

The Role of Individual Differences in General Decision-Making Styles of Accountants and Auditors

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Abstract

Researchers believe that accounting and auditing decision-making theories will cause performance improvement only if both the duty and processor are specified in them. In addition, they hold that research on the behavior of a decision-maker should consider a variety of judgments and demand for decision-making cases for such judgments, based on the knowledge of required processes. Therefore, research into this area should specify decision-maker's duties and knowledge, and information processing mechanism used by him/her. This study was done to determine the dominant accounting and auditing decision-making patterns. Data were gathered by distributing Scot and Bruce's (1995) General Decision-Making Style Inventory and analyzed with SPSS. Results from comparing the means and variances of different decision-making styles (using ANOVA and t-test) show that the dominant accounting and auditing decision-making style is a rational one. Findings also suggest a significant difference between the activity area with dependency, intuitive, and rationale styles of decision-making. In addition, there are significant difference in intuitive and rational decision-making styles with gender and between avoidance and instant decision-making styles with educational level.

Key words: Decision-Making, Decision-Making Styles, Accounting, Auditing

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Introduction

Decision-making is the foundation and principle of all managerial tasks. The importance of decision-making is such that some people equate management to decision-making. What guarantees decision-making success the most is accessibility to information, as well as its comprehensiveness, accuracy, and precision. Almost in all organizations, the major portion of information is within financial realm and thus the importance and role of it is obvious in improving the power, responsiveness, and decision-making of managers (Hadizadeh Moghadam and Tehrani 2008). Dastgir et al. know accounting information system as an information source for making accurate and rational decisions under complicated and challenging conditions (Dastgir et al. 2004). The majority of conventional methods used for the development and introduction of accounting theories do not consider the behavioral assumptions, especially user's behavior. In behavioral technique of accounting theory development, information relevancy for decision-making, as well as individual and group behaviors induced by communications created through this information should be emphasized (Masihabadi and Puryosef 2009). Accounting decision-making is not an iterative and typical process. Similar to different accounting decisions on managing the fixed assets, the choice of proposed methods for recording and using these assets and similar matters indicates the multiplicity of accounting approaches and the need for making appropriate decisions by accountants (Mihalache 2007). The majority of economic theories rely on rational reaction of people to economic circumstances, where all available information is considered in their decision-making process. This assumption is the main basis of an efficient market. On the other hand, some researchers have raised doubt in this fundamental hypothesis. They found evidence showing the lack of a fixed (logical) decision-making model. Individual decision-making theory studies the opinions of a person who has to make decision under uncertainty (Moradzade hfard and Nazemi Ardakani 2009). Decisions are our responses to environmental phenomenon and circumstances. Decision-making, as the quintessence of individuals' activities, is particularly important in all aspects of their tasks. People select their decision-making style in workplace on the basis of different individual, organizational, and environmental factors (Hasas yeganeh and Maghsudi 2010). Regarding the important tasks of accountants and auditors, decision-making is an important and vital part of accounting and auditing systems (Masihabadi A, Puryosef A, 2009). Accounting decisions are two-dimensional: one aspect deals with performing the task, meaning what financial decision-makers do, and the other aspect addresses environmental dimension that is related to accounting job description. The significance of the subject is due to adjudication differences caused by adopted accounting decisions. According to Heinz and Kachelmeyer: "If the unit of financial affairs decides to show value increase in financial statements in the assessment of items while this decision lacks adequate support, a significant falsification in financial statements will be possible, leading to negative consequences; thus, adjudications are made based on decisions" (Elbanan 2006). Peters believes that only the accounting and auditing decision-making theories, in which both task and processor are determined, improve the performance. Hughart also puts that research on decision-maker's behavior should consider all adjudications and demand for decision-making cases (task) based on the knowledge of required processes. Accounting information can affect decision-maker in terms of content and form, and offers many solutions for improving accounting and reporting systems. Tendency to improve the financial data given to users and capability in using them resulted in an interest in human information processing. The existing psychological theories and models in human information processing proposed an instrument by which accounting challenges are convertible to general information processing challenges (Khajavi and Noshad 2012). To observe such principles as honesty in professional adjudication, identification of factors

affecting decision-making seems necessary. Individual and mental characteristics are factors that influence decision-making (Fazel et al. 2015)

