



“EFFECT OF ACCOUNTING INFORMATION SYSTEM ON DECISIONMAKING PROCESS: THE CASE OF KURDISTAN REGION/IRAQ”

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Abstract

This study delves into the profound influence of accounting information systems on the intricate process of decision-making. Accounting information systems serve as the backbone of data gathering and storage, enabling meticulous planning and judicious control. Decision makers rely on these systems to structure data, transforming it into actionable insights. To maintain transparency and adherence to regulations, decision makers adhere to principled guidelines. This research concentrates on the unique context of the Kurdistan region in Iraq, examining various sectors, including private, public, and business entities. The study adopts a quantitative methodology, involving the administration of questionnaires to collect data. A sample size of 100 respondents was subjected to rigorous analysis through the utilization of SPSS version 26, utilizing linear regression as a key analytical tool. The findings of this study conclusively establish a significant correlation between accounting information systems and the decision-making process, shedding light on the critical role played by these systems in the financial landscape.

Keywords: *Accounting Information System, decision making process, financial statements, Kurdistan Region of Iraq.*

Introduction

Accounting plays a crucial role in the business world, involving the recording, evaluation, and reporting of financial transactions, ranging from capital investments to daily operational expenses. It provides vital insights into a company's financial performance, influencing decision-makers both within and outside the organization, such as managers, financial investors, and other key stakeholders. Accurate accounting information is essential for effective decision-making, as even a minor mistake can have far-reaching consequences, particularly in terms of managing resources. Thus, it is imperative that businesses possess reliable accounting data to make informed decisions that maximize profits and secure a sustainable financial foundation. Accounting information is not merely a historical record; it also serves as a crucial tool for planning and shaping an organization's future.

The strategic decisions made by management have lasting implications, making it imperative to harness accounting information to inform these choices. This information not only clarifies the roles and responsibilities of managers but also diminishes uncertainty when critical decisions are on the horizon. The accounting system plays a crucial role in providing decision-related data, facilitating effective decision-making processes.

Decision-making is an intricate process that requires informed choices in the absence of clear-cut pathways. An efficient accounting system can enhance this process by furnishing decision-makers with relevant data. The core attributes of an "Accounting Information System" are designed to aid in recording business transactions and provide the necessary information for timely decision-making. These attributes encompass functionality, reliability, usability, efficiency, maintainability, and portability. The ability of an AIS to adapt, provide reliable information, and efficiently respond to user requests is pivotal in aiding businesses as they navigate complex decision-making scenarios.



Significance of the Study

This research project aims to improve the utilization of accounting information systems for the benefit of an organization's decision-making process. This improvement has the potential to increase an organization's profitability and ensure its continued existence. It will also aid in the efficient allocation of limited resources for various purposes, ultimately enhancing the standard of living through increased productivity.

The accounting information system plays a crucial role in showcasing the different strategies and enhancements that an organization can employ based on its historical performance.

This research will demonstrate the advantages of accounting information systems in the decision-making process, focusing on the perspectives of investors, creditors, and management:

- **Investors:** Investors provide the capital necessary for a business to operate, and they rely on essential information to decide whether to buy, sell, or hold onto their investments.
- **Creditors:** Creditors need access to a company's financial statements to determine if it will meet its obligations and repay its debts on time.
- **Management:** Management relies on financial information to evaluate the company's performance, understand its current situation, and take appropriate actions to enhance the company's outcomes.

Definition of Accounting Information Systems

The information system is a formal procedure for processing data into info, gathering data, and allocating that info to users. The accounting info system (AIS) purposes to store, collect, and process financial statements and accounting, and produce info reports that directors or relevant parties can use to make “business decisions”. Even though (AIS) can be a manual system, most accounting info systems today rely on computers (State Accounting Guide , 2021). The few of previous years have seen some of the best surprising changes in the use and requests of the accounting info system, which inspires us to recount our understanding, thoughtful and use of accounting data (Nancy A. Baganoff, 2009).

Life Cycle of System Development.

As you can see, obtaining IT resources to implement systems and train people for large use (AIS) is a difficult task to study in systems and is also called system development, starting with formal information system research and to classify weaknesses and strengths who really does a systems study? this is different from business to business, as well as from project to project, many large organizations have IT experts to do so. In return, small organizations with limited technical Expertness, in addition to larger organizations with other priorities, are probable to hire external advisers for this work. (Mark G. Simkin, 2012).

