



## Identifying Tacit Knowledge Criteria and Experiences of Managers in the Earning Management Behavioral Pattern Using Delphi Method

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### ABSTRACT

Earning management affects earning quality that has been formed based on economic activities. In case that controlling mechanisms such as auditors, supervisory auditors and others be inefficient, conditions get ready for management so that they can manipulate earnings with the aim of reaching to the desired results in the reports such as preparing the expectations of analysts, preventing loss, having access to a growth process or smoothing the level of reported earnings. Therefore, specific experiences of auditors can develop professional auditing knowledge and have various effects on estimating the parameters and indexes such as earning management. The current research aimed at identifying tacit knowledge factors and managers' experiences in the earning management behavioral pattern using Delphi method. Statistical population of this study included official auditors and financial experts. To collect data, interview method based on the questionnaire was utilized. The personal and individual effects, experiences and tacit knowledge of taxes, accounting and financial experiences and tacit knowledge, management experiences and tacit knowledge, auditing experiences and tacit knowledge, political experiences and tacit knowledge, experiences and tacit knowledge of working rules and social security were among experiences and tacit knowledge criteria of managers regarding earning management. The results indicated that respectively, auditing experiences and tacit knowledge, experiences and tacit knowledge of working rules and social security, experiences and tacit knowledge of taxes, personal and individual experiences and tacit knowledge, accounting and financial experiences and tacit knowledge, experiences and tacit knowledge of other fields, political experiences and tacit knowledge and management experiences and tacit knowledge were effective on earning management.

**Keywords:** Earning management, Earning management behavioral pattern, Tacit knowledge and experiences of managers, Delphi method.



## 1. Introduction

In accounting literature, there have been various definitions presented by researchers regarding earning management. Presenting an appropriate definition regarding earning management requires considering the purpose and motivation from earning management and its use. Scott (2000) viewed earning management as the company's choice while selecting accounting policies to reach to some of the specific purposes of the managers. Now, there is a question that what are the specific purposes of a manager regarding earning management? Earning management is the intentional intervention in the reporting process that happens external to the organization with the aim of obtaining some of the personal benefits from managers and shareholders. The comprehensive definition of the earning management should entail actual earning management created through scheduled capitalization decisions or financial support decisions to change the reported earning or some of its components (Rahnemaye Rudposhti et al., 2018). Fern et al., (1994) has defined earning management as manipulating the earning by the manager to reach to a part of pre-judgments related to the expected earnings. DeGeorge et al., (1999) has defined earning management as a kind of artificial manipulation of the earning by manager to reach to an expected level of earning for some specific purposes (for example reaching to the predictions of analysts or estimating previous earnings for predicting future ones). Healy and Wahlen (1999) believed that earning management happens the time that managers use personal judgments in financial reports and manipulate the structure of transactions to change the financial reports. This purpose happens whether to mislead some of the stakeholders regarding the economic performance of the company or to affect the results of contracts whose holding requires the access to a certain earning. Ronen and Yari (2008) considered earning management as a set of management decisions which do not report some of the short-term facts known to the management to maximize earning values (Rahnemaye Rudposhti et al., 2018). Earning management can have negative consequences; for example, the reduction of the reporting credibility external to the organization, the costs of legitimate and rightful claims, the reduction of the price and returns of stocks, the reduction of companies' future performances, the reduction of the relevance of

financial information and the reduction of the fame and validity of the company can be pointed out. These negative consequences are obstacles for this behavior. The amount that earning management beclouds the actual performance and reduces the ability of stakeholders to take conscious decisions, can be considered as a cost. Therefore, controlling and reducing earning management is considered as a topicality and a necessary issue.

Accounting knowledge, which affects decision making, is obtained through occupational (direct) and educational (indirect) experiences. However, specific experiences of auditors can develop the technological knowledge of auditors and have various effects on the estimation of parameters and indexes.

Specific experiences affects people's attention regarding the interpretation of new data. Specific experiences along with the resulting information, performance evaluation based on consequences and creating more motivation resulting from the consequence improves the relational ring between consequences and evaluations in the individuals' minds. The apparent result of these consequences and the relational ring power between consequences and evaluations in the minds of people persuades them to use the consequences while evaluating others. Even the time that they have information regarding the quality of decisions of evaluators and know that compared to consequences, decision's quality are a better basis for evaluation, previous experiences along with evaluations based on decision's quality cause the predominance of decision's quality; therefore, people would concentrated on decision's quality while evaluating others. Moreover, Frederickson et al., predicted that repeating evaluations have a different effect on knowledge and the intensity of the effect depends on the kind of evaluation that people have just experiences (an experience based on consequence or an experience based on the quality of decision). It is expected that the effect of evaluation experience based on consequences be more powerful the time that evaluations are done repeatedly: any extra case of evaluation empowers the relational ring between consequences and performance evaluation in the mind of people. On the contrary, when individuals' evaluation be based on decision quality, the feedback of the consequence would not be related, which weakens the relational ring between consequences and performance evaluation. The results of the study

conducted by Frederickson et al., showed that people's experience regarding the performance evaluation simulated their attention and memory processes and questions people's primary beliefs regarding the competence of evaluations based on decision quality. However, in complex statuses, when data get the form of more interpretations, people's primary beliefs can restrict their learning effectiveness. A psychological research based on learning possibilities through multiple symptoms indicated that when people learn the casual relationships of observations, they don't have tendency to equally use the observations. In case the consequences of a certain action be integrated (for example the decision regarding the allocation of sources) and have many reasons, people's attention toward consequences adaptable with people's primary theories increases and its effect on later decisions improves; while incompatible consequences with these theories, lead to less attention of people; therefore, people's learning would be in a low level (Rosman et al., 2012).

