



# Interactive Effect Between Organization's Strategy Building and Accounting Information System Design “A Case Study of Social Security Corporation (Jordan)”

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## Abstract

This study aims to investigate the interactive relationship between organization's strategy building and accounting information system design, This study is one of very few studies which have investigated how organization's strategy influence the design of an accounting information system, which provides suitable and substantial knowledge, and how accounting information system is effecting on organization's strategy building for achieving organizational goals, mission, and vision. Questionnaires distributed to the members of the Social Security Corporation staff in Jordan , number of valid questionnaires for analysis were (72) questionnaires, (One sample t test and simple regression) were used to test questions of the study. The most prominent results of the study indicated that : The correlation coefficient of simple regression analysis ( $R = 0.485$ ), revealed positive medium relationship between organization's strategy building and accounting information system design, and values of regression coefficient of simple regression models indicated that, 43.3% of the change in the accounting information system (dependent variable) is attributable to the change in the organization's strategy building (independent variable). Instead, 54.2% of the change in the organization's strategy (the dependent variable) is attributable to the change in the accounting information system design (independent variable) with assumption of any other factors constant.

**Keywords:** Organization strategy, Accounting information system, the social security corporation.

## Contribution of Study

This study contributes in the existing literature to the interpretation of logical analysis of the interactive relationship between organization's strategy building and accounting information system design for the purpose of developing overall performance of the organization and accomplishing the strategic mission, vision, goals and objectives of the organization.

## 1. Introduction

The recent globalization and increased competitiveness among world organizations, dynamic changes in the business environment, and uncertainties all in all have increased the importance of developing strategy for an organization, and leveraged the value of an accounting information system for business organizations to be effective, and generates information needed for the organization and its subsidiaries, restructuring different organizational units and departments, providing organization of valid and current information about the environmental circumstances in aturbulent environmaents ,in which the organization operates for enabling the organization to create its distinct strategy that embodies the organization's mission and vision that helps it to deal with the different internal and external variables in the surrounding macroenvironment (general environment) and micro environment (task environment).

As commonly known, investment opportunities in the information technology is unlimited even though limited resources available to the organization, so it's necessary for organizations to link investment in information technology and likely improvements to the accounting information system with the overall strategy of the organization.In order to create the competitive advantage for the organizationand and enhance its competitive position.

### 1.1. Statement of the Problem

To operate efficiently and effectively, an accounting information system needs to be designed within organization's strategy , so that AIS interactiveness with other

organizational aspects enhances the capability of the whole organization capacities to respond to the threats and challenges and provides the managers with accurate information regarding the internal and external environments in which the organization operates, on the right time and effective cost, and linking all organizational components and levels together to ensure harmonious and synchronous operation of all organization aspects. On the other hand, the organization's strategy identifies the necessary improvements and additions needed to design the accounting information systems to create a competitive advantage within available organization resources and capabilities.

This study attempts to answer the following questions:-

- Does the organization's strategy effect the accounting information system design?
- Does the accounting information system effect the organization's strategy building?
- Is there an interactive effect between the organization's strategy Building and the accounting information system design?

## 1.2. Significance of the Study

The dramatic changes that have taken place in business environments resulted in asynergic associations between the organization's strategy and accounting information system design which enable aligning the various organizational units ,facilitating flow of work and supports efficient performance of management functions in light of the organization's overall strategy.

The significance of this study stems from investigating the interaction between organization's strategy building and the accounting system designed which lead to the following :-

1. Assist managers to perform their functions efficiently and effectively, and to develop their work processes and achieving the strategic goals, objectives and mission of the organization.
2. Dealing with risks and uncertainties associated with the environment surrounding the organization through providing necessary information in light of the changing circumstances in the turbulent environment and be agile in competitive environment.
3. Assist the organization for allocating sufficient resources towards handling organization's activities and tasks to implement strategic programs and plans, thereby ensuring a competitive advantage for the organization.
4. Develop data collection and processing operation; in order to match the management levels need and demand of information to enable them to coordinate their activities and integration with the organization's strategy, thereby developing the whole organization capacities and capabilities.
5. Assist in aligning all organizational hierarchies and encourages the culture of innovation, creation and empowerment among all organizational levels.

