



Analysing the impact of accounting information system components in enhancing the AIS performance in enterprises

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Abstract

The purpose of this paper is to analyse the impact of the accounting information system (AIS) components in enhancing the AIS performance in enterprise. This study obtained primary data using survey methods by a considerable representative sample of public enterprises in Kosovo. The collected data was analysed by descriptive statistics, correlation and multiple linear regression analysis. The analysed results provide an overview of the impact of AIS components in enhancing the AIS performance in enterprises. The AIS components has been expressed through characteristics of AIS, designers of AIS, information technology, professional education, regulations, laws, standards and accounting practices. Irrespective of the research outcomes, it is apparent that the AIS exhibits a strong correlation with the operational aspects of public enterprises in Kosovo, underscoring its pivotal significance in facilitating diverse functions within these enterprises. The findings emphasize the importance of the AIS components, towards enhancing the performance of AIS in public enterprises in Kosovo. Furthermore, this research paper indicates that there is a positive relationship among AIS components, AIS characteristics, AIS designers, information technology, professional education, regulations, laws, accounting standards and practices and AIS performance. These findings also underscore the significance of taking into account and optimizing each of these elements in order to maximize the advantages and results of implementing an AIS and enhancing performance in public enterprises.

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1. Introduction

Accounting information system (AIS) is a comprehensive information system that facilitates the conversion of economic data into financial information. Its purpose is to support the operational needs of an enterprise by providing timely and qualitative information to users. Consequently, AIS play a crucial role in contributing to the success of the enterprise. AIS is effective when all users of information have safe, relevant, reliable and in time data or when the performance of AIS tasks, improve continuously.

AIS perform crucial functions in the process, collection, storage, and dissemination of data to meet the information requirements of users. The formal analysis of AIS involves the examination of its construction, the process of development, and its constituent components. The primary objective of AIS is to facilitate the efficient distribution of relevant information within an enterprise. Additionally, AIS assumes a crucial role in the creation

and enhancement of the necessary capacities to achieve effective and efficient communication within the organization.

The components of AIS that enable its operation include human resources, information technology, data, techniques, models, and accounting practices. These components collectively support the enterprise to manage the knowledge effectively. The continuous improvement and significance of enhancing the effectiveness of AIS in both its composition and implementation contribute to the overall performance enhancement of AIS within the enterprise. Hence, when the various components of AIS are adequately designed, they effectively enable the provision of timely, pertinent, and dependable information that fulfils the needs of users. The quality of the system and the level of technical sophistication of AIS components play a crucial role in determining the relationship between information and its quality.

This study aims to analyse the impact of accounting information system (AIS) components on the improvement of AIS performance in enterprises, considering the significant role and support provided by AIS in various operational aspects. Indeed, this study specifically concentrates on evaluating and analysing the five crucial components of the AIS system, examining their interrelationships, and determining their influence on the performance of AIS within enterprises. To conduct the assessment and determination of the AIS components, this study relies on various types of research. Therefore, the performance of AIS will be evaluated by considering its key components, which include the characteristics of AIS, the AIS designers, information technology, professional education, as well as regulations, laws, standards, and accounting practices. The analysis was conducted utilising primary data acquired through survey methodologies from a significant and representative sample of public enterprises in Kosovo. Based on the findings of the analysis, it can be concluded that the performance of AIS is contingent upon its components. Additionally, a crucial aspect of AIS success lies in the harmonization of its components. The alignment and adjustment of the AIS components to the specific needs, technological requirements, and values of the enterprise result in an improvement in the overall effectiveness and efficiency of the system. As a result, the proper integration of AIS components has a significant impact not only on the performance of AIS itself but also on the overall performance of enterprises.

2. Literature Review

The accounting information system- AIS represents the integration between the field of accounting and the information system, designed to perform the possible accounting functions (Bagranoff, Simkin, & Norman, 2010; Vatanasakdakul & Aouny, 2009).

AIS is a combined system created by: human resources, hardware, software, communication networks, data resources, policies and procedures for storage, recovery, transformation and distribution of information within the enterprise (O'Brien & Maracas, 2010).