Problem Statement

Decision-making is now one of the most important issues in behavioral studies, which has contributed to valid research into accounting. Libby (1981) in his book, entitled "Accounting and Human Information Processing: Theory and Applications," implicitly addresses the adoption of decisions by people. He has no doubt in the usefulness of information in decision-making process, but the formation of decisions and description of decision-making process is what we usually fail to understand. Libby argues that several studies should be conducted to develop models suitable for various people, in which variable variations with time are considered, but there are many problems in achieving such models (Khajavi and Noshad 2012). Individual differences in the cognitive ability of decision makers to use information can lead to systematic differences in judgments (Butler and Gosh 2015). Regarding the importance of decision-making process in accounting and auditing professions, and that studying accounting and auditing decision-making styles on the basis of general decision-making styles has no history in Iran; the main focus of this study is on the general decision-making styles among accountants and auditors in Sistan-and-Baluchestan Province.

Theoretical Principles and background of the Study

Decision-making:

Decision-making is a process of selecting one out of many possible solutions. Adjudication is a process, in which people think and comment about the aspects of the problem. Wrong adjudications are usually due to decision-making mistakes (Rahimian 2005). Decision-making is one of the most important processes in organizations. Over the past three decades, some research have been performed into understanding of individual and group decision-making in the field of accounting and auditing, with the focus on information processing, adjudication, and decision-making or behavioral decisions. The main focus of all of them is on the detection of decision-making process, factors affecting it, and cognition process testing that lead to decision-making. The study of decision-making processes is not a fresh subject. In recent years, several studies have been done into decision-making in various field and disciplines, leading to many classifications in decision-making styles and models. These classifications differ from each other in terms of involvement of individual, organizational, and environmental factors in people's behavior and reaction to decision-making conditions. Similar to other professions, including law and medicine, accounting has its own ethical principles, observation of which is expected from the involved people. However, in today's communities it is very difficult to answer "what is good," as the subsequent question "what is legitimate" comes to the ground and is needed to be considered. In the task of approval, there are several cases in which sensitive relationships are created between the auditors and audited unit. In facing with such conditions, decision-making process includes solving conflicts between auditors' responsibility toward society and audited unit.

Theory of Problem-Solving

Several theories have been identified and used for solving complicated ethical problems. These theories can be presented within two general approaches, namely the cognitive and structural. Cognitive Approach: In this approach, professional auditors are regarded as informed people and purposive decision-makers. There are two theories in this approach. The first theory addresses the principle of utilitarianism, which is a conclusive theory on the basis of the "greatest goodness." According to this principle, one should investigate and assess the outcomes of an act for the greatest good for the greatest number. It emphasizes more on the outcome of an act rather than observation of rules. The second theory deals with the principle of ethical tasks, which is based on the content of observing ethical rules. Therefore, actions of auditors, rather than their consequences, are taken into consideration in the process of ethical deduction. According to this principle, a professional accountant is ethically required to act in consistence with the requirements of professional rules, regardless of their consequences. Structural Theory: The structural theory offers a detailed description of achieving systemic and social integration in social systems. The cognitive methods do not adequately consider this issue; rather, they focus on the analysis of individual factor or just its representative. In structural theory of decision-making, it is intended to consider all possible contexts and influential stakeholders. Nevertheless, expertise is an individual capability and an important criterion for determination of decision-making efficiency and adjudication quality (Hedari and Marooghi 2013).

Decision-Making Styles

People's decision-making styles indicate a habitual model used by them during decision-making. In other word, one's decision-making style is his personal approach in understanding and reacting to his decision-making task (Hasas yeganeh and Maghsudi 2010). Therefore, in addition to organizational and environmental factors affecting decision-making styles, difference in personality characteristics makes accountants and auditors to act differently and adopt different decision-making styles. In their studies into decision-making styles and the factors affecting them, Scott and Bruce emphasized inner characteristics and individual differences of people based on five decision-making styles: rational, intuitive, dependent, spontaneous, and avoidant (Parke et al. 2007). Rational Decision-Making Style: This style expresses the tendency of the decision-maker to identify all possible approaches, evaluate the results each solution from all aspects, and finally select the optimal solution under decision-making conditions (Oliveira and Arnaldo 2007). Previous studies show that people with intellectual cognitive style are more successful in the application and development of accounting information (Khajavi and Noshad 2012). Auditors always assume themselves as rational decision-makers, but psychological studies show that people make common mistakes in processing information and analyzing a certain decision (Rahimian 2005).