Accordingly, in this research, the tacit knowledge factors and managers' experiences in the earning management behavioral patterns have been identified using Delphi method. This article has been presented in five parts: in the first part, an introduction of the study have been presented and in the second part, the theoretical foundations and literature review of the research have been investigated. In the third part, the research pattern have been explored and in the fourth part, the conceptual pattern of the study have been investigated. Regarding the fifth part, methodology of the study and in the sixth part, research findings have been outlined. In the seventh part, model has been analyzed and in the eighth part, conclusion and discussion have been highlighted.

## **2. Theoretical Foundations and Literature Review**

Financial reports especially net earning is one of the main products of accounting system. The main purpose of collecting financial reports is having information that is beneficial for stakeholders and other beneficiary people while doing rational investments and validations and etc. However, during recent decades, the results of studies have shown the constant reduction in the information content of accounting earnings. Since calculating the net earning

of an economic institution is affected by accounting methods and estimates and due to the fact that based on the theory agency, management purposes are not concordant with stakeholders, it is impossible to manipulate the earnings. This is done through approaching the reported earning to the target earning. Philipon (2004) stated that the issue of agency have caused the occurrence of bonus plans in many companies to reduce the opposition among beneficiaries. He has also stated that managers should manage the earnings to reach to their own beneficiaries. He stated that since the measurement of operating cash is easy, managers use optional accrual items to manage the earning so that they have access to the desired earnings. Moreover, Watts et al., (1986) also declared that in companies where managers' bonus programs are held, managers seek to transfer the future periods' benefits to the current period; doing so, they manipulate the benefits (Moradzadeh et al., 2013).

Ebrahimi et al. (2017) in a study, investigated the effect of managers' overconfidence on actual earning management of companies accepted in Tehran stock exchange. The results of the study showed that there was a positive and significant relationship between management overconfidence and actual earning management criteria.

Hawaii Chun et al., (2017) in their study entitled "earning management and performance after initial public offer" responded to the question that whether institutional investors improve or reduce organizational problems? This study showed that companies having higher ownerships of the institutions, increase the stock return and performance of actions after initial public offer; accordingly, it was shown that capital market have improved to the observational performance of institutional investors after initial offer and these companies' performance. The results show the control of institutional investors and identifies institutional investors more, which improves the performance. Jering (2016) in his study entitled " the effect of earning management and disclosure on financial performance" showed that in case managers be extensively and abnormally interested in using the aforementioned methods, this shows that they have tendency toward actual earning management and the existence of specialist and aware investors limits the manipulation of actual activities. In this study, actual earning management was the

dependent variable and company's future performance, future asset return, future return of shareholder's equity, future earning of each share and the future ratio of price to the company's earning were considered as independent variables of this study. The results of the research indicated that there was a negative and significant relationship between actual earning management and future return of all assets, future return of shareholder's equity, future earning of each share and future share of price to the company's earning in the next year.

The study of Chapman (2011) showed that companies tend to meet the purposes of earnings in the last three months of the year through manipulating the actual activities such as the reduction of prices to temporarily accelerate the sale. Moreover, companies in competitive circumstances show more reactions toward earning management motivations. Goldoni and Oliveira (2010) considered indexes like the number of discussion groups regarding innovation in the product, process and the amount of valuable cooperation for organizational knowledge and intranet storages to create knowledge processes. "Danaiefard" and "Selseleh" (2010) also introduced indexes for creating knowledge processes such as passion for improving the knowledge of individuals, the existence of cash rewards for gaining more knowledge, people's tendency toward constant learning and using learning opportunities, the existence of employee education systems, companies' awareness of their experts in various fields, the existence of organizational sensitivities for attracting and preserving knowledge-centered employees, knowledge people's satisfaction from human resources and employees' personal capitalization for learning the amount of chief managers' employees' encouragement for gaining knowledge. Kohen et al., (2008) investigated the two kinds of earning management and comprehended that managers are involved in actual earning management while offering seasonal shares and the reduction of the performance while offering seasonal share is mostly the result of earning management through actual activities rather than earning management through accrual items. The reason behind is that manipulating actual activities has actual economic results.

Dadashzadeh and Baradaran Hassanzadeh (2018) investigated the strategic relationship between corporate diversification and the actual and artificial phenomena of earning management. The results of the

study showed that there was no relationships between trading diversification and artificial earning management and there was a negative and significant relationship between geographical diversification and artificial earning management. Moreover, there was no relationships between corporate diversification and actual earning management. Baghumian et al., (2018) investigated the effect of economic recession of negative growth of gross domestic product on companies' earning management. Having analyzed the findings of the study using multiple regression method, it was shown that there was a direct and significant relationship between economic recession and earning management of companies. In other words, having increased the negative growth of gross domestic product, companies' managers tend to have more earning managements so that prevent the failure through showing off their financial status. Furthermore, the results of the current study indicated that the gross domestic product fluctuations, as one of the major economic variables, can affect earning management. In other words, in addition to earning management motivations such as rewards, economic recession can also be considered as one the factor affecting earning management.

