The Study of Contingency Components Roles in the Design of Municipals' Accounting Systems: A Case Study

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Abstract Generally, the main idea of contingency view is that there is no sole best way to solve a problem or do a specific job. The best way depends on the situation. This is an applied- survey research. In this research, there are four variables, organisation structure, technology, organisation environment, and human resources as contingency components which are considered as predetermined components in designing accounting systems. This research tries to answer the question which states whether contingency components are considered in designing Municipals accounting systems in Khuzestan province (Iran)? In this research, first we received the data by sending the questionnaires manually to accountants, accountant managers and experts in 34 municipal districts and centres in Khuzestan province. Then, the data of selected samples are analysed based on single sample T- test, independent T, and Chi-Square leading to the results of this research. The findings show that the accounting systems of Khuzestan province municipals are mostly designed based on contingency components which in comparison with similar researches, are significantly contradictory. The respondents’ viewpoint about “human resources” component has not been articulated profoundly and suitably. In this research, it has been clearly found that the role that “organization structure” plays in designing accounting system is not more than that of “organization environment”.

Keywords: accounting system, contingency approach, organisation environment, technology, organisation structure


1. Introduction

In general, the basic idea in a contingency approach is that there is no sole best way to do things. The best method depends upon the circumstances. Such is the design of accounting systems. There is no one good design of accounting information system. It depends on the operating conditions and status and also accounting information must be based on the specific configuration. The framework of this approach, planning and control system design considers the specific circumstances of the particular organization. Recently, the use of a contingency framework for management accounting information system analysis become quite common. Although the formation and development of the contingency models of organizational theory literature was developed in the first half of 1960, until the mid-1970s, there was not any reference to the contingency theory in accounting literature and scientific texts [20]. Unfortunately, in Iran one can hardly find any theoretical or applied research carried out in this area. Variety of municipal properties and formulation and implementation of similar accounting information systems in municipalities, the necessity of doing research to test the contingency of accounting systems with specific conditions, situations and factors of municipality is felt.

During recent years, using contingency frameworks to design and analyse the management of information accounting system become frequent. Any way during last few years many researches have been done on organisational as well as behavioral management accounting.

Therefore, the contingency theory in the management, is a logical continuation of open systems theory which have complex, interactive relationships between interdependent components that interact with the upper systems were studied. Determining all important types of contingency factors and showing the relationships between them can be very complex. Attempts to identify and distinguish different models that fit the desired situation and demonstrate, experience and analyze this complex relationships to the possible extent, can lead management decisions in increasing the efficiency and achievement organizational goals.
2. Theoretical Framework of Contingency Approach

The components of Contingency approach that have been studied in this research include:

2.1. Organizational Structure

The findings of some of the researches conducted, recommend the best use of budget information in the case that is prepared based on the organizational structure. [11] concluded that the use of flexible funding style leads the organization towards more effective performance.

Subsequent research by [19] was conducted using a contingency scale which were not consistent with Hope Wood survey results. He believes that in most cases, a fixed budget, compared to using flexible budget, has a better performance to the organization (a contradictory overall result).

But a comparison of the characteristics of the two studies conducted, presents an important difference originating from the circumstances in considering the contingency approach. Hopwood study was about a complementary steal workshop and based on evaluating cost centers responsibility that were interdependent to each other. But [19] study involved measuring the responsibility of interest centres in coal industry each acting independent of the other in order to get to scientific purposes.

It should be noted that the use of budgeting style in [6] researches was not an independent variable, this variable was influenced by environmental and economic factors.

Similarly, the other research specified that the use of rigid definition of “performance evaluation” where there is a large dependence was inappropriate. Contingency result is that a suitable style to use the budget depends on the degree of interdependence of assessment centers and the results comparison of operations based on fixed budgets are less suitable and managers make better use of budget data through the flexible use of funds.