Intuitive Decision-Making Style: Intuitive decision-making is an unconscious process achieved under the shadow of elicited experiences. In this method, the decision-maker lacks a clear logic regarding the appropriateness of his decision, rather relies on his inner insight and intelligence in doing what he thinks is correct (Patton and John 2003). People's capability in making choices and evaluating the possible consequences of previous experiences (available perception) is observed in financial statements in different forms. Auditors tend to search for different types of mistakes they have faced with in their previous audits. They interpret the responses received from exploring the management performance of the employer based on their previous experiences of him (Rahimian 2005). The intuitive and sensory perceptions have major impact on job selection. The natures of auditing and accounting deal with working with figures. On the other hand, accuracy as well as organizational methods is more consistent with the sensory type of perception. Accountants and auditors tend to focus on short-term experiences. Their key emphasis is on the collected facts that may change directly. Therefore, those who have sensory perceptions rarely make mistakes and tend to precise works. The combination of people with sensory and intuitive perceptions is inappropriate in accounting as compared to other professions. This suggests the practicality of analytical skills for accountants and auditors in objective and real environments. Accountant should know the variables affecting their information use to adopt the best choice when selecting and processing information (Masihabadi and Puryosef 2009).

Dependent Decision-Making Style: This style indicates the lack of intellectual and practical dependence of decision-maker and his reliance on the supports and guidance of others in decision-making (Hestand 2012). Rahimian in a study puts that, "auditors rarely make decisions in a vacuum, and almost all decisions in auditing processes are made by consulting other members of audit team. This group decision-making is associated with advantages that compensate for adjudication mistakes made by individuals (Rahimian 2005).

Spontaneous Decision-Making Style: This style indicates decision-maker's sense of urgency and his tendency to adopt final decision in the shortest possible time, where there is often a lack of prior knowledge (Hestand 2012).

Avoidant Decision-Making Style: Those who adopt avoidant decision-making style postpone the decision-making as long as possible when facing with a problem, and avoid any reaction to the circumstances (Hestand 2012). Krajanský (1983) concluded that people should postpone adjudication about a problem as long as decisive evidence is not obtained and there is an uncertainty. Research findings suggest that knowledge should not be affected negatively for the sake of decision-making speed. Kurtz (1993) states that suspension of adjudication is a characteristic considered to be a necessary ingredient of skeptical inquiry, and the skeptics look for evidence before believing. Billy et al. (2006) concluded that suspension of adjudication is an important structure in knowledge acquisition, and if someone rushes in making adjudication, it may result in inappropriate assumptions and face auditors with problems in the assessment of evidence (Hajiha et al. 2014).

Background of the Study

The researcher did not find any similar domestic and foreign field research into general accounting and auditing decision-making styles, in which Scott and Bruce scale is used. The majority of relevant studies have inspected managers' decision-making styles. Similar to Heidari and Marzoghi (2012), Hadizadeh Moghaddam and Tehrani (2008), Smith (2011), and Thompson (2010), studies into decision-making styles in the field of auditing and accounting have merely addressed psychological theories. In this regard, articles by Masihabadi and Pooryousef (2008), entitled "Effect of Individual Difference in Accounting and Auditing Decision-Making," as well as Khajavi and Noshadi (2012), entitled "The Role of Behavioral Patterns and Decision-Making Models in Judgment by Auditors," can be mentioned.

Research Questions

1. What is the dominant decision-making style in accounting and auditing professions?
2. Is there any significant relationship between the activity field (accounting and auditing) and decision-making style?
3. Is there any significant relationship between age and decision-making styles of accountants and auditors?
4. Is there any significant relationship between sex and decision-making styles of accountants and auditors?
5. Is there any significant relationship between educational attainment and decision-making styles of accountants and auditors?