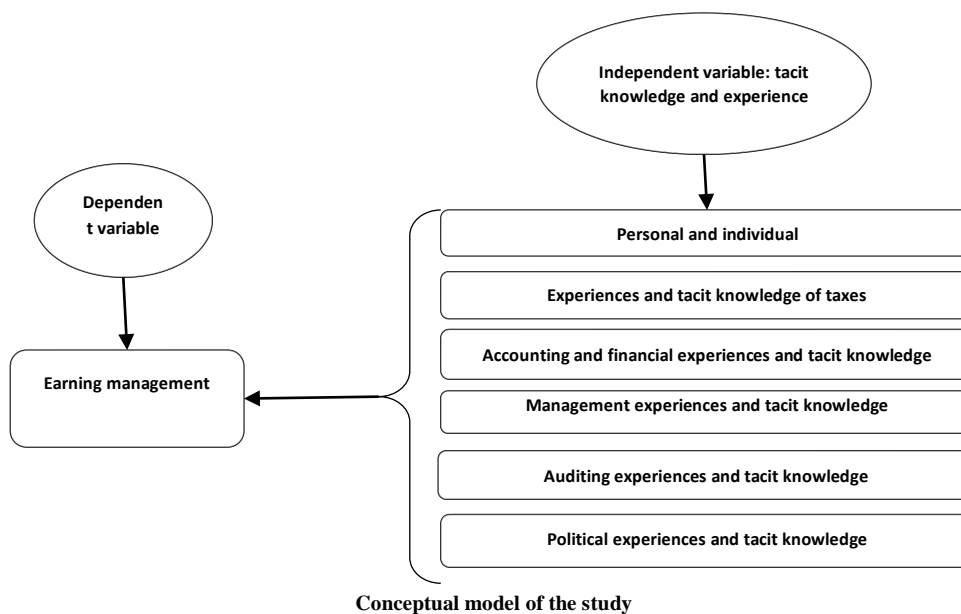
Sadathosseini and Gholami Jamkaran (2018) analyzed the content of published articles regarding earning management. The results of the study indicated that in 95% of the conducted studies, earning management variable had a significant relationship with the investigated variables, showing informative content and the validity of its measurements. Mollazadeh et al., (2017) explored the role of financial knowledge of directors on earning management. The kind of educational document was also considered as a criterion for measuring financial knowledge of directors and for analyzing the data, multiple regression was utilized. The results showed that financial knowledge of directors didn't have any effects on the earning management of the company.

### 3. Research Questions

- Which criteria of personal factors affect earning management?
- Which criteria of experiences and tacit knowledge of taxes affect earning management?
- Which criteria of accounting and financial experiences and tacit knowledge affect earning management?
- Which criteria of management experiences and tacit knowledge affect earning management?
- Which criteria of auditing experiences and tacit knowledge affect earning management?
- Which criteria of political experiences and tacit knowledge affect earning management?
- Which criteria of working rules and social security experiences and tacit knowledge affect earning management?

### 4. Conceptual Pattern of the Study

This study identified the factors of tacit knowledge and experiences of managers in earning management behavioral pattern using Delphi method. Having investigated the background of the study regarding personal effect, it was revealed that experiences and tacit knowledge of taxes, accounting and financial experiences and tacit knowledge, management experiences and tacit knowledge, auditing experiences and tacit knowledge, political experiences and tacit knowledge, working rules and social security experiences and tacit knowledge were among managers' experiences and tacit knowledge criteria on earning management. The purpose of the current research was identifying the sub-criteria of the mentioned criteria; therefore, the theoretical model of the study was estimated to be as the following:



### 5. Methodology of the Study

#### Delphi method

Delphi method is a structured relational technique or method, which is originally designed and developed to predict in an organized and interactive way, whose emphasis has been on the unison of the experts. This

method is used in future studies and mostly has purposes such as discovering innovative and trustful ideas or preparing appropriate information to make decisions. Delphi method is a structured process for collecting and categorizing the existing knowledge with the help of experts, which takes place through distributing questionnaires among these individuals

and received feedbacks controlling the responses and received comments (Oracle, 2016, 15).

The purpose of the current research was identifying the tacit knowledge factors and experiences of managers regarding earning management behavioral pattern using Delphi method. This study was applied and developmental in terms of purpose, and it was descriptive-analytical of survey type in terms of collecting data. Due to the novelty of the subject and diversity of its dimensions, its developmental phases had to be identified based on collective wisdom. Therefore, Delphi method was used along with content analysis method to have an effective connection with managerial experts and have rapid access to the consensus among their comments and use fuzzy numbers instead of crisp numbers to get to near to real results. In this study, the statistical population included Ph.D. professors and students of accounting, the members of official accounting community and experts of accounting. Those having sufficient knowledge, experience and cognition of the subject were selected for interviewing based on judgment sampling and snowball method. This research utilized judgment sampling and snowball method apparently. Based on Delphi technique, data collection of this study was done using questionnaire distribution through three phases. These phases were as the following:

#### **First Phase: Open Questionnaire**

In the first phase, a semi-structured questionnaire having open questions were distributed to experts to have their views and comments regarding the criteria affecting earning management methods. Having investigated the questionnaire, important and key concepts were extracted and similar concepts were integrated with each other and finally, the frequency of each item was calculated.

#### **Second Phase**

In the second phase, items that had been obtained in the first phase, were given to the experts and they were asked to comment on items.

#### **Third Phase**

In this phase, those questions having a mean less than 3 (less than moderate) were removed and in the next phase, they were given to the experts to be confirmed.

#### **Fourth Phase**

In this phase, the questionnaires were again distributed and questioned; based on these questionnaires, the criteria were ranked.

## **6. Findings of the Study**

In this part, the evaluated phases of Delphi method were investigated.

### **First phase: Interviewing and questionnaire**

This phase includes two parts: the first part includes interviewing the panel of experts and an open questionnaire and the second part includes a questionnaire (first round of Delphi). Therefore, in this part of the study, a semi-structured interview was utilized as the main instrument of collecting data. To this end, 10 individuals of experts were selected in the realm of accounting and management accounting using judgment and snowball method as well as theoretical sampling and semi-structured interview.