For the Organization category, characteristics of the organization itself are seen as relevant

Understanding the factors affecting the International Financial Reporting standard change implementation process in a larger context is also important to gain a holistic viewpoint of how the organization fits into society, developed by Gernon and Wallace [8], the accounting ecology framework provides this aspect into the synthesis and comprises five parts:

1. The societal slice, which refers to the structural, cultural and demographic elements that affect the demand for financial accounting services
2. The organizational slice, which refers to events and trends on rationalizations in the choice and design of accounting systems
3. The professional slice, which refers to events and trends that affect the determination of roles and relationships in the accounting profession
4. The individual slice, which refers to accounting policy choices made by individuals and covers the whole area of individuals lobbying standard setters and using accounting numbers to a specific advantage
5. The accounting slice that refers to accounting practices, rules and trends that affect or are affected by other slices of the environment. It includes the disclosure and measurement requirements and practices as well as types and frequency of accounting reports

To effectively plan and implement business strategy, firms need updated and resourceful business information. One of the ways to do this is through the design of AIS [13]. The better and more sophisticated the AIS design is, the better the performance of companies.

Thus, the degree of interdependence of responsibility centers as a function of both technology and organizational structure, which in turn, although not as conclusive, is influenced by technological factors. As a result, it appears that the organization structure and technology have an important impact on organising the accounting system.

2.2. Technology

Perhaps the easiest and most basic variables used in the design of accounting information systems is exploiting and production technology. The distinguish between different types of production technologies includes single-product production, small batches, large batches, mass production and processes manufacturing. According to Woodward [25] has long been recognized as a factor influencing the design of accounting systems, although its necessity is highlighted more by Woodward Research [25]. The nature of the production process determines the cost amounts allocated to each segment (units) which influences expenses shares to much extent.

Production and utilization technologies have a potential impact on the provided accounting information types. Mass production and custom manufacturing are two notable examples. Daft and Macintosh [16] also identified a variety of tasks and task knowledge as a factor influencing the design of management information systems were appropriate.

2.3. The Organizational Environment

Environmental factors also play an important role in the differences between the users of accounting information. Investigation of the impact of the competitive environment level types on the management of organizations showed that the philosophies of accounting system and operations control are affected by the environmental competitive rates. Additionally, different levels of competition, such as, pricing competition, marketing or product competitiveness, have a very different impact on the application of accounting controls in manufacturing organizations. A similar conclusion by Otley [19] was presented in which he discussed the effect of different levels of environmental factors in individually owned companies.

2.4. Human Resources

Necessity and progression of labors (employees) is also considered as a contingency variable. As clearly indicated in Tavystak studies about the mines, considering production issues only is far from enough. Employees have some theories about how their works should be organized, and these theories are regarded as contingency factors.
In one hand, behavioural accounting as an accounting approach deals with the relationship between human behavior and the accounting system.

This new subject was founded about four decades ago and has grown gradually but consistently. Attention to this field started since managers and professional accountants found that accounting systems and financial reporting does not provide all the information needed for decision making.

Supplementary information, although not necessarily, but to understand the nature of financial decision-makers and helped increase the information content of financial statements. Supplementary information, although not necessarily have financial nature, but helps the decision-makers to understand and increase the information content of financial statements.

Selecting the type of data, how they influence the information and how human behaviour influence the information and human behavior relationship to the design, performance and effective use of accounting information systems are of subjects that are discussed in behavioral accounting topics. Behavioral approach, one of the methods that is added to the body of knowledge and cause the increase of knowledge of accounting knowledge.

Management accounting systems in addition to providing the necessary information for managers decision making, it is also used to provide them with reports to evaluate their subset managers and operating staff.

These executive reports are often used as the basis for the payment of rewards, salaries and promotions. Content and form of executive reports and how they are used, judged and paid attention to by management will have positive or negative impact on employee motivation.

Therefore, the selection and application of accounting information types for the preparation and usage in the executive reports will largely depends on the behavioural effect on the of the managers.

3. Organization Theory and Contingency Theory

Researches cited are considered as an incentive to identify some of the variables used in the design of the accounting system.

Four major variables of contingency technology, organization structure, environment, and human factors were presented as examples for stating the issues because they are considered outstanding examples of the reformation of the theoretical basis of contingency theories in relation to accounting system.

