

RESEARCH ARTICLE

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The Influence of Organizational DNA and Strategic Decision-Making on Management Accounting

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Abstract

This study aims to explore the influence of organizational DNA and strategic decision-making on management accounting. The research method is descriptive-correlational, employing a structural equation modeling (SEM) approach. The statistical population comprises 500 managers from companies listed on the Tehran Stock Exchange in 2019, of whom 254 were selected as the sample using stratified random sampling based on Cochran's formula. Data collection was conducted through four researcher-designed questionnaires focusing on organizational DNA, strategic decision-making, and web-based management. Content validity was confirmed through confirmatory factor analysis, composite reliability (CR) indices, and average variance extracted (AVE). Reliability was also verified using Cronbach's alpha. The data were analyzed using Lisrel and SPSS software. The findings indicate that organizational DNA has a direct, significant, and positive impact on management accounting. Similarly, strategic decision-making positively influences management accounting through web-based platforms. These results underscore the importance of integrating organizational DNA and strategic decision-making to advance management accounting practices.

Keywords: Organizational DNA, Strategic Decision-Making, Management Accounting

Introduction

Today, companies utilize various accounting methods to prepare information using economic measurement criteria for different stakeholders. Management accounting, a branch focused on business income, expenses, and asset utilization (Turner et al., 2017), is gaining attention. Researchers view management accountants as forward-thinking individuals whose decisions impact the organization's future. This involves using accounting techniques to support strategy formation, business execution, decision-making, and risk management through financial and non-financial measures. Management accounting provides

information for internal managers and owners to plan and control business activities, aiding in difficult decisions with real financial and operational insights. It is forward-looking and confidential (Ghozali, 2016).

In practice, management accounting expands strategic management, enhances business decision-making performance, and participates in frameworks for identifying, measuring, managing, and reporting risks to achieve organizational goals. Its scope applies to all management process activities in commercial organizations for planning, evaluation, control, and decision-making (Aghajani, 2018). Management accounting

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adapts to environmental changes driven by technological advancements, globalization, and customer needs. Organizations rely on it to prepare information in dynamic environments, and failure to adapt management accounting systems can hinder the organization's ability to deal with change. Efficiency in management accounting is influenced by organizational variables, including structure, centralization, IT infrastructure, and culture (Ha, 2020).

Organizational DNA, a metaphor for fundamental factors defining organizational characteristics, includes structural elements like organizational structure, information flow, decision rights, and motivators. Unlike human DNA, it can be modified. Organizational DNA identifies problems and functional barriers, offering solutions (Anh, 2016). It's a measurement of organizational thinking, leadership patterns, and management practices (Namazi, 2023).

Decision-making, a core management activity, involves identifying issues, determining alternatives, choosing, and implementing solutions. Uncertainty complicates decisions, reducing confidence in optimal choices. Management relies on decision-making, and current industrial conditions, characterized by evolving customer needs, technology, competition, and globalization, pose challenges (Azizi et al., 2019). Continuous changes in the business environment require constant adaptation of management accounting methods to maintain efficiency. Misalignment can hinder organizational goals. Relevant, reliable, and comparable financial information becomes crucial (Woolman & Tortato, 2019).

Management accounting faces fundamental reviews in costing, strategic

decision-making, control, performance management, competitor evaluation, and customer analysis. Identifying influential factors is key, with flexible organizational structures potentially aiding development (Alizadeh et al., 2019). Companies must adapt to changes and integrate management accounting, given financial resource limitations. Strategic decision-making and web-based management systems providing databases for managers can enhance information accessibility and improve management accounting. Ultimately, this research aims to determine whether organizational DNA and strategic decision-making significantly impact management accounting.

Literature Review

Moradzadeh Fard et al. (2021) conducted a study titled "Investigating the Impact of Business Intelligence Tools on Increasing the Efficiency of Integrated Management Accounting Information Systems." This research aimed to comprehensively update the existing and traditional management accounting information and decision-making system, so that management accounting can reclaim its primary role in decision-making. The main role of management accounting is to use available information in the best possible way to make the best possible decisions. Achieving information to the highest extent in order to increase the efficiency of the management accounting information system can be achieved using business intelligence tools. Business intelligence tools include tools named ETL, OLAP, DWH for performance, resource planning, and strategic information. Traditionally, management accounting is considered the main support system for

decision-making and control in the organization. As such, it has clear links with the use of business intelligence technologies. Accordingly, in this research, we will analyze the studies conducted, examine their findings, and use the analysis of questionnaire results to discuss and conclude on the implications and opportunities of the research. The aim of this research is to investigate the positive impact of using business intelligence tools on modern management accounting by creating a more effective decision-making process with greater efficiency.