Open questions included the following cases:

- 1) Which criteria of management experiences and tacit knowledge affect earning management?
- 2) What are the criteria and indexes of auditing experiences and tacit knowledge of managers?
- 3) What are the criteria and indexes of accounting experiences and tacit knowledge of managers?
- 4) Which criteria and indexes of personal characteristics of managers affect earning management?
- 5) Which criteria and indexes affect the experiences and tacit knowledge of managers' taxes?
- 6) Which criteria and indexes affect the experiences and tacit knowledge of working rules and social security of managers?
- 7) Which criteria and indexes affect the managerial experiences and tacit knowledge of managers?

In summary, those criteria obtained from distributing open questionnaire, were as the following. These dimensions included personal indexes, experiences and tacit knowledge of taxes, accounting and financial experiences and tacit knowledge, management experiences and tacit knowledge, auditing experiences and tacit knowledge, political experiences and tacit knowledge, other fields' experiences and tacit knowledge and experiences and tacit knowledge of working rules and social security.

- Personal indexes: Gender, self-confidence, desirability and risk aversion, social relations, education, adherence to ethics, piety, adherence to commitments and educational field.

- Experiences and tacit knowledge of taxes: Tax evasion, tax avoidance and tax evasion risk.
- Accounting and financial experiences and tacit knowledge: Accounting experience, financial management experience, company earningability, constancy in the current post, earning sustainability and earning quality.
- Management experiences and tacit knowledge: Managers` changes, managers` rewards, relations with directors and committees, relations with shareholders, shareholders` structure, the way of appointment (the advocate shareholders` lobby), management power.
- Auditing experiences and tacit knowledge: Having experience in the field of accounting, opposition of beneficiaries, the way of choosing the auditor.
- Political experiences and tacit knowledge: Communications and political relations (political power), governmental pressures (regarding taxes and politics).
- Other fields` experiences and tacit knowledge: Stock exchange rules, central bank and other banks` as well as financial and credit institutions` rules, the kind of industry.
- Working rules and social security experiences and tacit knowledge: the experience of social security, the experience of working rules, working office pressures, social security pressures.
- Earning management indexes: accrual items, sale, research and development costs, the existence of goods and the price of wages.

In the second phase, questionnaire was given to the experts so that their views and comments regarding the effective criteria on earning management method could be obtained. Having investigated each questionnaire, important and key concepts were extracted and similar concepts were integrated with each other and finally, the frequency of each item was calculated.

Following table, demographic characteristics of the first phase have been presented.

First phase: Totally, 30 questionnaires were distributed among which, 25 individuals responded to questionnaires.

**Table 1. Demographic characteristics of the first fuzzy phase**

Expert	Age	Gender	Educational document	Experience
1	26-35	Female	M.A.	6-10
2	36-45	Male	M.A.	15-20
3	26-35	Male	Ph.D. and higher	6-10
4	26-35	Male	M.A.	1-5
5	More than 55	Male	M.A.	More than 20
6	46-55	Male	Ph.D. and higher	More than 20
7	26-35	Male	Ph.D. and higher	11-15
8	26-35	Male	Ph.D. and higher	6-10
9	26-35	Female	M.A.	1-5
10	26-35	Male	M.A.	1-5
11	36-45	Male	Ph.D. and higher	11-15
12	46-55	Male	Ph.D. and higher	More than 20
13	36-45	Male	M.A.	More than 20
14	36-45	Male	Ph.D. and higher	More than 20
15	36-45	Female	Ph.D. and higher	1-5
16	26-35	Male	Ph.D. and higher	1-5
17	46-55	Male	Ph.D. and higher	More than 20
18	36-45	Male	Ph.D. and higher	15-20
19	36-45	Male	Ph.D. and higher	More than 20
20	36-45	Male	Ph.D. and higher	More than 20
21	26-35	Female	Ph.D. and higher	1-5
22	26-35	Female	Ph.D. and higher	6-10
23	26-35	Female	M.A.	1-5
24	26-35	Male	Ph.D. and higher	6-10
25	36-45	Male	Ph.D. and higher	15-20

In summary, those criteria that have been obtained through distributing open questionnaires, were as the following. These dimensions included personal indexes, experiences and tacit knowledge of taxes, accounting and financial experiences and tacit knowledge, management experiences and tacit knowledge, auditing experiences and tacit knowledge, political experiences and tacit knowledge, experiences and tacit knowledge of other fields, experiences and tacit knowledge of working rules and social security.

- Personal indexes: Gender, self-confidence, desirability and risk aversion, social relations, education, adherence to ethics, piety, adherence to commitments and educational field.
- Experiences and tacit knowledge of taxes: Tax evasion, tax avoidance and tax evasion risk.
- Accounting and financial experiences and tacit knowledge: Accounting experience, financial management experience, company earningability, constancy in the current post, earning sustainability and earning quality.
- Management experiences and tacit knowledge: Managers` changes, managers` rewards, relations with directors and committees, relations with shareholders, shareholders` structure, the way of appointment (the

advocate shareholders` lobby), management power.

- Auditing experiences and tacit knowledge: Having experience in the field of accounting, opposition of beneficiaries, the way of choosing the auditor.
- Political experiences and tacit knowledge: Communications and political relations (political power), governmental pressures (regarding taxes and politics).
- Other fields` experiences and tacit knowledge: Stock exchange rules, central bank and other banks` as well as financial and credit institutions` rules, the kind of industry.
- Working rules and social security experiences and tacit knowledge: the experience of social security, the experience of working rules, working office pressures, social security pressures.
- Earning management indexes: accrual items, sale, research and development costs, the existence of goods and the price of wages.

Considering earning management behavioral pattern criteria based on tacit knowledge and managers` experiences were obtained according to the participants` responses and have been presented in Table 2.