A general view of the development process (perhaps the best review by Hofstede's research [11] about a budgetary control) is mainly reached to a contingency approach to accountant information systems in 1970, which in some ways a part of this change due to the need to explain the inconsistent observations.

But this is not the only factor, another major factor that influenced the use of contingency approach in designing accounting systems, is the development and extension of contingency perspective in organisation theory. The contingency theory itself is originated from systems theory. In summary, the contingency perspective suggests that different environments require different organizational relationships to ensure the most effective way. we should also cite Chandler [4] that emphasized the relationship between choosing the strategy and organizational structure of an organization to gain the intended goals. This emphasis gained general acceptance.

4. Empirical Research

Few empirical studies in accounting contingency approach, which was to be paid to the data collection. Both studies highlight the Burns and water house [3] to interpret and compare results from different issues are. Burns and Waterhouse [3], about the behavior of fund managers were discussed in relation to the behavior of the structure depends on various factors, Such as the degree of centralization, the degree of autonomy and structured activities are being considered.

The idea that they are “in a stable environment and centralized organizational structure, budgetary control is the most effective tool” offered.

Hayes [10] theory of triple contingency factors that influence an organization is supposed to be delivered on department performance: Mutually dependent relationship with the environment and third units relative to internal factors, each of these units will require special interests. The first sequence and interdependence of units classified according to Thompson [23] defined.

Second Contingency Theory of Hughes, the relative relationships with the environment, based on the dynamic aspects - as well as stability and homogeneity - heterogeneity is depicted contingency factors and three inner factors, including the nature of the tasks that nurses do community norms and personal interaction.

Hughes research results that would confirm his hypothesis, in this case the effectiveness of the various sub-units of the organization (such as production, marketing and R & D) by different combinations of the variables above contingency account and is explained.

In two studies mentioned above, a large number of potential variables related to the research by means of interviews or questionnaires, the researchers collected and analyzed data and factor analysis, a number of variables were eliminated illogical.

He concluded the inductive method of accounting in an organization is influenced by the complexity of the tasks of the organization.

For example, the range of products sold in a variety of activities, seasonal changes and the variety of selling methods is noteworthy.

He emphasized the complexity of the task of intervening variables affecting the structure of the accounting system.

Technology as a major causal variables (explanatory) will affect the accounting information system. This theory were presented by Mcintosh & Daft [16]. Experimental study based on a questionnaire that was sent to 253 individuals in 24 work units with different products, a high correlation between style and technology information system used was observed.

However, in the context of this study, the effect of the diverse, independent and experimental research results offer no clear explanation above. Also, a variety of independent and dependent variables in this study are given such that the overall similarity between these studies
can be seen. Further operationalization of variables is problematic.

In this study, a large number of potential variables describing the position and orientation of one or two key variables, a statistical measure of the average number of variables have been left out.

Also, in this study the association between contingency variables and patterns of accounting reports and accounting system shall not attempt to build a tool to measure effectiveness. All of the above studies concluded that the degree of association between variables, contingency hypotheses and advance accounting system is observed.

According to research conducted by Chang, [5] the effect of contingency factors. (a) When a company facing higher degree of environment competition and environmental uncertainty, more broad-scope information could effectively enhance user satisfaction, operation improvement and managerial performance. (b) When a company pursuing cost leadership strategy, higher degree of aggregation information will improve operation procedure. When a company's goal was for marketing differential, more timely and integration information were needed and less aggregated information should be provided for a better performance of operation improvement and managerial performance. When a company was pursuing innovation differential strategy, accounting information systems should provide more timely information. When a company was pursuing strategy breadth strategy, more emphasis should be on aggregation and integration information. (c) When a company pursuing marketing differential strategy, organization structure structure, or facing higher task uncertainty, the emphasis on User participation will improve User satisfaction and managerial performance.

Thus, the overall results of research conducted, but the lack of support and contingency theories, research findings, in particular the division and distribution.