Sheikhalishah and Nakhaei (2021) conducted a study entitled "Management Accounting and Strategic Management Accounting: The Role of Organizational Culture and Information Systems." The purpose of this study was to examine the theoretical literature on the factors of applying strategic management accounting and the role that management accountants play. The management accounting network, the quality of information systems, and organizational culture are three variables that play a role in management accounting. The findings of this research prove a positive relationship between the management accounting network and the implementation of strategic management accounting practices. However, this relationship has a positive relationship with the quality of information systems, which enables management accountants to implement strategic management accounting measures. In contrast to the quality of information systems, organizational culture has also been discussed and examined in this research, which showed that it affects strategic management accounting.

Mohammadi and Davachi (2019) conducted a study aimed at determining the impact of differentiation strategy, the business partner orientation of management accountants, and management accounting systems on the exploratory innovation process and financial performance of companies listed on the Tehran Stock Exchange in 2019, among financial managers, management accountants, internal auditors, and human resources managers. The research hypotheses were tested using PLS software. The results showed that the differentiation strategy has a positive and significant effect on the orientation of management accountants as a business partner. The orientation of management accountants as a business partner has an impact on the use of the management accounting system. The orientation of management accountants as a business partner has a significant impact on the use of the management accounting system. The use of a management accounting system has an impact on innovation. The use of a management accounting system has an impact on financial performance. The use of a management accounting system has an impact on exploratory innovation. The use of a management accounting system has an impact on exploratory innovation.

Alrjoub et al. (2023) conducted a study entitled "The Impact of Business Intelligence Systems on Management Accounting Systems from the Perspective of Experts." The results showed that the application of intelligent systems can affect the expertise of management accountants and not only can bring about final changes in existing management accounting methods, but also can create more changes by supporting new and advanced management accounting

methods. By identifying the changes in the management accounting system and the factors that can follow or prevent the specific relationships between business intelligence and management accounting systems.

Sriyono et al. (2022) conducted a study entitled "The Impact of Business Analysis and Organizational Systems on Management Accounting." The results showed that business analysis (descriptive, predictive, and prescriptive) and four dimensions of performance evaluation (financial, customer, internal process, and learning and growth) in the organizational system environment have a positive and significant impact on management accounting.

Dasuki (2021) conducted a study entitled "Creating Agile Organizations through Information Technology: The Impact of Internal Service Perceptions on the Quality of Information and Communication Technology Services and IT Agility." The results showed that the use of new information and communication technologies plays a significant role in organizational agility and organizational processes, as well as improving the quality of services.

Azudin, and Mansor (2018) conducted a study entitled "Management Accounting Practices: The Impact of Organizational DNA, Business Potential, and Operational Technology." The results showed that organizational DNA and business potentials with the mediating role of operational technology have a positive and significant impact on management accounting practices.

Research Questions

Main Question:

- Does organizational DNA and strategic decision-making of

management have an impact on management accounting?

Subsidiary Questions:

- Does organizational DNA have an impact on management accounting?
- Does strategic decision-making of management have an impact on management accounting?

Research Methodology

In terms of its purpose, this research is applied. Considering the research topic, the research method employed is descriptive, utilizing survey and correlational approaches for data collection. Furthermore, as the relationships between all variables are examined, correlation techniques and tests were also applied. The analysis of the results was conducted using SPSS 22 and Lisrel statistical software at both descriptive and inferential levels. At the descriptive level, statistics such as frequency, percentage, mean, and standard deviation were used. To determine the correlation between the research variables, and based on the normality of the data, Pearson's correlation coefficient test was used. Confirmatory factor analysis was used to identify organizational DNA, strategic decision-making, web-based management, and management accounting constructs. Additionally, to determine the extent and strength of the influence of organizational DNA and strategic decision-making on management accounting, with web-based management as a mediator, structural equation modeling (SEM) was performed using Lisrel statistical software.

Population and Sample

The statistical population of this research consists of all senior-level managers of

companies listed on the Tehran Stock Exchange in 2019. According to the announcement by the Issuers Affairs Department of the Stock Exchange, the number of managers is 500.