**Table 2. Earning management behavioral pattern criteria based on tacit knowledge and managers` experiences (first phase, frequency)**

Dimensions/experience criterion	Experience indexes	Frequency	Frequency percentage
Personal indexes	Gender	20	57.14
	Self-confidence/ over-confidence	19	54.29
	Desirability and risk aversion	21	60.00
	Social relations	18	51.43
	Education	19	54.29
	Adherence to ethics	17	48.57
	Piety	17	48.57
	Educational field	20	57.14
Experiences and tacit knowledge of taxes	Tax evasion	18	51.43
	Tax avoidance	20	57.14
	Tax evasion risk	19	54.29
Accounting experiences and tacit knowledge	Accounting experience	20	57.14
	Financial management experience	19	54.29
	Company earningability	17	48.57
	Constancy in the current post	17	48.57
	Earning sustainability	18	51.43
	Earning quality	18	51.43
	Managers` changes	20	57.14



Dimensions/experience criterion	Experience indexes	Frequency	Frequency percentage
	Rewarding managers	17	48.57
	Relations with directors and committees	17	48.57
Management experiences and tacit knowledge	Relations with shareholders	18	51.43
	Shareholders` structure	20	57.14
	Management power	18	51.43
Auditing experiences and tacit knowledge	Having auditing experience	20	57.14
	Opposition of earnings	19	54.29
	The power and way of selecting auditors	20	57.14
Political experiences and tacit knowledge	Political relations (political power)	19	54.29
	Governmental pressures (financial and political)	18	51.43
Experiences and tacit knowledge of other fields	Stock exchange rules	20	57.14
	Rules of central banks, other banks and financial and credit institutions	19	54.29
	Kind of industry	19	54.29
Experiences and tacit knowledge of working rules and social security	Social security experience	20	57.14
	Working rule experience	20	57.14
	Working office pressures	19	54.29
	Social security pressures	18	51.43
Earning management indexes	Accrual items	20	57.14
	Sale	17	48.57
	Research and development costs	17	48.57
	Goods` existence	20	57.14
	Wages` cost	20	57.14

Source: research investigations

As it is observed in the above table, earning management behavioral pattern criteria based on tacit knowledge and managers` experiences included 37 items along with each one`s frequency. Based on the findings of this table, the above items were preferred among received responses.

**Second phase**

In the second phase, those items obtained from the first phase, were given to the experts and they were asked to comment on these items. Therefore, the demographic characteristic has been also observed in the second phase. In this phase, 25 questionnaires were distributed, among which, 22 individuals responded to research questions.

**Table 3. Demographic characteristics of the second phase of the research**

Expert	Age	Gender	Educational document	Working experience
1	36-45	Male	Ph.D. and higher	More than 20
2	46-55	Male	M.A.	15-20
3	36-45	Male	Ph.D. and higher	15-20
4	26-35	Female	Ph.D. and higher	5-10
5	26-35	Female	M.A.	5-10
6	26-35	Female	M.A.	5-10
7	26-35	Female	M.A.	5-10
8	26-35	Female	M.A.	5-10
9	26-35	Female	M.A.	5-10

Expert	Age	Gender	Educational document	Working experience
10	36-45	Male	Ph.D. and higher	5-10
11	26-35	Male	Ph.D. and higher	5-10
12	36-45	Male	Ph.D. and higher	15-20
13	36-45	Male	M.A.	More than 20
14	36-45	Male	Ph.D. and higher	More than 20
15	26-35	Female	M.A.	5-10
16	26-35	Female	Ph.D. and higher	5-10
17	26-35	Female	M.A.	10-15
18	36-45	Female	Ph.D. and higher	10-15
19	36-45	Male	Ph.D. and higher	More than 20
20	36-45	Male	M.A.	15-20
21	26-35	Male	Ph.D. and higher	10-15
22	26-35	Female	M.A.	5-10

Using Likert scale (really low agreement 5, completely agree 1), the importance of each item was identified (Tables 3-4). In addition, they had to run their adjusting comments regarding the questionnaire. In other words, they were free to remove, add or

confirm the items. Table 4 has presented the earning management behavioral pattern criteria based on tacit knowledge and experiences of managers in the second fuzzy phase.

**Table 4. Earning management behavioral pattern criteria based on the tacit knowledge and experiences of managers (second phase, mean)**

Dimensions	Question	Mean
Personal indexes	Self-confidence/ over-confidence	3.967
	Desirability and risk aversion	4.033
	Social relations	3.533
	Education	3.733
	Adherence to ethics	4.167
	Piety	3.033
	Adherence to the commitments	3.900
	Educational field	3.533
Experiences and tacit knowledge of taxes	Tax evasion	4.167
	Tax avoidance	4.033
	Tax evasion risk	3.667
Accounting experiences and tacit knowledge	Accounting experience	4.067
	Financial management experience	4.400
	Company earningability	4.233
	Constancy in the current post	3.867
	Earning sustainability	3.800
	Earning quality	3.833
Management experiences and tacit knowledge	Managers` changes	3.800
	Rewarding managers	3.967
	Relations with directors and committees	3.833
	Relations with shareholders	3.467
	Shareholders` structure	3.767
	Management power	3.900
Auditing experiences and tacit	Having auditing experience	4.067
	Opposition of earnings	4.000