## 2. Literature Review

Multiple studies have been performed on the value of (AIS) investment and the value of strategies separately, but in this study we combine them by investigating interactive effect between organization's strategy building and accounting information system design. According to [Daft \(2004\)](#) strategy is plan for interacting with the competitive environment to achieve organizational goals. [Nordqvist and Melin \(2010\)](#) define Strategy "a set of objectives, policies, and plans that, taken together, to define the scope of the enterprise and its approach to survival and success. From the author point of view, strategy can define as: a plan that defines the, vision, organizational goals, missions, procedures, programs, used to achieve these goals and objectives. And strategy building can consist from different steps which are strategy formulation, strategy implementation, strategy evaluation and control, and Strategy improvement. And accorrdion to [Feurer and Chaharbaghi \(1997\)](#). Strategy improvement based on the performance results, management may need to make adjustments to the process of strategy formulation or implementation or both.

Information Systems (IS) can be defined as a set of inter-related components working together to collect, retrieve, process, store and distribute information in order to facilitate the planning, control, coordination, analysis and decision making in companies and organizations. Information systems contain information about significant people, places, and things within the organization or in the surrounding environment.

[Romney Marshall and Steinbart Paul \(2012\)](#) defined: accounting Information System (AIS) a system that collects and stores data about organization activities and transactions and processes data into information that is useful for making decisions and provides adequate controls to safeguard the organization's assets. [Cragg et al. \(2002\)](#) focused on measuring the alignment of business strategy and information technology strategy among small UK manufacturing firms and then investigated the link between alignment and performance. They found that a group of small firms which employed high information technology alignment had achieved better organizational performance than firms with low information technology alignment.

[Basahel and Irani \(2007\)](#) examined the relationship between information systems and operational strategy at "x" Airlines. They found that there is a strong relationship among

information technology activities and business strategies with its measurement of performance, and this relationship support creativity and innovation, which are important factors for organizations. [Xiaoying et al. \(2008\)](#) studied the alignment between information systems and business strategy as an empirical study in China. They found that information system strategic alignment is a better predictor of business performance than business strategy or information system strategy alone, although business strategy can significantly influence business performance. [Bush et al. \(2009\)](#) studied the alignment of information systems with organizational objectives and strategies in the health care industry; they found this alignment as a key, contemporary challenge to organizational in general.

Therefore, the accounting information system is not a goal per se, rather it is a means by which high-quality comprehensive information can be produced timely to assist management in performing their functions and accomplish the goals and objectives of the organization. In return, the organization's strategy identifies the general attitude and plan of the organization, thereby developing work and performance in order to achieve goals and objectives of the organization.

### 3. Research Methodology

In order to achieve the primary objectives of this study, a theoretical literature review has been done in order to develop a questionnaire. The questionnaire was distributed to employees at Social Security Corporation (Jordan).

#### 3.1. Sample of the Study

The population of this study consists of all employees at Social Security Corporation (Jordan). Sample was selected using simple random sampling, targeting managers, vice managers, chairmen, and employees. A total of 81 questionnaires were distributed in a period of three months; between April to June 2015 with the help of enumerators. Out of 81 questionnaires, only 72 questionnaires were fit for analysis.

#### 3.2. Instrumentation

The data of this study were obtained through a survey, in which of a total of 81 questionnaires were distributed to employees at Social Security Corporation (Jordan). The questionnaire is divided into two sections. The first section includes the demographic information of the employees (i.e. age, certification, occupation, educational level, and expertise). In the second section, there were 15 items to investigate the effect of Strategy in Accounting Information System (AIS) design, and 20 items to investigate the effect of Accounting Information System (AIS) in Strategy building. The employees were asked to indicate the level of acceptance toward these 35 items on a five-point Likert-scale, ranging from 1 – not accepted to 5- fully-accepted.