AIS is comprised of three main subsystems: The first subsystem the payments processing system which supports the daily operations of business and generates diverse reports for users across the enterprise. The second subsystem is the general financial reporting system, which is responsible for producing traditional financial statements, including the income statement, balance sheet, cash flow statement, changes in equity, tax returns, and other reports mandated by the legal regulations. Lastly, the system of management reporting which provides internal management with a range of financial reports and relevant information for decision-making purposes. It includes budget reports, variance reports, and responsibility reports, among others (Hall, 2011).

The AIS is a system that relies on information technology and is specifically designed to perform crucial functions, including the collection, storage, management, and distribution of accounting information to information users (Bodnar & Hopwood, 2004; McLeod & Schell, 2007).

The primary purpose of an Accounting Information System (AIS) is to generate relevant and reliable information pertaining to economic events. This is achieved through the integration and coordination of various systems and subsystems (Gelinas & Dull, 2012; Susanto, 2013). However, the function of AIS is not only in providing financial reports, but more broadly like in managing and planning of business activities, in controlling systems, planning budget, standardization of financial reports and managerial reporting perspective (Frezatti, Aguiar, Guerreiro, & Gouvea, 2011; Robalo & Moreira, 2020; Romney & Steinbart, 2012). The management of enterprise strategic functions and processes is facilitated through the utilisation of information technology to manage the functions of the AIS (Kieso, Weygandt, & Warfield, 2012; Porter & Norton, 2009). Moreover, nowadays the AIS is essential for managers to forecast and define the company's strategic objectives in the future, as well as to make decisions that will lead them to success (Monteiro & Cepeda, 2021).

The quality of the system, with a specific focus on information production, should be tailored to the technical levels and aligned to the systemic levels (DeLone & McLean, 1992; Susanto, 2013). To be effective, AIS must be designed and evaluated with relevant models in diverse enterprises. Therefore, previous accounting researches have reviewed different models of adaptation among AIS, enterprise, technology, organizational structure, environment and other factors (Mia & Chenhall, 1994; Otley, 1980).

Consequently, the construction of AIS is sustained by various elements, including human resources-referred to the users of the system while procedures and instructions encompasses the methods employed to acquire and process data. Data refers to the pertinent information for the enterprise, while software denotes the

computer programmes utilized for data processing. Information technology infrastructure encompasses the equipment employed to operate systems, and internal controls encompass security measures implemented to safeguard sensitive data (Romney & Steinbart, 2012; Teru, Idoku, & Ndeyati, 2017).

According to several authors, the AIS components are: users of system, management support, training and education, the organization and its tasks, the system design, processes, technology, enterprise and its circumstances, legal system, guidelines and rules of practice and other factors that contribute to AIS efficiency or quality (Hirschheim, 1985; Kim & Lee, 1986; Cerullo, 1980; DeLone & McLean, 1992; Doll, 1985; Ives & Olson, 1984; Ginzberg, 1980; Chenhall & Morris, 1986; Ginzberg, 1980; Gordon & Narayanan, 1984; Otle, 1980; Ginzberg, 1980; Ives & Olson, 1984; Okour, 2016; Puspitawati, 2021).

The AIS components, exhibit diversity as described by various authors and lack consistency across individual research papers. Many research papers examine the attributes of accounting information and the characteristics of AIS. These attributes are commonly identified as follows: The key elements under consideration include concentration, accumulation or assemblage, alignment, temporal scope, monetary and non-monetary data, as well as quantitative and qualitative data (Chenhall & Morris, 1986; Gordon & Miller, 1976; Gordon & Narayanan, 1984). The information characteristics of the AIS, are determined by each other and therefore their information orientation, focus and purpose, should adapt to their respective task characteristics. To increase the performance of the AIS usability, the design of the system is very important issue (Hirschheim, 1985). An AIS design that is of high quality and sophistication facilitates the provision of integrated information across various organisational functions, enabling effective response to uncertainty and optimization of the decision-making process. Choe (1996) and Gul (1991), in his research paper studied the performance of AIS, respectively the satisfaction of the users information and the usability of information, where influencing factors according to the author were the ability of AIS personnel, user participation, the size of the organization, training and education of participants.

The information technology support the AIS through complementary system of intelligence and the technical competences of technology, therefore information technology and AIS are positively related to the performance of AIS in enterprises (Grande, Estébanez, & Colomina, 2011; Teece, 2007).