Dimensions	Question	Mean
knowledge	The power and way of selecting auditors	3.500
Political experiences and tacit knowledge	Political relations (political power)	3.967
	Governmental pressures (financial and political)	3.967
Experiences and tacit knowledge of other fields	Stock exchange rules	3.700
	Rules of central banks, other banks and financial and credit institutions	3.500
	Kind of industry	3.567
Experiences and tacit knowledge of working rules and social security	Social security experience	2.967
	Working rule experience	3.167
	Working office pressures	3.000
	Social security pressures	2.933
Controlling questions	Being male	3.233
	Having desired relations	3.233
	Having Ph.D. document	2.900
	Ethical issues	3.733
	Not paying taxes	3.433
	Having accounting experience	3.667
	Having financial manager experience	4.033
	Having the experience of working in a post	3.967
	Appointing managers	3.800
	Organizational stakeholders	3.700
	Governmental stakeholders	3.433
	Private stakeholders	3.133
	Auditing experience	3.733
	Opposition of earnings	3.767
	Power and the way of selecting auditors	3.367
	Collusion with politicians	3.500
	Presence in partys	3.267
	Active presence of members in virtual spaces	2.867
	Financial rules	3.733
	Insurance rules	3.367
	Paying insurance right	2.900
Earning management indexes	Accrual items	3.933
	Sale	3.967
	Research and development costs	3.700
	The existence of goods	3.733
	Wages` cost	3.467

Source: research calculations

The results showed that most of the aforementioned factors such as dimensions and sub-criteria based on tacit knowledge and managers` experiences were confirmed. The highest mean of these sub-criteria in each of the criteria were as the following:

Personal indexes: Adherence to ethics and desirability and risk aversion had the highest scores in designing the earning management behavioral dimensions, according to experts.

Experiences and tacit knowledge of taxes: Tax evasion had the highest score in designing earning

management behavioral dimension, according to experts.

Accounting experiences and tacit knowledge: According to experts, financial management experience and company profitability had the highest score in designing the earning management behavioral dimension.

Management experiences and tacit knowledge: According to experts, managers' rewards and management power had the highest score in designing the earning management behavioral dimension.

Auditing experiences and tacit knowledge: According to experts, having experience in auditing had the highest score in designing the earning management behavioral dimension.

Political experiences and tacit knowledge: According to experts, political relations (political power) and governmental pressures (financial and political) had the highest score in designing the earning management behavioral dimension.

Experiences and tacit knowledge of working rules and social security: According to experts, the experience of working rules had the highest score in

designing the earning management behavioral dimension.

Earning management indexes: According to experts, accrual items and sale had the highest score in designing the earning management behavioral dimension.

Moreover, according to the mentioned issues regarding fuzzy Delphi method, to continue the study and o the third phase of the research, those questions having a mean less than 3 (less than moderate) were removed and in the next phase, they were given to experts for final confirmation. As it is observed, social security pressures in presenting earning management behavioral patterns in companies accepted in stock exchange were contrary to the experiences and tacit knowledge of working rules and social security, having Ph.D. education and active presence of members in virtual spaces in presenting the behavioral pattern of management and were removed from the controlling questions of the next phase.

### Third phase of Delphi

The following table has presented demographic characteristics of the third phase.

**Table 5. Demographic characteristics in the third phase**

Expert	Age	Gender	Educational document	Working experience
1	36-45	Male	M.A.	15-20
2	46-55	Male	Ph.D. and higher	More than 20
3	36-45	Male	Ph.D. and higher	15-20
4	26-35	Female	Ph.D. and higher	5-10
5	26-35	Female	M.A.	5-10
6	26-35	Female	M.A.	5-10
7	26-35	Male	Ph.D. and higher	5-10
8	26-35	Male	Ph.D. and higher	5-10
9	36-45	Male	Ph.D. and higher	15-20
10	36-45	Male	M.A.	More than 20
11	36-45	Male	Ph.D. and higher	More than 20
12	26-35	Female	Ph.D. and higher	5-10
13	26-35	Female	M.A.	10-15
14	36-45	Female	Ph.D. and higher	10-15
15	36-45	Male	Ph.D. and higher	More than 20
16	36-45	Male	M.A.	15-20
17	26-35	Male	Ph.D. and higher	10-15
18	26-35	Female	M.A.	5-10
19	36-45	Male	Ph.D. and higher	More than 20
20	36-45	Male	M.A.	15-20
21	26-35	Male	Ph.D. and higher	10-15
22	26-35	Female	M.A.	5-10

**Table 6. Earning management behavioral pattern criteria based on tacit knowledge and experiences of managers (third phase, mean)**

Dimensions/ experience dimensions	Frequency	Mean
Personal indexes	Self-confidence/ over-confidence	3.31
	Desirability and risk aversion	3.95
	Social relations	3.77
	Education	3.50
	Adherence to ethics	3.73
	Piety	3.86
	Adherence to the commitments	3.45
Experiences and tacit knowledge of taxes	Educational field	3.91
	Tax evasion	3.55
	Tax avoidance	4.18
Accounting experiences and tacit knowledge	Tax evasion risk	4.09
	Accounting experience	3.68
	Financial management experience	4.09
	Company profitability	4.14
	Constancy in the current post	4.14
	Profit sustainability	3.95
Management experiences and tacit knowledge	Profit quality	4.00
	Managers` changes	3.82
	Rewarding managers	3.91
	Relations with directors and committees	4.14
	Relations with shareholders	3.95
	Shareholders` structure	3.86
Auditing experiences and tacit knowledge	Management power	3.91
	Having auditing experience	3.86
	Opposition of profits	4.05
Political experiences and tacit knowledge	The power and way of selecting auditors	3.68
	Political relations (political power)	4.00
Experiences and tacit knowledge of other fields	Governmental pressures (financial and political)	4.00
	Stock exchange rules	3.64
	Rules of central banks, other banks and financial and credit institutions	3.55
Experiences and tacit knowledge of working rules and social security	Kind of industry	3.50
	Working rule experience	3.41
Controlling questions	Working office pressures	3.18
	Being male	2.86
	Having desired relations	2.91
	Ethical issues	3.36
	Not paying taxes	3.59
	Having accounting experience	3.82
	Having financial manager experience	3.77
	Having the experience of working in a post	3.59
	Appointing managers	3.73
	Organizational stakeholders	3.86
	Governmental stakeholders	3.50
Private stakeholders	3.09	

