value. In terms of accounting, IK can be found in all business processes, except for financial or non-financial information that is formally produced and generally defined within the framework of obligations and standards.

2.1. FEEDBACK

Feedback means, in the sense of a dictionary, knowledge about the result of a behavior or regulation that is obtained from the environment of a person (TDK, 2015). Theoretically, feedback requires comparison and evaluation of actions, operations and changes in the environment, for goals, standards and predictions (explicit and tacit, organizational and personal) unlike purely knowledge. Feedback can be analyzed in two ways, at the organizational level focusing on output or focusing on individual performance at the staff level (Pitkanen ve Lukka, 2010:1). At organizational level, feedback can be shaped as performance reports, key performance indicators across the organization, or information about the performance of competitors. Staff level feedback can be described as behavior, motivation, learning, and bottom-up communication. Pitkanen and Lukka (2010) deal with formal and informal feedback in terms of source, time and rule dimensions. *Formal feedback* can be expressed as periodic and regular sub-meetings and reports, including formal assessments and performance reviews. Because of necessity and formalism, operation is systematic. *Formal Feedback with Resource Dimension* is system-based feedback and is linked to information systems. The performance data is coded and can then be exchanged without inter-person communication (Pitkanen ve Lukka, 2010: 3). Form the substructure of a standard and regular source. *Formal Feedback with Time Dimension* gives comparable time series results that follow trends, analyzing changes in time to managers in regular and ongoing reports (Pitkanen ve Lukka, 2010: 3). *Formal Feedback with Rule Dimension* is based on coercive and hierarchical communication between the executives and employees, who are considered necessary for the organization. Feedback in the form of monthly performance measures production for central management or standard performance evaluation procedures can be given as an example (Pitkanen ve Lukka, 2010: 4).

Meanwhile, *Informal feedback* can be defined as social relationships between superiors, peers and duty-share or spontaneous feedbacks arise from individual behaviors communicated by daily interactions. Informal feedback which arise without request out of plan and program is independent of the formal feedback mechanism and not systematic. *Informal Feedback with Resource Dimension* enables different questions to be raised between two or more people about a broader view of the issues and the issues discussed (Pitkanen ve Lukka, 2010: 3). *Informal Feedback with Time Dimension* is the feedback that occurs frequently during daily life, during an action or when something is done. This kind of feedback allows to respond quickly to changes and needs in day-to-day management and make real-time decisions (Pitkanen ve Lukka, 2010: 3). For example, managers may request additional temporary reports from their information systems due to changes in the immediate product or

customer preferences on the market. The source to be addressed in this case is informal feedback. *Informal Feedback with Rule Dimension* perceived as voluntary and additional feedback generated without being requested. Therefore, submission and retrieval depends on personal skills, style and preferences (Pitkanen ve Lukka, 2010: 4).

2.2. EXPLICIT AND TACIT KNOWLEDGE

Explicit Knowledge is concrete knowledge that can be expressed by words, pictures and other means. According to Alavi and Leinder (2001), explicit knowledge is the knowledge that can be obtained and expressed systematically, formally and systematically, which can be coded, used as symbols and spoken languages (Aydıntan vd, 2010: 7). Explicit knowledge is information that can be saved on a computer or paper. Therefore it can be communicated to a formal and systematic language (Dervişoğlu, 2004: 31). Tacit knowledge is the fuzzy knowledge that lies in the brains and minds of workers (Cooper 2007: 519). According to Alavi and Lainder (2001), the tacit knowledge is embedded in the experience, idea or action (Aydıntan vd, 2010: 7).
According to Goulay (2002), context is the non-numerical and non-linguistic form of knowledge, which is highly personal, rooted in one's values, feelings, ideas and experiences (Karakoçak, 2007: 32). Polanyi (1958) defines tacit knowledge as knowing to do something without thinking how it is done. At this point, three theses have been put forward. The knowledge (1) a real invention that can not be answered by clear rules and algorithms, (2) is highly individual, (3) is implicit or caused by implicit knowledge (Nonaka vd. 2000: 24).