The advancement of information technology has significantly contributed to the progress of new accounting systems. This progress has led to improvements in economic models, emphasizing business relationships, as well as addressing technical issues with a particular focus on ensuring the confidentiality, integrity, and availability of data within the system (Dunkerley, 2011). In addition to the aforementioned benefits, information technology advancements have resulted in reduced time and costs, as well as increased efficiency and effectiveness in transactions and communication within business relations. Hence, the integration of contemporary AIS with emerging technologies can significantly enhance the strategic flexibility and overall performance of organizations (Yoshikuni, Dwivedi, & Dultra-de-Lima, 2023). The integration of AIS with technology showcases that how the system can effectively support cost-informed tracking, alerts, and forecasting within enterprises. This integration enables organizations to leverage AIS capabilities to monitor costs, receive timely alerts, and make informed forecasts (Tingey-Holyoak, Pisaniello, Buss, & Mayer, 2021).

AIS and information systems strive to enhance procedures and employ advanced information techniques to attain relevant and meaningful information (Bodnar & Hoopwood, 2010).

A high-quality AIS meets various requirements, including information security, accessibility, user reliability, data integration, and availability. By fulfilling these requirements, AIS can effectively support and enhance the performance of enterprises (Rosa & Purfini, 2019).

Schipper and Vincent (2003) explain that the quality of accounting information is a multifaceted concept that encompasses relevance, conservatism, and profitability, providing significant value for management.

The quality of financial data refers to its adherence to a standard measure or a certain level of excellence. Achieving this quality is possible through the implementation of effective quality systems (Sacer & Mamic, 2006). A well-designed AIS approach is instrumental in enhancing the representational fidelity of financial reporting information (McCallig, Robb, & Rohde, 2019). Moreover, the AIS has enhanced the representational faithfulness of information, closely aligning it with the audit function (McCallig et al., 2019).

The AIS should also be aligned, with the code of ethics and include comprehensive training and re-training programs for accounting professionals. Numerous studies have established a direct correlation among professional education, training, and AIS performance. Through professional education, AIS users acquire additional skills to proficiently carry out their roles, adapt to evolving requirements, conduct assessments, and address system constraints and associated issues. Therefore, to enhance the quality of AIS, enterprises should employ highly skilled and competent professionals and accountants who possess appropriate academic qualifications, regardless of their position in the AIS (Jarrah, 2022). By doing so, the AIS can enhance professional skepticism and promote a culture of continuous improvements (Ghani, Jabal, Zandi, & Hye, 2022). The implementation of an Accounting Information System (AIS) necessitates the consideration and incorporation of relevant laws, standards, and accounting practices specific to the countries in which the enterprise operates. (Pratama, 2022; Romney & Steinbart, 2012).

Financial reports must adhere to standardized and integrated formats, taking into consideration the specific needs of both external and internal users. This is especially crucial for external users, such as state agencies, investors, creditors and society in general. The dynamic developing of the AIS, through flexibility,

complementary intelligence system, technical competencies in technology, and the performance of the AIS and overall enterprise performance is evident. Consequently, there exists a reciprocal relationship between the performance of the AIS and the performance of the enterprise, which remains consistent over time. . (Puspitawati, 2021).

3. Research Methodology

This research has been carried out using the deductive approach, wherein the theories and concepts are derived from pre-existing ones. The research for this paper has started with secondary data in order to know the subject, its characteristics and dimensions. The secondary data has also helped the use of AIS components and select the important ones, for our research. After defining the research questions and hypotheses, we worked with the primary data. In this study, the primary data was obtained through a questionnaire that was organised into multiple sections. For the purposes of this research, only the first and second sections of the questionnaire were utilised. The data analysis was done through the statistical package SPSS 21. The SPSS 21, provides a range of statistical procedures and tools to analyse data, including descriptive statistics, inferential statistics, correlation analysis, regression analysis, factor analysis, and more. To gain a better understanding of the data and extracting meaningful insights without making inferences or drawing conclusions beyond the data itself, we used descriptive analysis. To measure their impact, affect or influence of the dependent and independent variables we have utilized the multiple linear regression. Meanwhile the relationship or correlation between the variables, were measured through correlation analysis.