Dimensions/ experience dimensions	Frequency	Mean
	Auditing experience	3.45
	Opposition of profits	3.82
	Power and the way of selecting auditors	3.36
	Collusion with politicians	3.59
	Presence in partys	3.14
	Financial rules	3.50
	Insurance rules	3.18
Earning management indexes	Accrual items	3.59
	Sale	3.68
	Research and development costs	3.32
	The existence of goods	3.50
	Wages` cost	3.23

Source: research calculations

Table 3 have presented the earning management behavioral pattern criteria based on tacit knowledge and experiences of managers.

The results showed that most of the aforementioned factors such as dimensions and sub-criteria based on tacit knowledge and experiences of managers were confirmed. The highest mean of these sub-criteria in each of the criteria were as the following:

Personal indexes: Desirability and risk aversion as well as educational field had the highest scores in designing the earning management behavioral dimensions, according to experts.

Experiences and tacit knowledge of taxes: Tax avoidance had the highest score in designing earning management behavioral dimension, according to experts.

Accounting experiences and tacit knowledge: According to experts, company profitability and constancy in the current post had the highest score in designing the earning management behavioral dimension.

Management experiences and tacit knowledge: According to experts, relations with stakeholders and management power had the highest score in designing the earning management behavioral dimension.

Auditing experiences and tacit knowledge: According to experts, opposition in earnings had the highest score in designing the earning management behavioral dimension.

Political experiences and tacit knowledge: According to experts, political relations (political power) and

governmental pressures (financial and political) had the highest score in designing the earning management behavioral dimension.

Experiences and tacit knowledge of other fields: According to experts, the rules of stock exchanges had the highest score in designing the earning management behavioral dimension.

Experiences and tacit knowledge of working rules and social security: According to experts, experience of working rules had the highest score in designing the earning management behavioral dimension.

Earning management indexes: According to experts, accrual items and sale had the highest score in designing the earning management behavioral dimension.

Before conducting a fuzzy investigation, it is necessary that the controlling questions related to each of the dimensions be explored. To this end, the comparison of t mean was utilized. The results showed that there was no significant differences between controlling questions and each of the dimensions; therefore, the dimensions effective on earning management were investigated confidently using fuzzy Delphi technique. Table 7 has presented the earning management behavioral pattern criteria based on tacit knowledge and experiences of managers using fuzzy approach.

**Table 7. Earning management behavioral pattern criteria based on tacit knowledge and experience using fuzzy approach**

Dimensions/experience criterion	Frequency	Mean	The amount of defuzzification of each question	The status of questions	The percentage of consensus	The amount of weight	Rate in the dimension
Personal indexes	Self-confidence/ over-confidence	3.31	3.06	Confirmed	40.91	0.02	8
	Desirability and risk aversion	3.95	3.96	Confirmed	68.18	0.03	1
	Social relations	3.77	3.6	Confirmed	54.55	0.03	4
	Education	3.5	3.45	Confirmed	45.45	0.03	5
	Adherence to ethics	3.73	3.84	Confirmed	54.55	0.03	3
	Piety	3.86	3.33	Confirmed	59.09	0.02	6
	Adherence to the commitments	3.45	3.14	Confirmed	45.45	0.02	7
	Educational field	3.91	3.95	Confirmed	50	0.03	2
Experiences and tacit knowledge of taxes	Tax evasion	3.55	3.17	Confirmed	54.55	0.02	3
	Tax avoidance	4.18	4.06	Confirmed	54.55	0.03	2
	Tax evasion risk	4.09	4.09	Confirmed	50	0.03	1
Accounting and financial experiences and tacit knowledge	Accounting experience	3.68	3.54	Confirmed	40.91	0.03	6
	Financial management experience	4.09	4.02	Confirmed	63.64	0.03	3
	Company profitability	4.14	4.03	Confirmed	40.91	0.03	2
	Constancy in the current post	4.14	4.04	Confirmed	50	0.03	1
	Profit sustainability	3.95	3.68	Confirmed	45.45	0.03	5
	Profit quality	4	3.97	Confirmed	54.55	0.03	4
Management experiences and tacit knowledge	Managers` changes	3.82	3.62	Confirmed	59.09	0.03	6
	Rewarding managers	3.91	3.66	Confirmed	63.64	0.03	4
	Relations with directors and committees	4.14	3.85	Confirmed	59.09	0.03	2
	Relations with shareholders	3.95	3.94	Confirmed	40.91	0.03	1
	Shareholders` structure	3.86	3.64	Confirmed	54.55	0.03	5
	Management power	3.91	3.66	Confirmed	50	0.03	3
Auditing experiences and tacit knowledge	Having auditing experience	3.86	3.92	Confirmed	62.07	0.03	2
	Opposition of profits	4.05	4	Confirmed	59.09	0.03	1
	The power and way of selecting auditors	3.68	3.55	Confirmed	54.55	0.03	3
Political experiences and tacit knowledge	Political relations (political power)	4	3.7	Confirmed	40.91	0.03	2
	Governmental pressures (financial and political)	4	3.97	Confirmed	54.55	0.03	1
Experiences and tacit knowledge of other fields	Stock exchange rules	3.64	3.53	Confirmed	50	0.03	1
	Rules of central banks, other banks and financial and credit institutions	3.55	3.47	Confirmed	50	0.03	2
	Kind of industry	3.5	3.45	Confirmed	45.45	0.03	3
Experiences and tacit knowledge of working rules and social security	Working rule experience	3.41	3.4	Confirmed	54.55	0.02	1
	Working office pressures	3.18	3.06	Confirmed	54.55	0.02	2
	Accrual items	3.59	3.18	Confirmed	63.64	0.02	2