5. Theoretical Researches

Theoretical as well as empirical researches are based on the relationship between accounting information systems and contingency theory. Gordon and Miller (1976) tried to provide a comprehensive framework through designing accounting information systems (AIS) and particular needs of any organization through explaining theoretical literature of the organisation, management policies and defining accounting variables that are considered essential criteria for the performance of the organisation.

Environmental, organizational personality and decision-making style are proposed as major aspects of the proposed contingency variables: each contingency agent is defined in accordance with appropriate situation of accounting information system variables.

However, sometimes a combination of environmental situation, organization and style of decision-making that are in conflict of interest is detected. In this study, there are no clear and explicit results about effectiveness and goals of the organization.

A simple theoretical framework by Waterhouse and Tiessen [24] was presented with identification of a variety of the organisation control requirements and considering the management accounting systems and two main groups of contingency variables are presented: the environment and technology. Environmental factors were identified in two major aspects, the simple -complex and Fixed-flexible that drawing both together is also possible. Operational tasks of organization units on the operation control) or its management tasks, including defining Anthony management and some strategic planning activities, seems to be prominent and have been institutionalized.

In these studies it is recommended that the managerial roles are identified by a set of environmental variables while the emphasis is on the direct contact of structure and operation process of the unit with technology variable. Thus, accounting information system is considered as a kind of control mechanism and, depending on the needs of an organization control units, which itself is dependent on the building structure, it should be designed based on technological and organizational environment. In theoretical researches, weak evidences has been provided about the relationship between the organization and management variables with organisation effectiveness. The dependent variables identification is significant and substantial progress can be seen in way of transforming their scheme and shape classification.

More writers were in the same line with [11] that the accounting information systems play a basic role in the organisation. Studies done by scholars of organizational behavior provide a better picture of the processes such as goal setting, trying for developing organizational power or conflict resolution presented a different framework that is suitable for Amigoni [1] various devices of accounting control.

He simulated a model that evaluates aspects of the financial accounting and financial accounting and accountability components measures and responsibility evaluation accounting and strategic planning. Amigoni identified two major contingency variable, i.e., degree of complexity of the corporate structure in terms relative to the environment as well as the degree of turbulence and environmental disruption.

He concluded that in response to the increasing complexity of the structure, new accounting tools can be used and also offer to develop these tools as a research priority.

Thus, despite the fact that the structure is not directly intended, it seems that the principal variable of structure complexity as demonstrating both factors of accounting control tools and appropriate forms of organization.

In summary, the reviewed parts of theoretical and empirical researches, insisted in a number of general resources in the organization theory literature. It seems that environment and technology are effective in the organization structure and the structure in turn influences the design of an information system.

The technology by itself, and directly does not have a significant effect on the organization of the system indirectly through intervening variables "structure of the organisation" that will impact the accounting information system. “organization structure” is considered as intervening and meddler between “technology” and “accounting system” variables. Also “organisation structure” play the same meddling role between “environment” and “accounting system”.


Intermediary variable has established a causal link between the independent variable and dependent variable. Therefore, the "organisation structure" variable is called "intervening variable" and the relationship models is called "intervening relationship". While contingency variables affect on both variables of "organisation structure" and "accounting system plan" using the structure of the organization as the only intervening variable between contingency variables of accounting information system selection are not logical.

A subject that subsequent studies have clearly proved. In Table 1 below, the simple linear framework discusses the literature review of researches conclusions for designing accounting information systems.