Four Phases in Life Cycle the Systems Development

Usually, we can determine four steps or the main stage of investigating systems:

1. “Planning and investigation” this step is establishing and forming a system study team that will conduct a preliminary investigation of the current system and develop a strategic plan for the remainder of the research.
2. “Analysis” this step includes to analyse the company's current system to recognize info that requires weakness and strength in the current system.
3. “Design” in this step will make organizational design changes that remove the weaknesses of the current system while maintaining strong point.



4. "Implementation Follow up and Maintenance", this stage contains obtaining resources for new system, in addition to exercise fresh or available employees for use by businesses conducting follow up investigations to control whether the new system is effective or not, certainly, to determine any new issues with it. Lastly companies must keep continue the system meaning corrects light errors and keep informed the system as requisite. (Mark G. Simkin, 2012).

7 Steps of Decision-Making Process

In general, decision-making assistances managers and other commercial professionals solve difficulties and issues by testing alternative options and deciding on the best way to take a step-by-step method that is an effective way to make informed and informed decisions that are effective and result on the company's administration's long-term and short-term objectives the corporate process of making decision and it is usually shared into 7 phases.

The next are the 7 main steps in process of decision-making:

Classify the decision, the primary phase in creating the correct decision is to identify the issue or ~~and~~ and decide why this decision will make a change to your clients or fellow workers.

Collect information, then, it's time to collect info thus you might make a decision established data and facts. This needs a valuable result and verdict that determines what information is related to the decision and how to take it, ask yourself what you need to know in order to make a true decision and then actively search for anyone who needs to participate.

Classify alternatives, when you have a clear understanding of the problem, it is time to determine the different solutions available to you, you may have many dissimilar choices when it derives to creating your decision, so it is significant to get a set of choices and this will aid you identify the course of action that is the best way to achieve your goal.

Weigh the evidence, in this phase, you necessity to assess the appropriate approvals and desires to find out the best alternative according to management experts "Phil Higson" and managers "Anthony Sturgis" should be able to weigh the ranks and cons, and then choose the option that has the highest chance of success, it can be co-operative to search out a trusted second estimation to improvement a new viewpoint on the matter at hand.

Select between alternatives, when it comes time to make your decision to make sure you comprehend the risks of participating in your selected path, you can also select a range of alternatives now that you fully understand all related potential risks and information.

Take action, after that, you need to make an execution plan. This includes selecting the necessary resources and achievement support from staff and employers. Interfering with others in your decision is a key element of the effective implementation of your plan to be ready to resolve any questions or concerns that may arise.

Review your decision, a step that is often ignored but significant in the process of decision-making is to assess your decision to be effective, examine yourself what you have done well and what will be better next time. (Concordia ST. Paul, n.d.).



The Role of Financial Statements in Decision Making Process

The role of financial statements is to afford and gives info and data to an extensive range of stakeholders/users related to the work and financial position and changes in the company's financial position that must be decided on and financial statements run and afford valued info and evidence about the management ability to work with the resources provided by the owners. Notifying the relevant parties means providing accounting information in a well-known manner with comprehension content for those who intend financial statements.

The most significant financial statements considered during the company's performance assessment, which serves as a decision-making basis, are “balance sheets, income statements, statements of cash flow statements and statements of retained earnings”.

Literature Review

Information on how to trade with internal and external users is provided to managers, investors, and others. The information and info system are seen as having a significant impact on companies and occupying the normal areas of organisation or administration analysis (Tickell, 2010). Decent accounting information must be existing to provide a proper decision-making process that can increase the organization's profits and improve the use of scarce resources. Accounting systems also offer payment for the rationality through the audit procedure and interrogation process. Efficient and effective accounting info shows a key role in administrative making of decision. Accounting is a business language because it is the main tool used for reporting, recording, assessing financial events and dealings and that usually affect their jobs and procedures, and offers or displays financial information about the business of local and foreign users such as investors, managers, and others (Paulsson, 2006). The accounting information system is the most significant information that is widely used in administrative decisions and affects the performance of the organization (Royae, R. Salehi, & Aseman, 2012). One of the most significant characteristics thatsoak organizations make is the decision of management and presenting their failure or progress inachieving the objectives and goals that have been set before, one of the marks of executive poweris the capability to decide. One of the responsibilities of free men to be present for a decision and one of the characteristics of influential individuals is the courage to decide. The definition of decision: the process of selecting different ways to work using knowledge processes. Deciding is essential when there is only one strong progression of act to accompany. Accounting systems aid to make decisions by providing decision-making information (Gebremedihin, 2019).