We have evaluated the logical connections between the raised concepts using supporting empirical data, in order to answer the question of the paper. The primary inquiry of this study, grounded in the paper's objective, revolves around the following: To what extent do the constituent elements of AIS exert influence on the operational efficacy of AIS within public enterprises situated in Kosovo? Based on the inquiry posed, the present research paper formulates the hypothesis as follows: "H₁- AIS components impact the AIS performance in public enterprises in Kosovo"

The outcome of this analysis will offer insights into the influence of the independent variables, specifically the components of AIS, on the dependent variable, which is AIS performance. AIS components are expressed by: characteristics of AIS, designers of AIS, information technology, professional education, regulations, laws, standards and accounting practices.

4. Findings and Discussion

The collected data for the analysis encompassed respondents with diverse roles in the field of AIS, including information producers, AIS designers, AIS users and individuals occupying managerial positions. While positions such as financial officer, financial assistant, manager, administrator, and others are used to describe respondents' jobs in public organisations. The most represented age of respondent was between the age of 36-45, followed by other age groups.

To further pursue the main question of the study, we present the results of the multiple linear regression analysis, raised from the main hypothesis as follows. Initially, we focused on the coefficient R, which indicates the relationship between the predicted performance of AIS and the observed performance of AIS. During the analysis the dependent variable or AIS performance is represented by the parameter "b", while the "a" - represents the independent variables or predictors (constant), respectively: characteristics of AIS, AIS design, information technology, professional education, laws, standards, and regulation.

Table 1 presented the coefficient R, it is 88.5%. Since this is a high number (close to 1), we can conclude that the model predicts the performance of AIS in the right way. The coefficient R² with a value of 78.4% provides the variations of the AIS performance by the independent variables or AIS components.

Table 1. Model summary of multilinear regression.

| Model | R | R square | Adjusted R square | Std. error of the estimate |
|-------|--------------------|----------|-------------------|----------------------------|
| 1 | 0.885 ^a | 0.784 | 0.774 | 2.766 |

Note: a- Independent variables or predictors (constant): Characteristics of AIS, AIS design, information technology, professional education, laws, standards, regulation; b- Dependent variable: AIS Performance

The Table 2 presented the results of the ANOVA regression. The F coefficient explains that the model represents a significant amount of variance with a value of 75.773. The independent factors can account for the variation in the dependent variables because F has a significance value smaller than sig 0.05.

Table 2. Anova regression results^b.

| Model | | Sum of squares | Df | Mean of squares | F | Sig. |
|-------|------------|----------------|-----|-----------------|--------|--------------------|
| 1 | Regression | 184.84 | 8 | 23.111 | 75.773 | 0.000 ^a |
| | Residual | 81.26 | 242 | 0.305 | | |
| | Total | 266.09 | 250 | | | |

Note: a- Independent variables or predictors (constant): Characteristics of AIS, AIS design, information technology, professional education, laws, standards, regulation; b- Dependent variable: AIS Performance

After presenting the R and F coefficients, in [Table 3](#), we provide the estimation of variables according to the regression equation and the multiple linear regression equation. Based on the results of the analysis, the multiple linear regression equation is expressed as below:

“AIS performance= 4.216 + 0,099 “characteristics of AIS” + 0,129“AIS design” + 0,195 “information technology” + 0,074” professional education” + 0,170“laws, standards, regulation”.

The value of the unsteady coefficients B indicates the prediction of the dependent variable from the independent variable. Consequently, information characteristics affect the performance of AIS with .099 units, AIS design with 0.122 units, information technology with 0.195, professional education with 0.74 and laws, regulations and accounting practices with 0.170 units.

From this equation, it can be observed that the independent and dependent variables have a positive relationship, and that raising the independent variables also increases the dependent variable and, hence, the performance of AIS.

Table 3. Estimation of variables according to the regression equation.

| Model | | Unstandardized coefficients | | Standardized coefficients | T | Sig. |
|-------|-----------------------------|-----------------------------|------------|---------------------------|---------|-------|
| | | B | Std. error | Beta | | |
| 1 | (Constant) | 4.216 | 0.030 | | 141.842 | 0.000 |
| | AIS performance | 0.099 | 0.043 | 0.156 | 2.305 | 0.022 |
| | AIS design | 0.122 | 0.059 | 0.134 | 2.342 | 0.039 |
| | Information technology | 0.195 | 0.056 | 0.308 | 3.472 | 0.001 |
| | Professional education | 0.074 | 0.034 | 0.117 | 2.179 | 0.030 |
| | Laws, standards, regulation | 0.170 | 0.052 | 0.267 | 3.253 | 0.001 |