<table>
<thead>
<tr>
<th>Study</th>
<th>Contingent Variables</th>
<th>Organisational Design</th>
<th>Type of Accounting Information System</th>
<th>Organisational effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burns and Waterhouse (1975)</td>
<td>Organisational structure (origin, size, technology, dependence)</td>
<td>Structuring activities, Concentration of authority</td>
<td>Control system complexity and perceived control leading to budget – related behaviour (interpersonal and administrative control strategies)</td>
<td>-</td>
</tr>
<tr>
<td>Daft and Macintosh (1978)</td>
<td>Technology (task variety: search procedures)</td>
<td>-</td>
<td>Is Style (amount, focus, and use of data)</td>
<td>-</td>
</tr>
<tr>
<td>Gordon and Miller (1976)</td>
<td>Environment (Dynamism, heterogeneity and hostility)</td>
<td>Decentralisation Bureaucratization</td>
<td>Technical characteristics of Accounting information system</td>
<td>-</td>
</tr>
<tr>
<td>Hayes (1977)</td>
<td>Environmental factors- mutual dependency factors- internal factors</td>
<td>-</td>
<td>Appropriate performance evaluation techniques</td>
<td>Departmental effectiveness</td>
</tr>
<tr>
<td>Khandwalla (1972)</td>
<td>Type of competition faced</td>
<td>-</td>
<td>Sophistication of accounting</td>
<td>-</td>
</tr>
<tr>
<td>Piper (1978)</td>
<td>Task complexity (product and diversity variability between units)</td>
<td>Decentralization of decision making</td>
<td>Financial control structure (e.g., use of financial planning models; frequency of reports)</td>
<td>-</td>
</tr>
<tr>
<td>Waterhouse and Tiessen (1978)</td>
<td>Environmental predictability Technological routine ness</td>
<td>Nature of sub-units operational or managerial</td>
<td>Management accounting systems planning</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Otley (1980:420)

Thus, various studies were presented using simple linear style. In some studies, hypothesis such as the effect of structure (or process) on the organization, as well as contingency variables were defined and measured in a good manner. The default effective function for each type of organization has been presupposed. However, only Hayes. Research [10] attempted to measure the effectiveness.

Mousavi [17] investigated the use of quantitative analysis of how and managerial accounting information in decision making. Research with Quantitative analysis of the research and the application level of accounting information in management decision-making began. The research objectives are:

Access to desired quality, obeying social responsibility, optimize utilization of resources, optimum utilization of the allocated budget. The statistical tests used include:

1. correlation test.
2. Friedman ANOVA.

First, the correlation test results about four hypotheses examined and the relationship between the four variables are analyzed together. Finally, Friedman ANOVA is investigated for ranking variables and their components together.

Sajjadi, Motamedi [21] during a research titled contingency approach used in the design of accounting information systems of water and sewer companies in Iran, It was found that 95% of the water and sewer enterprise accounting system of Iran is not based on the contingency approach.

Sinaie & Dehdar [22] in a research titled application of contingency approach in the design of the accounting system of Tehran Municipality, it was found that in 95% of certainty of Tehran Municipality's accounting system has been designed based on the contingency approach.

6. Research Hypothesis

6.1. The Main Hypothesis

This study consists of two main hypotheses as follows:

A. The First Main Hypothesis-Municipal Accounting System is Designed Based on Contingency Factors. Hypothesis

1. Municipal accounting system design is based on organizational structure.
2. Design requirements for technologies in municipal accounting system are considered.
3. Terms of the organizational environment are considered in Municipal accounting system design.
4. Municipal accounting system is designed based on the human condition.

B. The Second Main Hypothesis: the Role-Playing Level of Elements of "Organizational Structure" are more than "Institutional Environment" Component in Municipal Accounting System Design

6.2. Sub Hypothesis

To ensure the insignificance effect of education, age, gender, work experience of respondents on perception and their responding way – four sub-hypothesis are defined as follows:

1. The first sub-hypothesis: the level of academic subjects and their perception of the role of contingency in Khuzestan province municipal accounting system design are related.
2. The second sub-hypothesis: subjects' age and their perception of the role of contingency factors in
Khuzestan province of municipal accounting system design are related.
3. The third sub-hypothesis: the experience of working subjects and their perception of the role of contingency factors in Khuzestan province of municipal accounting system design are related.
4. The fourth sub-hypothesis: subjects' gender and their perception of the role of contingency in Khuzestan province of municipal accounting system design are related.

7. Research Method

This study is based on the application target. These researches are used to meet the requirements by using cognitive and informatic bases and backgrounds.

On the other hand, since this study proceeds with the objective and functional description of the components of contingency relationship between four aspects of organizational structure, technology, organizational environment and human resources (employees) in the design of municipal accounting systems and the relationship between education and work experience of the participants and their perceptions of the role of contingency factors in the design of the accounting system is concerned, the nature and methods are descriptive (non-experimental).