Methodology

This study was done in the field of behavioral research into accounting and auditing, aiming at investigating the dominant decision-making style in the statistical population. It also investigated the relationship of demographic characteristics of the research samples with decision-making styles. Scott and Bruce (1995) used factor analysis method to design and validate the Decision-Making Styles Scale aiming at assessing people's decision-making styles. This inventory consists 25 items that measure five decision-making styles, namely rational, intuitive, avoidant, dependent, and spontaneous. The validity of it was reported as 0.68 to 0.94 for the mentioned styles, using Cronbach's alpha. The items are scored on a 5-point Likert scale from 1 "strongly disagree" to 5 "strongly agree" (Scott and Bruce 1995; Tabesh and Zare 2013). Hadizadehmoghaddam and Tehrani (2008) normalized the General Decision-Making Styles Inventory in Iran. They reported the Cronbach's alpha of 0.71 for the whole test (Hasas yeganeh and Maghsudi 2010). This study investigated the relationship between each decision-making style (rational, intuitive, dependent, spontaneous, and avoidant), adopted by sample accountants and auditors. Therefore, it was an applied survey study in which the main research question is investigated by selecting statistical sample and using correlational method. The statistical population included auditors working in the Court of Auditors and audit firms, as well as accountants working in different public and private organizations. The statistical samples were selected using convenience sampling method amongst those who were interested to participate in the study.

Findings

There were 69 people interested in the study. Their demographic characteristics are presented in Table 1.

Table 1. Demographic characteristics of the statistical sample

Age	20-25 years	25-30 years	30-35 years	More than 35 years
Number	3	13	41	12
academic degree	Diploma	Associate	Bachelor	Master and more
Number	0	3	62	4
Sex	Woman	Man		
Number	12	57		
field of activity	Accounting	Audit		
Number	36	33		

To investigate the dominant style amongst the statistical sample, the mean score of different styles was measured and compared with the mean score of dominant style using one sample t-test.

Table 2. The mean score of decision-making styles and comparison of it with the dominant style

decision-making styles	Mean	The mean score of decision-making styles and comparison of it with the dominant style	Sig(2-tailed)
Avoidance decision making style	11/78	-4/26	0/000
Spontaneous decision making style	12/59	-3/45	0/000
Dependent decision making style	14/35	-1/69	0/000
Intuitive decision making style	15/20	-1/24	0/000
Rational decision making style	16/044		

Regarding the results (Table 2), the highest (16.04) and lowest (11.78) mean scores belong to rational and avoidant decision-making styles, respectively. Comparison of means also suggests a significant difference between the mean scores of avoidant, spontaneous, and dependent decision-making styles with the mean score of rational decision-making style. To investigate the relationship between decision-making styles with the field of activity and gender, the independent t-test was used. Results are presented in Table 3 and 4.

Table 3. Comparison of decision-making styles by the field of activity

decision-making styles	field of activity	number	mean	t	sig
Avoidance decision making style	Accounting	33	11/18	-1/86	0/66
	Audit	36	12/33		
Spontaneous decision making style	Accounting	31	12/54	-0.91	0/927
	Audit	36	12/63		
Dependent decision making style	Accounting	31	15/58	3/63	0/001
	Audit	36	13/30		
Rational decision making style	Accounting	32	17/37	5/048	0/00
	Audit	36	13/27		
Intuitive decision making style	Accounting	31	17/90	4/57	0/00
	Audit	36	14/44		

The highest mean scores belong to the rational decision-making style for accountants (17.90) and auditors (14.44). In addition, there is a significant difference between the two field of activity (accounting and auditing) in terms of three decision-making styles, namely dependent, intuitive, and rational, at the level of $\text{sig} < 0.05$.

Table 4. Comparison of decision-making styles by gender

decision-making styles	Gender	Number	Mean	t	sig
Avoidance decision making style	Male	57	12/01	1/65	0/103
	Female	12	10/66		
Spontaneous decision making style	Male	55	12/27	-1/42	0/158
	Female	12	14/83		
Dependent decision making style	Male	56	14/14	-1/44	0/155
	Female	11	15/45		
Intuitive decision making style	Male	56	14/58	-2/97	0/004
	Female	12	18/08		
Rational decision making style	Male	56	15/23	-4/96	0/00
	Female	11	20/18		

Test results suggest that the highest mean score belong to rational decision-making style, which is 15.23 and 20.18 in men and women, respectively. There is a significant correlation between the intuitive and rational decision-making styles with gender at the level of $\text{sig} < 0.05$. Apart from avoidant decision-making style, the mean score of other decision-making styles is higher in women. Table 5 and 6 show the relationship of decision-making style with age and educational attainment.