Coefficients t with values of 2.305; 2.342; 3.472; 2.179 and 3.253 are coefficients divided by standard error. Low values of p-value (<0.05) or 0.022; 0.039; 0.001; 0.030 and 0.001 indicate that the hypothesis is confirmed, or the hypothesis is accepted as such:

"AIS components impact the AIS performance, respectively information characteristics, AIS designers, information technology, professional education and laws, regulations and standards impact the AIS performance in public enterprises in Kosovo".

To measure the correlational, or relationship between the AIS performance and AIS components with the Pearson's correlation coefficient. The results of the correlation coefficients have the values of 0.262, 0.271, 0.020, 0.747, 0.154, 0.015 and 0.083 that provides the direct relation between the performance of AIS and AIS components. Therefore, the results also explain that when one of the AIS components increases, the AIS performance increases too. As a results, by considering and optimizing each of the AIS components the AIS performance will enhance in public enterprises.

5. Conclusion

The accounting information system, supports the operation of enterprises, by providing relevant information. The organisation has benefited from the AIS services of data collecting, processing, generation, and analysis, which have greatly improved AIS performance. The purpose of this paper was to analyse the impact of the AIS components in enhancing the AIS performance in enterprise. This study obtained primary data using survey methods by a considerable representative sample of public enterprises in Kosovo. The collected data was analysed by descriptive statistics, correlation and multiple linear regression analysis. The analysed results provide an overview of the impact of AIS components on AIS performance in enterprises. The AIS components has been expressed through characteristics of AIS, designers of AIS, information technology, professional education, regulations, laws, standards and accounting practices. The findings emphasize the importance of the AIS components, towards enhancing the performance of AIS in public enterprises in Kosovo.

The results of this research paper indicate that there is a positive relationship between AIS components, AIS characteristics, AIS designers, information technology, professional education, regulations, laws, accounting standards and practices and AIS performance. It is concluded from this:

- The characteristics of accounting information with comprehensive, diversifying and specific focus orientation, with qualitative and quantitative character, financial and non-financial information oriented on past, present and future events are considered as AIS components that impact the performance of AIS in public enterprises in Kosovo.
- The AIS design with easy access, function, quality, safe, integrative and appropriate to user requirements is considered a component that impact the performance of AIS in public enterprises in Kosovo.
- The information technology with technical competence, easy functional access, availability, confidentiality, integrity of data, efficiency in costs and time, storage and security of data is considered an effective component that impact the performance of AIS in public enterprises in Kosovo.

- The professional education with the increase in the quality of information and efficiency in implementation and professional competence is considered a component that impact the performance of AIS in public enterprises in Kosovo.
- The laws, regulations, accounting standards or practices, with guiding and managing the AIS in the quality of financial reporting through standardization and unification is considered a component that impact the performance of the AIS in public enterprises in Kosovo.

The results of this research paper also reflect the interdependent and complex nature of the AIS in public enterprises in Kosovo, and that, the AIS is an integral part of all functions of the public enterprise in Kosovo. Additionally, the AIS affects the performance of the public enterprise through the quality of financial reporting, the decision-making process, performance, the control system and the facilitation of transactions in the enterprise.

The performance of public enterprises is important not only for the managers of public enterprises but for the whole society. The accountability of public enterprises is very vital; therefore, the quality of financial reporting and transparency is related to the management of public funds.

Therefore, it is advised to increase and support these resources, which are believed to be helpful in increasing the performance of the AIS in public enterprises in Kosovo. The performance of AIS depends on the availability of physical and human resources, as well as their capacity to provide information that is characterised by convenience and reliability, in order to support and help users of information inside and outside the enterprise. Human resources should have the appropriate competencies and qualifications, to increase development and strengthen the enterprise's position in the future. In addition, the sophistication of the information technology, and proper AIS design implementation, increase flexibility and overall operation to enhance any situation.

The performance of public enterprises can be one of the priorities for sustainable economic development. Therefore, increasing the performance of AIS is considered a successful manner to determine and accomplish the continuous variations at the environment of public enterprises in Kosovo.

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