Methodology Research

Questions

1. What is the relationship between accounting information system and of decision-making process?
2. What is the impact of accounting information system in decision making process?

Research Objectives

1. Evaluation or examination of the effect of accounting information system in the decision-making process is the prime objective of this research.
2. To describe how the system of accounting information can improve the process of decision making.



Sample Size

The example of respondents that have been planned are designated by decent accountants who are professionals from private, public, and business sectors in the Kurdistan Region. In addition, the samples that have been returned or finished by responders which are (100) respondents. Respondents who find and select as decent accountants work in business sectors like (Home store company, Honey Bird company and Qatter Airline company), Private sector in educational academy like (Accountants and professional teachers in Accounting Field in Tishk International University, Cihan University, and International University of Erbil), and also in these two banks (RT Bank and Cihan bank) and public sector like (Ministry of Natural Resources and from education: University of Koya).

Sampling technique

Judgmental sampling is a type of non-random sampling where the researcher chooses individuals for the sample based on their own knowledge and personal judgment. This means picking a group of people whom the researcher believes represent the larger population being studied. For example, in judgmental sampling, you might select knowledgeable individuals from different social groups and ask them questions related to your research.

Statistical tools of analysis

The SPSS, which is derived from statistical package for social sciences, is to study and analyze primary data. This is a program that is used to analyze data by calculating the data's mean, median, mode, standard deviation, and creates a histogram for the data. The program can analyze data in multiple ways. This program will analyze descriptive questionnaires.

SPSS is a program that will analyze data by analyzing independent variables with dependent variables by using linear regression method. This is done to understand what effects these variables have on each other. Later to check the study's reliability the program can check by Alpha Cronbach which checks the reliability of the primary data (Adams, Khan, & Raeside, 2014).

To be informed of the relationship of the two variables and a model being created with this information is affected by the regression analysis. The independent variables can be compared to the dependent variables that are affecting the independent variables.

Also, to measure internal regularity SPSS has this option called Alpha Cronbach. This relates to the closeness of a group of items. Alpha Cronbach is also referred to as the measure of scale reliability. Cronbach's alpha increases and the average interim correlation increases to keep the number of items constant (Adams, Khan, & Raeside, 2014).

Data Collection

Data collection consists of two ways. We have secondary and primary data collection. The primary data collection is collected by gathering data from experienced accountants that have worked in the accounting field, either in public, private, or in the business sector. This was done by a questionnaire to ensure 'The Effects of Accounting Information System in Decision Making process' in the Kurdistan region. The secondary data collecting method is achieved from trustworthy academic backgrounds. For example, books, academic journals, articles, and other educational foundations.

Hypothesis of Research

H_0 : Accounting Information system does not have significant impact on decision making process. H_1 : Accounting Information system has significant impact on decision making process.



Data of Analysis

Reliability Statistics

Cronbach's Alpha	N of Items
.882	20

The research reliability was certified by Cronbach Alpha to prove the outcome as shown in the board above. As clarifies that to reliability test to be accept according to this study (Hinton, Brownlow, McMurray, & Cozens, 2004) it requisite more than 0.75 Cronbach alpha. So, the researcher received 0.882 meaning that the study was strongly reliable on those items related to all questions of independent and dependent variables based on Cronbach alpha.

Demographic Information

Items		Frequency	Percentage
Gender	Male	66	66
	female	34	34
	Total	100	100
Academic Qualification	Diploma degree	18	18
	Bachelor's degree	63	63
	Master's degree	16	16
	Doctor degree (PhD)	3	3
	Total	100	100
Specialization	Accounting	56	56
	Business and Management	30	30
	Banking and Finance	14	14
	Total	100	100
Years of Experience	Less than 2 Years	33	33
	2-5 Years	40	40
	6-10 Years	13	13
	More than 10 Years	14	14
	Total	100	100
Sector of Profession	Private Sector	70	70
	Public Sector	17	17
	Business Sector	13	13
	Total	100	100

This table presents demographic data on survey participants, including gender, academic qualification, specialization, years of experience, and sector of profession. Data is shown in terms of frequency and percentage for each category within these demographic factors.