2.3. INFORMAL KNOWLEDGE

The English word “form” in the meaning of figure, form, image, physical appearance has been made adjective with “al” formative, has been gained the meaning of customary, regular, the essence of something, form, related with figure. The “formal” word has evolved over time into a broad understanding of “official”, “legal”, “by rule”. “Informal” which is reached by “in” negation formative is used in corrensponse to the meanings of “unofficial”, “unsuitable”, “unprofessional”, “legally invalid”, expressing the exact opposite of the meanings listed above (Etymology, 2015, Wikipedia, 2015). IK is the knowledge exist verbally in the nature unlike the FK contained in systematic and scientific written sources such as work notes, handbooks or curricula, transmitted only by the sources written for advice and guidance purposes (Fleck ve Tierney, 1991: 11). Outside of formal learning environments, such as school and training courses, is knowledge acquired through personal experience (Business Dictionary, 2015). While FK can be revealed and shared with programmed activities such as lectures or workshops, IK can be revealed and shared with programs such as coffee breaks, social events organized in parallel with these organizations (Reychav & Te'eni 2009, 1267). It focuses on two issues that serve the formation of IK. These are informal learning, the other is informal communication.

Informal learning is a learning experience that comes alive without depending on a certain purpose and plan in the natural environment (Özen, 2011: 2). It is defined as learning resulting from everyday activities related to work, family and other times of day. This learning is often called experiential learning and can be understood as accidental learning to a certain degree. Informal learning is not structured in the direction of learning objectives in terms of time and support. So it is not expected to be approved, it is usually untargeted and coincidence (Danielle ve Jens, 2004: 71). Businesses use informal learning for the development of workers as a result of inevitable human behavior. Workers randomly learn more from another worker than they learn in formal programs (Cross, 2007: 36). *Informal communication* is a form of communication that involves uncertainty about how information and instruction flow can be achieved. It is linked to an informal set-up within the organization and manifests itself in a network of interpersonal relationships that affect decisions within the organization. Even if informal communication is contrary to the formal process, it can be functional in institutional mechanism(Solmaz, 2006: 564). It is dealt with as communication where the command and control of management or managers is at a minimum and more emphasizes the social aspects of businesses (Fay, 2011: 214). Informal communication can function to contribute to the success of the organization, such as solving problems, resolving conflicts, providing coordination, sharing information (Koçel, 2011: 532).

3. INFORMAL KNOWLEDGE USE AND REPORTING IN ACCOUNTING INFORMATION SYSTEM

The AIS is defined as a business information system that produces accounting knowledge to present to internal and external users using financial and non-financial data in business. The accounting knowledge generated by the AIS is used to measure financial information about the economic activities of an business and to report the available informations to the managers in the decision-making process (Akgün ve Kılıç, 2013: 22). The process of generating information in the traditional AIS begins by collecting the data on the economic events and

transactions that can be expressed in money and affect the assets and resources of the business and recording them to the information production process. The process continues with information and knowledge transformation activities and ends with obtaining accounting reports, financial statements, declaration and etc. outputs. In general, it can be said that the accounting function produces, knowledge from -by updating the existing information, -by combining two facts, -by using customer and supplier relations, -by improving the technological infrastructure and - by using R&D studies.

The AIS which concentrates on the generation and use of FK, accepts exist of IK, however does not incorporate into the standard knowledge production processes. Due to its nature and infrastructure, the traditional AIS is not interested in IK, which is unfounded and unreliable. Taking the feedback or exposing the tacit knowledge in the organization are a form of behavior that is not familiar to the accounting function. In fact, an important paradox that most modern organizations and businesses with improved information systems face is still not to receive sufficient and continuous feedback, and not to expose tacit knowledge. This viewpoint is based on financial accounting. However, IK is the subject of management accounting that uninterested IK can create value to any managerial decision-making or problem-solving process. In order to increase the contribution of the accounting to the decision-making process, such knowledges should not be neglected. It should not be forgotten that the main purpose of the information systems is to meet the expectations of the management at the highest possible level and to satisfy the knowledge users. On the other hand, there is no obligation to comply with legal requirements and standards in management accounting, so it is important to include knowledge that is not formal but strategic in terms of business, to the knowledge use and reporting. According to these approaches, the knowledge use of feedback and exposed tacit knowledge of the accounting under the IK frame should be examined and considered on teporting.

3.1. Feedback in the Accounting Information System

It is possible to refer to the AIS as a function that prepares the feedback of business activities. Some of these feedbacks are made up of reports relating to the financial AIS and generally prepared in accordance with legal requirements. The other part is related to management accounting, affecting decision-making processes, reports on performance measures in terms of strategy and targets. Traditionally feedback in management accounting is formal information system and mathematical view of performance measures and formal goals such as a balanced scoreard. However, feedback needs to have broader coverage effects from both formal and informal process in line with the common management objectives (Pitkanen ve Lukka, 2010:1).