#### 3.3. Statistical Method

The responses obtained from the survey were tested for internal consistency and reliability using Cronbach alpha tests. In order to study the effect of Strategy Building in Accounting Information System (AIS) design, and the effect of Accounting Information System (AIS) in Strategy building, one sample T-test were used by comparing the test value calculated with the arithmetic mean for the study sample value. This was done for all of the 35 items listed in the questionnaire. Since the questionnaire was graded using the five point Likert scale starting from 1 to 5, the test value of the comparison is 3  $((5+4+3+2+1)/5)$ . Hence, if the level of significance is less than or equal to 0.05 at 95% confidence level, there are statistically significant differences from the test value 3 and the arithmetic mean for the study sample value for each item and dimension listed in the questionnaire. However, if the level of significance is greater than 0.05, then statistically, there is no significant difference between test value 3 and the arithmetic mean for the study sample value for each item and dimension listed in the questionnaire. Consequently, the researcher would accept that there is effect of strategy building in AIS design & vice versa, if the significance level is equal to or less than 0.05 in each dimension of the developed questionnaire. And accepted that there is no effect of strategy building in AIS design & vice versa, if the level of significance is greater than 0.05 in each dimension of the developed questionnaire.

Simple regression model used to test interactive effect between organization's strategy building and accounting information system design, simple regression analysis (F-test) value was used, to examine the acceptability of the regression model, if the value of (F-test) statistically significant, when significant level less than or equal to 5%. Then through the use of the value of the correlation coefficient (R) measured the strength of the relationship between the independent variable and the dependent variable, in significant level is less or equal to 5%. And was measured the ability of the independent variable in explaining the dependent variable through the value of Adjusted  $R^2$ , to indicate the ability of the independent variable in explaining the dependent variable in significant level is less or equal to 5%. Finally, it was relying on the estimation coefficients to the variables of the independent study, in order to examine the variance in the dependent variable as a result

of the variation in the independent variable, if the significant level of this factor is less or equal to 5%.

4. Statistical Analysis

This section includes analysis and discussion of the empirical study results in light of the study questions.

Results from one-sample T-test regarding effect of organization's strategy on the accounting information system design. Were tabulated and presented by table (1).

Table-1. Effect of organization's strategy on the accounting information system design

Items	mean	Std Deviation	T	Sig
The organization's strategy affects the accounting information system design through:				
1. Designing a system connecting different management levels in the organization that encourages culture of participation.	4.25	0.69	15.44	0.00
2. Determining all necessary information that is needed for all management levels in the organization.	4.06	0.60	14.87	0.00
3. Determining financial and non-financial resources assigned for keeping track with the modern technologies and updating the system as needed.	4.06	0.80	11.15	0.00
4. Designing a system that concentrate in implementation strategic plans and programs.	3.97	0.82	10.04	0.00
5. Identifying the level of technology related to security issues and accessibility to the system.	3.96	0.85	9.61	0.00
6. Identifying intended goals and objectives sought by the organization.	3.89	0.74	10.16	0.00
7. Specify the strategic options among the technological alternatives related to the system.	3.86	0.86	8.49	0.00
8. Identifying the track followed by the organization while keep pace with the IT developments associated with the system.	3.82	0.76	9.19	0.00
9. Create integration between the system and organization's processes and organizational structure.	3.81	0.78	8.76	0.00
10. Create compatibility between all system elements and components toward accomplish the mission and vision of the organization.	3.76	0.81	7.97	0.00
11. Identify quality and quantity of information generated by the system.	3.68	0.87	6.64	0.00
12. Direct the system to respond to any dynamic changes in the surrounding environmental conditions.	3.67	0.84	6.74	0.00
13. Encouraging the culture of creativity and innovation among all employees in performing the organizational functions.	3.67	0.95	5.96	0.00
14. Create integration between different system processes to added-value to organization activities.	3.64	0.81	6.69	0.00
15. Create compatibility between the system and the organizational culture.	3.60	0.93	5.45	0.00
The arithmetic mean of the total items.	3.85	0.41	17.65	0.00

Table (1) shows that all the items measuring effect of organization's strategy on accounting information system design had arithmetic means higher than the test value (M=3) at a statistical significance level ( $\alpha\leq0.05$ ), indicating a positive effect of the organization's strategy on accounting information system design on all perspectives (items) of the study questionnaires.