Descriptive Analysis

Section I: Accounting Information System					
#	Items	Valid	Mean	Min	Max
1	Most organizations use Accounting Information System.	100	3.36	1	5
2	The organizations who work in Kurdistan region requires Accounting Information Systems.	100	4.16	1	5
3	It is necessary to work with Accounting Information Systems.	100	4.36	1	5
4	Accounting Information System gives real benefit to organizations by providing timely and accurate information.	100	4.22	1	5
5	Accounting Information System is efficient to create reflectivity in day to day work.	100	4.25	1	5
6	Accounting information systems have an impact on new decision making in organizations.	100	4.06	1	5
7	The Accounting information system has a role in increasing profits in Organizations because it helps in budgetary planning.	100	4.08	1	5
8	The accounting information system has a significant impact on employee productivity.	100	3.88	1	5
9	The accounting information system shows errors upon application and this is what prompts employees to develop their skills to avoid making mistakes and to optimize their performance.	100	4.01	1	5
10	The organizations cannot grow and expand without an accounting information system.	100	3.89	1	5
11	The accounting information system is one of the most important strategies that will best achieve the objectives of the organization.	100	3.97	1	5
12	The accounting information system helps the organizations to avoid the bad effects of centralization especially delaying decisions.	100	4.01	1	5
Section II: Decision making process					
#	Items	Valid	Mean	Min	Max
1	There is a strong relationship between Decision making process and Accounting information system.	100	3.99	1	5
2	Most Organizations need decision makers.	100	4.21	1	5
3	Most organizations depend on decision makers to make changes in the economic activities of the organization.	100	4.17	1	5
4	The Decision-making process plays a significant role in Accounting information system.	100	4.12	1	5
5	It is a vital for Integrating the decision making process with Accounting information systems to bring about changes in the organizations to get success.	100	4.02	1	5



6	Decision making process helps in taking rational financial decision.	100	4.09	1	5
7	The success of Accounting information system depends on the sound decision making process.	100	4.09	1	5
8	The sound decision making process has positive effects on profitability.	100	4.25	1	5

During our descriptive analysis, we have ascertained the validity of the responses, with 100 individuals providing their answers. These responses are organized into two distinct tables, each addressing different aspects of the study.

The first table comprises twelve questions concerning the accounting information system, functioning as an independent variable. On the other hand, the second table encompasses eight questions that are focused on the decision-making process, serving as the dependent variable. Furthermore, this study adopted the five-point Likert scale methodology to facilitate and streamline the response process for the participants. This method offers a structured range of responses, spanning from "strongly disagree" to "strongly agree." This approach was chosen to enhance clarity and efficiency in the data collection process.

Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.649 ^a	0.422	0.416	0.39982
a. Predictors: (Constant), Accounting Information System				

The table provides an overview of the relationship between the dependent variable, the decision-making process, and the independent variable, the accounting information system. It indicates a positive correlation between the two. The R-value of 0.649 suggests a strong relationship, nearing a value of 1. The R Square value of 42.2% represents the proportion of the total variation in the dependent variable explained by the independent variable. The adjusted R Square, at 41.6%, accounts for the variability from the independent factor in the population.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.422	1	11.422	71.450	.000 ^b
	Residual	15.666	98	0.160		
	Total	27.088	99			
a. Dependent Variable: Decision Making Process						
b. Predictors: (Constant), Accounting Information System						

In this analysis, we explore the effectiveness and relationship between the accounting information



system and the decision-making process. The ANOVA results indicate a significant relationship, with a value (Sig.) of 0.000, which is less than 0.05, suggesting statistical significance. Therefore, the null hypothesis (HO) is rejected, and the alternative hypothesis (HI) is accepted.

Moreover, the sum of squares for the regression variable is 11.422, while the sum of squares for the remaining portion is 15.666. Higher sum of squares implies greater variability in the data, while lower values indicate less variability around the mean. The F value of 71.450 is greater than 1, indicating that there is effect and relationship between the dependent and independent variables.