The concept of feedback has been widely studied within the scope of performance measurement in the area of management accounting. Feedback is taken as teactions that reflects the deviations between performance and targets. The definitions of performance measurement in the literature refer to systems that help managers to stay in orbit and provide business objectives with periodic feedback reports that include progress against goals. Traditionally feedback focus the on whether budgeted financial goals and objectives of functions and workers are met. Reports and communication channels in the AIS include many subjective opinions and evaluations which consist of unit and financial data. However, management requires to IK sources prepared by department workers and users such as face interviews, impressions, telephone interviews, etc. in addition to quantitative accounting knowledge. The AIS sometimes provides unrealistic, too late, very abstract or general, neglected, but limited, quantitative knowledge. This, also causes management to search for sometimes irregular, but faster and more realistic IK generated with less formal knowledge resources by using knowledge workers (Pitkanen, 2013; 57).

3.2. Transferring Tacit Knowledge Into Explicit

When an evaluation is made in terms of AIS, tacit knowledge can be accepted in the class of IK. IK is not defined in what conditions and forms are to be produced in accounting principles, standards and laws is generally produced in the direction of the expectation of knowledge users. Cost and management accounting sub-information systems have the potential to produce such non-formal knowledge (Özçelik, 2010: 92). Tacit knowledge hidden in workers can be transformed into value by being learned, transferred and taught to others. A climate should be set up to encourage social relations within the organization to transfer tacit knowledge into explicit and to share the knowledge stored in individuals with team members with this relationships. At this point, it has been revealed in many types of research that the roles and behavioral control elements that constitute the components of social capital and the theory of planned behavior have implications on the intention and behavior of tacit knowledge sharing (Aydıntan vd, 2010: 4).

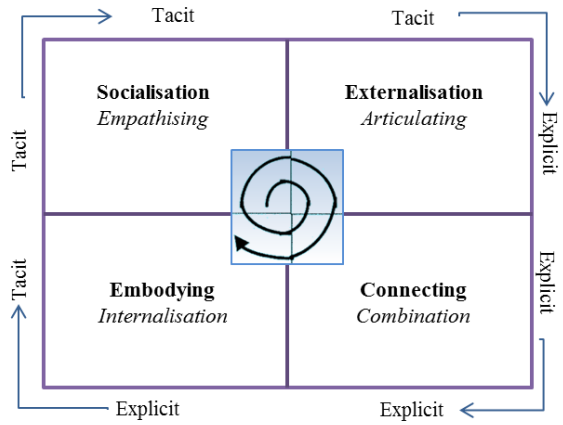

Figure 1. The SECI Process
Source: Nonaka I., Toyama R. & Konno N. (2000). SECI, Ba, and Leadership: A Unified Model Of Dynamic Knowledge Creation.

Tacit knowledge may be possible through acquiring such socialization, informal enviroment, coaching and counseling, master-apprentice relationship, face-to-face communication elements (Bengshir 2011: 1). The most comprehensive and subject-oriented study on this area is Nonaka et al. (2000) 's SECI dynamic knowledge production model. SECI is a process consisting of socialization, externalization, combination, and internalization elements (figure 1). The transformation in the SECI process is shown as a spiral rather than a circle. This spiral indicates that there is a continuous increase in the interaction between these four elements in the knowledge production process. This is a sign that the previous stage is always overrun by the next stage. The resulting interactions will broaden both the horizontal and vertical boundaries of the available knowledge. Another means of this that such these interactions allow both the generation of new knowledge and the expansion of the existing explicit or tacit knowledge itself (Nonaka vd., 2000: 11).

It is an important advantage in terms of the AIS that workers have access to a great deal of accounting data and information and have a structure that will expose tacit knowledge. This advantage can be used for elements that contribute to the production of knowledge such as updating existing knowledge, accessing new knowledge by combining two facts, and creating another knowledge source of knowledge.