Table 5. Comparison of decision-making styles by age

decision-making styles	Age	Number	Mean	f	sig
Avoidance decision making style	20-25 years	3	10.66	1/47	0/231
	25-30 years	13	11/9		
	30-35 years	41	12/12		
	More than 35 years	12	11/7		
Spontaneous decision making style	20-25 years	3	13/66	0/341	0/796
	25-30 years	13	11/18		
	30-35 years	41	12/90		
	More than 35 years	12	11/80		
Dependent decision making style	20-25 years	3	15/66	1/104	0/354
	25-30 years	13	14/58		
	30-35 years	41	13/90		
	More than 35 years	12	15/33		
Intuitive decision making style	20-25 years	3	15	3/35	0.42
	25-30 years	13	15/23		
	30-35 years	41	14/36		
	More than 35 years	12	18/36		
Rational decision making style	20-25 years	3	13/66	5/62	0.02
	25-30 years	13	16/58		
	30-35 years	41	15/17		
	More than 35 years	12	19/36		

The highest and lowest mean scores among decision-making styles belong to rational style among those older than 35 years and avoidant style among those between 20-25 years, respectively. Moreover, the rational style was significantly correlated with age at the level of $\text{sig} < 0.05$.

Table 6. Comparison of decision-making styles by educational attainment

decision-making styles	academic degree	Number	Mean	F	sig
Avoidance decision making style	Diploma	-	-	4.56	0.014
	Associate	3	13.00		
	Bachelor	62	11.95		
	Master and more	4	8.25		
Spontaneous decision making style	Diploma	-	-	2.76	0.071
	Associate	3	11.50		
	Bachelor	62	12.91		
	Master and more	4	8.25		
Dependent decision making style	Diploma	-	-	1.006	0.371
	Associate	3	16		
	Bachelor	62	15.95		
	Master and more	4	17.50		
Intuitive decision making style	Diploma	-	-	2.19	0.119
	Associate	3	-		
	Bachelor	62	14.90		
	Master and more	4	14.90		
Rational decision making style	Diploma	-	-	0.35	0.702
	Associate	3	13.66		
	Bachelor	62	16.58		
	Master and more	4	19.36		

The highest mean score belongs to those who adopted rational style and have master degree or higher. The lowest mean score is for those who adopt avoidant and spontaneous styles and have master degree or higher. Additionally, there is a significant relationship between the adoption of avoidant and spontaneous styles with educational attainment at the level of $\text{sig} < 0.05$.

Conclusion

Accountants and auditors in every organization have to make important decisions that directly affect the usefulness of financial reports. In this condition, they attempt to make rational and informed decisions. A factor that can affect these decisions is their habitual patterns and/or decision-making styles. Therefore, their decision-making styles can influence the quality of decisions and subsequently their performance. According to the results, the dominant decision-making style amongst accountants and auditors is rational style. It means that accountants and auditors assess all possible solutions from different perspectives before making decision, and then select the most appropriate and optimal one. This finding about adjudication and decision-making in auditing is consistent with that of Rahimian. In addition, results show a significant correlation between dependent, intuitive, and rational decision-making styles with the field of activity. The mean scores of these styles are higher among accountants. The relationship between decision-making style and gender also shows that intuitive and rational styles based decisions are correlated with gender such that the mean scores of them are higher among women. Moreover, decision-making on the basis of rational style has significant correlation with age. People over 35 years old make more rational decisions. This may be due to gaining more experience with time and having higher tendency towards inspecting different solutions and selecting the desired one. The relationship of decision-making style with educational attainment also shows a significant mean difference between avoidant and spontaneous styles. In that, people with master degree or higher tend less to spontaneous decisions. They also do not avoid making decision and react to the problem in a reasonable time. These findings are consistent with Scott and Bruce (1995) pertaining the effect of demographic characteristics and inner nature of people on their decision-making style (Rahimian 2005).

Recommendations

To improve decision quality of accountants, and especially auditors, investigation into the samples of efficient and inefficient decisions in this field are recommended in future studies. In addition, the conditions leading to such decisions are recommended to be inspected. Holding specialized training courses by educational centers and institutions is also recommended to empower decision-making skills of accountants and auditors.

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