Dimensions/experience criterion	Frequency	Mean	The amount of defuzzification of each question	The status of questions	The percentage of consensus	The amount of weight	Rate in the dimension
Earning management indexes	Sale	3.68	3.21	Confirmed	40.91	0.02	1
	Research and development costs	3.32	3.05	Confirmed	45.45	0.02	4
	The existence of goods	3.5	3.15	Confirmed	40.91	0.02	3
	Wages` cost	3.23	3	Confirmed	40.91	0.02	5

Considerable results of the aforementioned table are as following:

Regarding personal dimension, factors such as desirability, risk evasion, educational field, adherence to ethics and social relation are preferred in presenting management behavioral pattern. Education, piety and self-confidence affect earning management behavioral pattern in the next phases.

Regarding the experiences and tacit knowledge of taxes, factors such as tax evasion risk, tax avoidance and tax evasion were preferred in presenting earning management behavioral pattern.

Regarding accounting and financial experiences and tacit knowledge, factors such as constancy in the current post, company profitability, financial management experience, profit quality, profit sustainability and accounting experience were respectively preferred in presenting earning management behavioral pattern.

Regarding management experiences and tacit knowledge, factors such as relations with stakeholders, relations with directors, the way of appointment, managers` rewarding, stakeholders` structure and managers` changes were preferred in presenting earning management behavioral pattern.

Regarding auditing experiences and tacit knowledge, factors such as oppositions of profits, having experience in accounting, and the power and way of selecting auditors were effective in presenting earning management behavioral pattern.

Regarding political experiences and tacit knowledge, factors such as governmental pressures and political relations were preferred.

Regarding the experiences and tacit knowledge of other fields, factors such as the rules of stock exchange, the rules of central bank and kind of industry were effective in presenting earning management behavioral pattern.

Regarding experiences and tacit knowledge of working rules and social security, factors such as working rules and pressures of the working office were

effective in presenting earning management behavioral pattern.

## 7. Conclusion and Discussion

In this research, the criteria regarding tacit knowledge and experiences of managers in the earning management behavioral pattern was investigated using Delphi method. To this end, Delphi method was utilized; therefore, in the findings section, each of the phases of the Delphi method was analyzed.

The results of the investigations showed that:

Considering the abovementioned analyses, it was observed that accounting experiences and tacit knowledge, experiences and tacit knowledge of working rules and social security, experiences and tacit knowledge of taxes, personal experiences and tacit knowledge, accounting and financial experiences and tacit knowledge, experiences and tacit knowledge of other fields, political experiences and tacit knowledge, and management experiences and tacit knowledge, respectively, were effective on earning management. Moreover, exploration of the sub-criteria revealed that:

Regarding personal dimension, factors such as desirability and risk aversion, educational field of study, adherence to ethics and social relations were preferred in presenting management behavioral pattern. Education, piety and self-confidence were effective on presenting earning management behavioral pattern in the next stages. When managers are overconfident or, in a sense, optimistic about the efficiency of the business unit, they are able to provide better earning management. The results of this study are in line with the results of the research of Ebrahimi et al. (2016) and Bumhan (2014).

Regarding experiences and tacit knowledge of taxes, tax evasion risk, tax avoidance and tax evasion were respectively, preferred in presenting earning management behavioral pattern. Earning management can be effective when it comes to tax payments, which use accounting numbers to calculate taxes. But if the tax laws do not give the manager the authority to tax



accounting, the efficiency of earning management in this area will decrease.

Regarding accounting experiences and tacit knowledge, constancy in the current post, company profitability, financial management experience, profit quality, earning sustainability and accounting experience were respectively, preferred in presenting earning management behavioral pattern.

Regarding management experiences and tacit knowledge, relations with stakeholders, relations with directors, management power, managers' rewarding, stakeholders' structure and managers' changes were respectively, preferred in presenting earning management behavioral pattern. Therefore, through managerial experience and tacit knowledge, including rewarding managers, relationships with the board of directors and committees, shareholder structure and managerial ability will be improved and earning management will increase in line with it. Therefore, considering the positive effect of managers' experience and tacit knowledge, it can be emphasized that there is a positive and significant relationship between managers' rewards and earnings management. This result is consistent with the views of March and Shepira (1992) and Brown (2007).

Regarding auditing experiences and tacit knowledge, opposition of earnings, having experience in accounting and the power and way of selecting auditors were respectively, effective in presenting earning management behavioral pattern.

Regarding political experiences and tacit knowledge, governmental pressures and political relations were respectively, preferred in presenting earning management behavioral pattern.

Regarding experiences and tacit knowledge of other fields, the rules of stock exchanges, the rules of central bank and the kind of industry were respectively, effective in presenting earning management behavioral pattern.

Regarding experiences and tacit knowledge of working rules and social security, working rule experiences and pressures of the working office were respectively, effective in presenting earning management behavioral pattern.

According to the results of the study, it is suggested that accounting experiences and tacit knowledge, experiences and tacit knowledge of working rules and social security, experiences and tacit knowledge of taxes, personal experiences and tacit

knowledge, accounting and financial experiences and tacit knowledge, experiences and tacit knowledge of other fields, political experiences and tacit knowledge and management experiences and tacit knowledge be respectively, considered.

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