Also table (1) shows one-sample T-test results to the overall items related to the first questions "Does the organization's strategy affect the accounting information system design?" had arithmetic mean score (M=3.85) at a significant level (0.000) which is less than  $\alpha\leq0.05$ , implying a significant effect of the organization's strategy on the accounting system design.

Results from one-sample T-test regarding effect of the accounting information system on organization's strategy building were tabulated and presented by table (2).

Table-2. Effect of the accounting information system on the organization's strategy building

Items	mean	Std Deviation	T	Sig
The accounting information system affects the organization's strategy building through:				
Flow of comprehensive, accurate and timely information through organizational levels that are involved in building the organization's strategy.	4.21	0.85	12.00	0.00
Acquiring the organization sufficient knowledge that enhances effectiveness of decision-making related to building and implementation of organization's strategy.	4.04	0.74	11.95	0.00
Providing the management levels with feedback that help develop and follow-up the organization's strategy.	4.04	1.01	8.72	0.00
Communication and disseminate the culture of innovation and entrepreneurship at all organizational levels.	4.03	1.06	8.22	0.00
Schedule the designed plans and programs that translate the organization's strategy.	4.01	0.91	9.44	0.00
Increasing the capability of the organization to deal with the dynamic environment when building the organization's strategy	3.92	0.80	9.72	0.00
Control the implementation process of the strategy based on the plans and programs designed.	3.89	0.83	9.07	0.00
Linking the internal parties and departments with communication networks to facilitate strategy building and development.	3.85	0.86	8.14	0.00
Evaluation of the organization's strategy in light of the resources and budget assigned for the organization's strategy programs.	3.85	0.88	8.63	0.00
Increase the cooperation and coordination between the organization and different stakeholders to build the organization's strategy.	3.85	0.88	8.14	0.00
Increasing the capability of the organization to capture opportunities in its operations environment.	3.81	0.76	8.97	0.00
Identifying internal and external challenges encountered by the organization when building the organization's strategy.	3.78	0.89	7.40	0.00
Relate the accountability with extent of accomplishing the strategic goals.	3.69	0.74	7.92	0.00
Identifying uncertainties related to internal and external environment of the organization.	3.67	0.89	6.37	0.00
Identifying weaknesses and strengths encountering organizations' strategy building.	3.64	0.91	5.97	0.00
Evaluating and analyzing priorities, options and strategic alternatives available by organization when building its strategy.	3.58	0.98	5.08	0.00
Evaluating progress of the organization's strategy in accordance to intended objectives and goals on regular basis.	3.44	1.01	3.75	0.00
Determining financial and non-financial resources assigned for the organization's strategy programs.	3.36	1.07	2.88	0.01
Evaluating and analyzing outcomes of the plans and programs and continuing improvements needed for organization's strategy development.	3.33	1.07	2.63	0.01
Delegate authorities and more decentralization in the organization's strategy.	3.17	0.95	1.49	0.14
The arithmetic mean of the total items.	3.76	0.45	14.15	0.00

Table (2) shows that the items measuring the effect of accounting information system on organization's strategy building had arithmetic mean score higher than the test value (M=3) at a statistical significance level ( $\alpha\leq0.05$ ) excluding the item related to effect of the accounting information system on authorities delegation tendency to decentralization in designing the organization's strategy, which obtained arithmetic mean equal to (3.17) at a significant level ( $\alpha>0.05$ ). This result indicates that the accounting information system moderately affects authority's delegation and tendency to decentralization when building the organization's strategy. In the researcher's opinion, this could be due to nature of the decisions related to authority's delegation and decision-making which are mostly governed by various organizational factors in the organization.