3.3. Reporting Based on Informal Knowledge

In the case of competition and change situations, the information system reporting in a formal structure appears to be inadequate. For example, a manager who requests knowledge from the AIS to solve a sudden problem may have to wait for the end of the period to get a consistent report. Or, when the evaluation of one of customer performance who is experiencing a managerial crisis but is considered very positive according to the financial indicators, if the knowledge obtained informal ways about the difficulties of customer has experienced can not be conveyed to the related parties, it may be faced with surprise developments such as failure to collect receivables, order rejection etc. Because of these circumstances, it is necessary for the AIS to use IK as well as FK and to support the decision making and crisis management processes of middle and upper management. IK should be seen as knowledge that can be included in management accounting reporting, as it is not possible to do so in legal reports, which are usually relevant to financial accounting and are required to be formal.

According to the Financial Accounting Standards Association studies defined the factors affecting the quality of the knowledge as the benefit cost, the intelligibility, the timeliness, the predictive value, the value of feedback, the reliability, the loyalty to the representation, the impartiality, the probability of accuracy the verifiability, the comparability, the consistency and the materiality (Özçelik, 2010: 138). The contents of reports based on IK are expected in flexible, abstract, and even reject some elements qualified, in contrast to the most mentioned elements. In this direction, reports can be expected to be created with different qualities and features in particular for organizations. In a general assessment, the qualifications of the AIS based on IK reports can be summarized as follows.

Reporting exclusive for users and department: The AIS should be able to create non-standard and user-specific reports with its technological infrastructure. With this feature, knowledge users can create their own reports according to their requirements. With the same understanding, accounting knowledge will be able to create reports in line with the needs and demands within the framework of the permissions granted to other departments. *Reporting enterprise intelligence supported:* Data and information obtained through entreprise

intelligence technologies that can be integrated into the AIS can be made into qualified knowledge by subjecting them to analytical examinations. Thus, knowledge includes features such simulation, forecasting, future projection, error detection, inspection, investment analysis, feasibility, etc. can be reported. *Reporting transparent and sharing openly:* The knowledge to be reported should be made as open as possible to the sharing in the extent of business confidentiality. Transparent sharing of the financial situation of the business with its financial and non-financial activities will have an effect of increasing the sense of belonging to the workers. In addition, it will be possible to discuss opinions and solutions on the general situation and problems from different sections. *Timeless, Simultaneous Reporting:* Due to the periodicity principle, the reports generally have to wait periodically and the period ends. However, decision-makers can request knowledge that is timeless against the fast-developing situations and without waiting for the end of the period. Instead of waiting for the end of the period in reports to be submitted in time, it should be possible to prepare quick reports about the main events by analyzing the events that develop. In order to prevent inconsistencies that may arise in the requested reports, the completions and corrections can be made with forecasts. *Budget Comparative Reporting:* Developments in the operator's foreseen activities can be intervened quickly by including informal information in reports. Alert mechanisms can be developed, especially in reports on expense and sales budgets. With these reports, budget comparisons can be made constantly to ensure that budget estimates are kept as accurate as possible. *Reporting Workere Participatory:* The reports can be supplemented by estimates, interpretations, and perceptions that the workers have achieved with the knowledge and experience they have acquired as a result of individual initiatives. This feature will enable decision makers to notice cases that they missed or can not predict. *Evaluative Reporting:* The evaluations of brainstorms and workshop realized with worker participation should also be included in the reports of the AIS. Such reports may include proposals for problem solutions, road maps, and strategy recommendations.

4. CONCLUSION

The qualified knowledge produced by the AIS is intended to increase the competitiveness and profitability of the business. Previously, the produced knowledge while it seems sufficient to meet the legal obligations of the business, today, due to the changing circumstances and the desire to gain the foreseeable future, it is expected to be more qualified and value-creating form. This has forced the accounting to increase efficiency and functionality in the provision of knowledge. It is expected that, apart from the formal structuring of accounting, the accounting should be open for structuring which provides IK production, contributing to the differentiation of the obtained knowledge and increasing the quality of the reports. It is also requested that the AIS not only reach to the sources of IK but also be able to incorporate the knowledge obtained from these sources in the way that will create value, into its reports in the direction of needs and demands. At this point, it can be regarded as an obligation to gain the responsibility and experience of knowledge workers in order to select and select qualified knowledge to create value. In the scope of the study, it was emphasized the necessity of the feedback and exposing tacit knowledge under the IK frame, in this direction, it has been tried to determine the nature of the IK based reports of the AIS. This study can be considered as a theoretical evaluation. It is expected to contribute to the literature in terms of providing a new perspective on the use and reporting of information in the area of AIS and management accounting.

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