Coefficients ^a						
Model	Standardized Coefficients			Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			
1	(Constant)	1.589	0.302		5.267	0.000
	Accounting Information System	0.629	0.074	0.649	8.453	0.000
a. Dependent Variable: Decision Making Process						

This table presents standardized coefficients for the regression model. It demonstrates that the decision-making process can be predicted based on the accounting information system using the following formula:

$$[\text{Decision Making Process} = 1.589 + 0.629 * \text{Accounting Information System}]$$

This indicates that for every unit increase in the accounting information system, the decision-making process decreases by 0.629. Additionally, the table shows a significant outcome with a p-value (Sig.) of 0.000 for the accounting information system, signifying a strong effect. Specifically, the independent variable, the Accounting Information System (AIS), has a 64.9% effect and correlation with the dependent variable, the decision-making process.

Major Finding

This study aimed to investigate the impact and relationship between the accounting information system and the decision-making process. The research findings provide answers to the research questions as follows:

1. Relationship Between Accounting Information System and Decision-Making Process

The analysis of primary data revealed a moderate correlation between the dependent variable (decision-making process) and the independent variable (accounting information system), with a correlation coefficient of 0.649. This value approaches 1, signifying a substantial relationship. The correlation analysis showed statistical significance (Sig=0.000), which is below the threshold of 0.05. This indicates a significant and robust correlation between the accounting information system and the decision-making process.

Secondary data supported the idea that the relationship between the accounting information system and the decision-making process is mutually influential, emphasizing the essential role of accounting



information in decision-making.

2. Impact of Accounting Information System on Decision-Making Process

The primary data analysis demonstrated that the accounting information system significantly impacts the decision-making process, with a regression analysis showing a p-value (Sig) of 0.000, which is less than 0.01.

The effect of the independent variable, the Accounting Information System (AIS), on the dependent variable, the decision-making process, is 64.9%, underscoring the substantial influence of AIS on decision-making.

In conclusion, the findings of this research underscore the importance and strong correlation between the accounting information system and the decision-making process, emphasizing their interdependence and the critical role of accounting information in making informed decisions.

Conclusion

This study was done with a goal of understanding “the effect of accounting information system on decision making process of the business organization”. Also, to explain and lay out the situation of this matter in the Kurdistan region on using accounting information systems.

- Based on literature review of the study it can be concluded that because technology plays a big role in development and allows easy and new solutions to make human life easier, we can say that the accounting information system holds a grand role in the effect of decision making.
- Depending on the literature review, we can understand that the accounting information system allows organizations to have profitability and it helps take care of the economics. Now due to accounting information system being the dependent factor where the independent factor is the decision-making process, we can say that there is a significant effect. Although the question of the dependent factor covers the decision-making process. In the end we can conclude that accounting information system provides enough information for an organization to gain profitability through the decision-making process.
- With the data that has been analyzed it can be concluded that the accounting information system on the decision-making process has had a significant result in the Kurdistan region. Statistically it shows that the hypothesis number is positive $R=0.649$. This number is close to (+1) of the model summary. Nevertheless, the Significant level is (Sig=0.000) and this number is positive. So, its lower than 0.01. From these figures it shows that the regression model is significant and the answers that have been concluded is analyzed to agree with the whole population. As resulted from the inspections of the researcher the accounting information system has a direct effect on the decision-making process in the Kurdistan region. The accounting information system was the main factor to have a grand effect on the management performance from what the researchers have inspected.

Recommendation

- This research strongly recommends the widespread adoption of accounting information systems, emphasizing their efficiency and effectiveness in influencing decision-making.
- Implementation of these systems across all sectors, including public, private, and business, is advised, particularly in the Kurdistan region, to enhance accuracy, inventory management, profitability, financial reporting, and support for decision-makers.



- Accounting information systems simplify tasks for accountants and streamline financial data processing, enabling stakeholders and management to make informed decisions.
- Employing experienced professionals is essential for effective system implementation, and decision-makers should utilize these systems for data collection from financial statements to drive economic growth.
- The research underscores the significance of accounting information systems in collecting, analyzing, and summarizing critical data.

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