Also table (2) shows one-sample T-test results to the overall items related to the second question: “does the accounting information system affect the organization's strategy building?” had arithmetic mean score (M=3.76) at a significant level (0.000) which is less than  $\alpha \leq 0.05$ , implying a significant effect of the accounting information system on the organization's strategy building.

To investigate the interactive effect of the organization's strategy building and accounting information system design, the simple regression analysis was employed to find out the effect of the organization's strategy on the accounting information system design, in that the organization's strategy was taken as the independent variable and the accounting information system design as the dependent variable. Further, the interactive effect of the accounting information system on the organization's strategy building was studied where the accounting information system was considered as the independent variable and the organization's strategy building consider as dependent variable. Results from the simple regression analysis test were presented in table (3) as follows:

**Table-3.** results from simple regression analysis of the organization's strategy and accounting information system design; and simple regression analysis of the accounting information system and organization's strategy building.

Simple Regression								
Model summary			Anova test		Coefficients			
R	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	Sig (F)	Beta	Std. Error	t. Beta	Sig Std. Error
0.485	0.235	0.224	21.5	0.000				
model 1(Dependent Variable: Accounting Information System (AIS))								
Constant					2.216	0.354	6.262	0.00
Independent Variable: Organization's Strategy					0.434	0.094	4.637	0.00
model 2(Dependent Variable: organization's Strategy)								
Constant					1.674	0.452	3.704	0.00
Independent Variable: AIS					0.542	0.117	4.637	0.00

Table (3) demonstrates that the correlation between organization's strategy building and accounting information system design representing the relationship between the two variables in the simple regression analysis was (R=0.485) indicating a moderately positive relation between organization's strategy building and accounting information system design. The value of (F=21.5) at a significant level (Sig F=0.00) which is below the significance level ( $\alpha \leq 0.05$ ) implying that R<sup>2</sup> and regression model was statistically significant at a significance level below or equal (5%), and the adjusted R<sup>2</sup>=0.224 indicated 22.4% of variance in the organization's strategy building can be explained by the variance in the accounting information system design vice versa, while should other factors remains constant.

Table (3) shows the regression coefficient being (Beta=0.434) and (t=4.637) at a significant level (Sig (t) =0.00) which is below 0.05 for the regression model related with the effect of organization's strategy on the accounting information system design, meaning that 43.3% of variation in the accounting information system design (dependent variable) attributed to change in the organization's strategy (independent variable).

Table (3) demonstrated that regression coefficient being (Beta=0.542) and (t=4.637) at a significant level (Sig(t)=0.00) which is below 0.05 for the regression model related with the effect of the accounting information system on the organization's strategy building, meaning that 54.2% of variation of the organization's strategy building (dependent variable) attributed to variation in the accounting information system (independent variable), thereby all of the above confirming an “interactive effect between organization's strategy building and accounting information system design”.

5. Results and Recommendations

This study concluded a number of results most importantly that:

The accounting information system has an effect on the organization's strategy building in terms of its various dimensions including mission, vision, programs and plans, goals and objectives, in a way that enhancing competitive advantage of the organization in a widely open, sharply competitive and ever-changing world.

The interactive effect of the organizational strategy and accounting information system leads to identify strengths and weaknesses, threats and challenges in the internal and external environment and helps find out opportunities, alternatives and prioritize available choices and select the best alternative in light of the organizational objectives and strategy.

The interactive effect of the organizational strategy and the accounting information system will result in more rational decisions by focusing on activities that added value and assists accomplishing strategic organizational objectives and mission.

So the researcher recommended that it is necessary to develop and update the strategic plans, so as to keep collecting and processing data in a way to meet the need of the various management levels from sufficient information, and enhances the organization innovation and entrepreneurship culture, and encourage employee participation and invest their skills in achieving the organization goals. Finally, business organizations need to adopt accounting information system design as an issue of strategy and perform continual

improvement of the components of the accounting information system in the light of the organization's strategy built, taking into account limited resources available to organizations.

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