The present is non-experimental in which research variable cannot be manipulated. The present study is of the spatial characteristics of library and field (survey or field detectors).

This study involves a survey of experts in finance and accounting for which the survey (field detectors) method was selected.

In order to study subject literature and research history, library studies (taking notes) carried out and in the field stage in order to collect the necessary data, a questionnaire was designed and administered.

In other words, the present research, based on applied target from the nature and methods of data collection view is in terms of descriptive categories (non-experimental) classification a cross-sectional survey. Research questions are descriptive. The hypothesis of the research is the interface of descriptive type and presents the existant situation.

The independent variable in this study in contingency approach are the four aspects of organizational structure, personnel, technology and organisation environment, and the dependent variable is the municipal accounting system design. For data preparation, descriptive statistics and for hypotheses test specifically, single-sample t-test, independent t-test and Chi-square were used.

8. Variables Scale Measurement

The attitude scale of this study is of the Likert scale type. Tetrahedral contingency approach model appropriate questionnaire was prepared by which information about the contingency variables (organizational structure, technology, organization environment and staffing) is collected.

Systematic order of Likert scale in this study was groomed from very low to very high. In the range of very low point one and very high score point five is allocated. The questionnaire of the survey includes four demographic questions and 27 specialized items (questions). This questionnaire has been developed in two parts. Section A contains demographic data and Section B is containing technical questions regarding the main hypotheses of the study.

The survey questionnaire before distribution was distributed on a limited basis among 14 subjects (statistical unit including managers and experts in finance and accounting in each of the 34 municipalities of Khuzestan province), to minimize the ambiguities and increase the reliability and validity (credibility).

Validity, significant and important topics in every research In this study, to determine the validity, of the method of vivid validity was used based on experts and informants opinion Therefore, to increase the validity (validity) scale of the questionnaire, after the basic setup, a preliminary and experimental way with a critical perspective, were distributed among some experts the critics of whom are implemented, the final review was again done by a lecturer in research methods.

Also it is tried to correcting the mistakes and clarifying the ambiguities, the questionnaire’s validity increased through a few times of its phrases summarizing, and in some cases by omitting and amending the repetitive phrases.

However, to determine the reliability of the questionnaire, the Cronbach’s Alpha was used. For Alpha value output from statistical software SPSS roughly calculated as much as almost 91%. The survey questionnaire is stable because, the statistical software output alpha value is greater than 70%.

9. Hypotheses Explanation

In the current study, the main research hypotheses are explained using peer groups. The research hypothesis are, a series of measurements of the existant state at the mean of the same variables:

In other words, the two sets are not independent of each other, but are interrelated:

This means that there were not two groups of subjects, that each one selected randomly and individually but only one group of subject in which each subject was tested two times for one variable.

The counterpart groups in the current study consists of a set of measures and a number of intermediate (neutral) digit “3” is an attribute that indicates the intermediate state under investigation. These two sets are also called related measures.

10. Population, Sample and Sampling

Due to the special characteristics of the questions, the population was defined at the level of experts. The population of this research constitute, accountants, managers and financial experts Khuzestan province municipalities.

The study included every accountant, manager and financial expert of centers in 34 municipalities of the province that attempted to answer the questionnaire to provide information and research data as they are acquired.
Sampling in this study were in a simple random method. In random sampling each element of the population has an equal chance of being selected. In this method the intended people from the population listed and numbered as well as supplied for this reason at random.

**Test the research hypothesis**

Main Hypothesis 1: municipal accounting systems of Khuzestan province are planned based on components of contingency.

| Table 2 |
|-----------------|----------------|----------------|----------------|
| Khuzestan Province municipal accounting system design based on contingency parameters | number of respondents | Mean | standard deviation | coefficient of variation |
| 29 | 3.3116 | 0.58318 | 0.176 |

One-sample t-test

| Table 2.1 |
|-----------------|----------------|----------------|
| Khuzestan Province municipal accounting system design based on contingency parameters | Test statistics | Degree of freedom | Significance level |
| 2.877 | 28 | 0.008 |

Commentary: According to the respondents, Khuzestan province municipal accounting system is properly designed based on contingency components.

Hypothesis 1-1 Khuzestan province municipalities accounting system design is based on organizational structure.

| Table 3 |
|-----------------|----------------|----------------|----------------|
| Khuzestan Province municipal accounting system design based on organisational structure | number of respondents | Mean | standard deviation | coefficient of variation |
| 29 | 3.6207 | 0.72967 | 0.201 |

One-sample t-test

| Table 3.1 |
|-----------------|----------------|----------------|
| Khuzestan Province municipal accounting system design based on organisational structure | Test statistics | Degree of freedom | Significance level |
| 4.581 | 28 | 0.000 |

Commentary: According to the respondents, Khuzestan province municipal accounting system is properly designed based on organizational structure.

Hypothesis 2-1 municipalities province accounting system design is based on technological requirements.

| Table 4 |
|-----------------|----------------|----------------|----------------|
| Khuzestan Province municipal accounting system design based on technological requirements | number of respondents | Mean | standard deviation | coefficient of variation |
| 29 | 3.4207 | 0.76035 | 0.222 |

One-sample t-test

| Table 4.1 |
|-----------------|----------------|----------------|
| Khuzestan Province municipal accounting system design based on technological requirements | Test statistics | Degree of freedom | Significance level |
| 2.980 | 28 | 0.006 |

Commentary: According to the respondents, Khuzestan province municipal accounting system is properly designed based on technological requirements.

Hypothesis 1-3, the design of accounting systems and organizational environment in the province municipalities has been considered.

| Table 5 |
|-----------------|----------------|----------------|----------------|
| Khuzestan Province municipal accounting system design based on organisational environment | number of respondents | Mean | standard deviation | coefficient of variation |
| 29 | 3.3931 | 0.79009 | 0.232 |

One-sample t-test

| Table 5.1 |
|-----------------|----------------|----------------|
| Khuzestan Province municipal accounting system design based on organisational environment | Test statistics | Degree of freedom | Significance level |
| 2.679 | 28 | 0.012 |

Commentary: According to the respondents, Khuzestan province municipal accounting system is properly designed based on organizational environment.

Hypothesis 1-4. Khuzestan province's Municipal accounting system is based on workforce situation.
11. Conclusion

The results revealed that 95% of the province's municipality's accounting system is designed based on contingency factors and the results compared with similar research conducted in different areas and centers of the Municipality of Tehran by the researcher Sinaii or investigator Moein in the Company of Iran Water and Wastewater, is quite the contrary. By comparison of the results obtained one can assume that accountants and financial experts analysis and interpretation of the role of contingency components in accounting system design differs considerably from one society to other society.

Results of previous studies indicate that accounting system is designed as one component of the integrated control system and using information technology has made significant changes in the quality of financial reporting, in particular, an increase in the relevance quality of accounting information and timely information. Furthermore, the ability to compare financial information of the Company (the analysis of changes in financial position and the results of its operations) is also increased. Information Technology affects the qualitative specifications of accounting information and this effect is applied through reporting. In fact, information technology leads reporting into updated financial reporting and this type of reporting, provides information with different characteristics that due to the increasing development of information technology, it is expected that the impact on reporting and the qualitative characteristics of accounting information is improving (more positive) day by day and update reporting and disclosure of comprehensive accounting and taxation to keep pace with the rapid changes in the business world was created.

Accordingly, because in designing the municipalities accounting system design in Khuzestan province, technology and environment of an organization components are desirable considered, Municipal financial reporting of the province containing accounting information is timely and relevant and keep pace with rapid changes in the organization's environment.

The municipal accounting information Khuzestan province municipalities have the ability to compare financial information and accounting and financial reporting and disclosure of comprehensive municipal province to provide efficient and timely information and the accounting system as one of the control sub-systems and remarkably effective organizational planning and decision making and guiding the organization's current role. The best use of the state budget and financial reports are prepared based on the organizational structure [11]. As the province's municipal accounting system is designed in accordance with an appropriate organizational structure we can assume that the data and information on budgeting and financial reporting and accounting, financial and

| Table 6 |
|----------------------|-----------|-----------|------------------|
| Khuzestan Province municipal accounting system design based on workforce situation | number of respondents | Mean | standard deviation | coefficient of variation |
| | 29 | 3.1517 | 0.67961 | 0.216 |

One-sample t-test

| Table 6.1 |
|----------------------|----------------------|----------------------|
| Khuzestan Province municipal accounting system design based on workforce situation | Test statistics | Degree of freedom | Significance level |
| | 1.202 | 28 | 0.239 |

Commentary: According to the respondents, Khuzestan province municipal accounting system is not suitable as weak human resources and condition are applied.

Main hypotheses 2: the impact of environmental factors are more than the effect of the organizational structure of the municipal accounting system design.

Independent t-tests

| Table 7 |
|----------------------|----------------------|----------------------|
| Furthestness of the role of the organizational structure components compared to the organisation environment in municipal accounting system design in Khuzestan province | Test statistics | Degree of freedom | Significance level |
| | 1.14 | 56 | 0.259 |

Commentary: according to the significant level of the role of the organizational structure is equal to that of the components of the organizational environment in designing Khuzestan municipal accounting system.

| Table 8. summarizes the results of sub-hypothesis testing |
|----------------------|----------------------|----------------------|----------------------|
| Research theories | Test statistics | Significance level | result |
| | | | |
| The first sub-hypothesis: the level of academic subjects and their perception of the role of contingency in Khuzestan province municipal accounting system design are related. | 1.078 | 0.898 | reject |
| The second sub-hypothesis: subjects' age and their perception of the role of contingency factors in Khuzestan province of municipal accounting system design are related. | 6.622 | 0.578 | Reject |
| The third sub-hypothesis: the experience of working subjects and their perception of the role of contingency factors in Khuzestan province of municipal accounting system design are related. | 20.14 | 0.01 | Accept |
| The fourth sub-hypothesis: subjects' gender and their perception of the role of contingency in Khuzestan province of municipal accounting system design are related. | 3.585 | 0.167 | Reject |
operational information are the most effective and efficient municipal information for financial analysts and auditors which fortify the relationship between the top managers and middle managers with operatmn managers of the organisation and the strategic planning information of the organisation which are the result of applied interaction between management information system and accounting information system are presented to the top managers in time and at the proper place. The findings of the result show that human resources components are not regarded enough in designing Khuzestan province Municipal accounting system.

The main hypothesis of the study results suggest that the role of the "Organization" and "institutional environment" components in municipal accounting system design in Khuzestan province is the same.

In the other part of the research, it has been clear that at the level of 95% there was not any significant relationship between education level, age and gender tests and their perception of contingency components in designing Municipal accounting system of Khuzestan province. It is obvious that with education increase and consequently increase of staff knowledge, attention to design elements of the contingency in accounting systems will be felt more. Knowledge could be resulted from scientific and academic training as well as inservice training of course, a significant relationship is found between the career of respondents and the level of perception of contingency components in designing Municipal accounting system of Khuzestan province. If we evaluate the result of this hypothesis with that of forth hypothesis, it could be concluded that with the increase of career and working experience, the staff become more aware of weak points and difficulties of accounting system, but in spite of this awareness, their place in designing municipal accounting systems is not considered. Therefore, it is hoped that the designers by becoming aware of the importance of this factor and other factors can design the future accounting systems with a contingency approach.

Age and career with year unit are the same two variables and they are the result in organizational and personal experience. It is hoped with the increase in education level of the staff and improving their view about using contingency components along with their perception which is the result of service career regarding designing accounting systems we could see extraordinary efficiency and proper of municipal accounting systems and provide the top managers helpful and valuable information which in turn will help in improving programming, decision making, leadership and right control of municipal in the province and fulfill the servicing mission to citizenship society.

References


[7] Etemadi investigated the effects of information technology on qualitative characteristics of accounting information, accounting and auditing research, No. 43. 2006.