In the present study, because the statistical population consists of several groups based on educational level, a stratified sampling method proportional to the size of each group in the statistical population was used. This sampling method is used when the statistical population does not have a homogeneous structure. In such cases, the population should be divided into strata, each of which has a homogeneous structure, and then a random sample is selected from each stratum. The number of samples in each stratum is

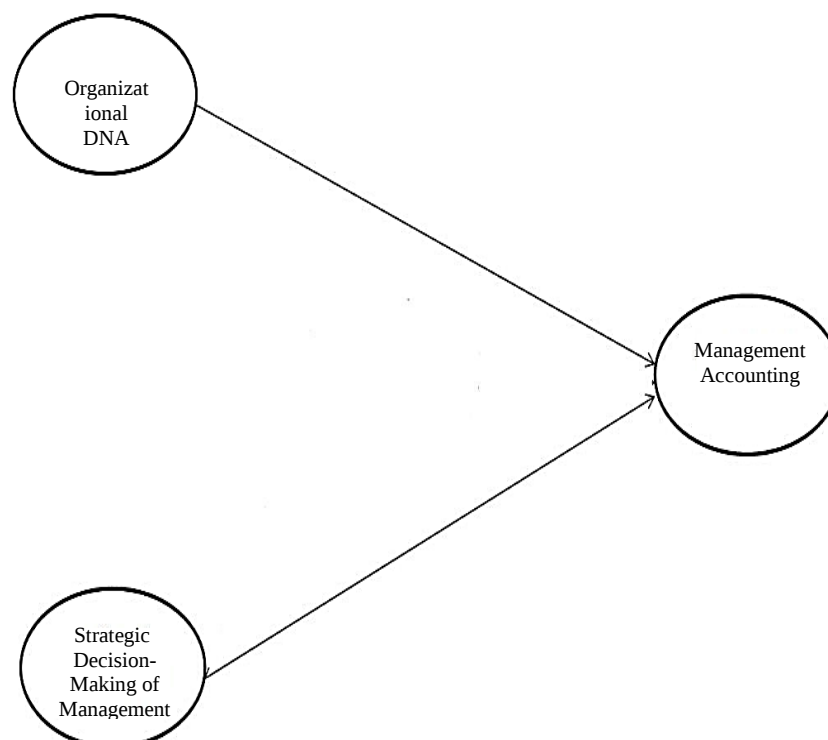
determined proportionally to its representation in the overall statistical population. To estimate the required sample size for the present study, Morgan's table was used. Consulting the table indicated that for a population size of 500, a sample size of 217 individuals would be sufficient for the study. In anticipation of some questionnaires not being returned, 280 questionnaires were distributed. Ultimately, 254 complete questionnaires were returned and analyzed.

Conceptual Model and Research Variables

The conceptual model of the research is presented in the figure1:

Figure 1.

Research Conceptual Model



- **Organizational DNA:** Organizational DNA is a system consisting of four main factors – decision rights, information, motivators, and structure – that shape the

personality of an organization, distinguish it from other organizations, and strive to identify the strengths and weaknesses of the organization and

provide solutions to overcome them. The organizational DNA questionnaire includes four dimensions – decision rights, information, organizational structure, and motivators – in the form of 20 items and based on a five-point Likert scale.

- **Strategic Decision-Making of Management:** Strategic decisions are decisions that are made by senior managers and require the attraction of significant material resources, foresight, and future orientation, and affect the progress and success of the organization in the long term. The strategic decision-making questionnaire includes four dimensions – decision orientation, fostering a culture of participation, organizational maturity of individuals, and risk tolerance – in the form of 20 items and based on a five-point Likert scale.
- **Management Accounting:** Management accounting is the process of identifying, measuring, collecting information (both financial and non-financial), and analyzing it to assist the organization's management in performing the functions

of evaluation, planning, and control of the organization. Management accounting also includes the preparation of financial reports for non-management groups such as stakeholders, creditors, regulatory organizations, and tax authorities. The management accounting questionnaire includes four dimensions – value chain analysis, activity-based costing, continuous improvement, and balanced scorecard performance evaluation – in the form of 24 items and based on a five-point Likert scale.

Inferential Statistics

Assumptions for Using Structural Equation Modeling (SEM)

In causal modeling, the distribution of variables should be normal. Therefore, the absolute values of skewness and kurtosis for the variables should not exceed ± 1.96 , respectively. As shown in Table 1, the absolute values of skewness and kurtosis for all variables are less than the specified values. Therefore, this assumption of causal modeling, namely univariate normality, is met.

Table 1.

Descriptive Statistics of Research Variables

Variable	Mean	Standard Deviation	Skewness	Kurtosis
Organizational DNA	3.38	0.79	0.19	-0.42
Strategic Decision-Making	3.34	0.64	0.33	0.01
Management Accounting	3.21	0.61	0.08	-0.35

Another assumption of structural equation modeling is the significance of the correlation matrix. The results of the Pearson

correlation coefficient between the research variables are presented in Table 2.

Table 2.*Results of the Pearson correlation coefficient between the research variables*

Variable	1	2	3
1. Organizational DNA	1		
2. Strategic Decision-Making	0.54**	1	
3. Management Accounting	0.52**	0.58**	1

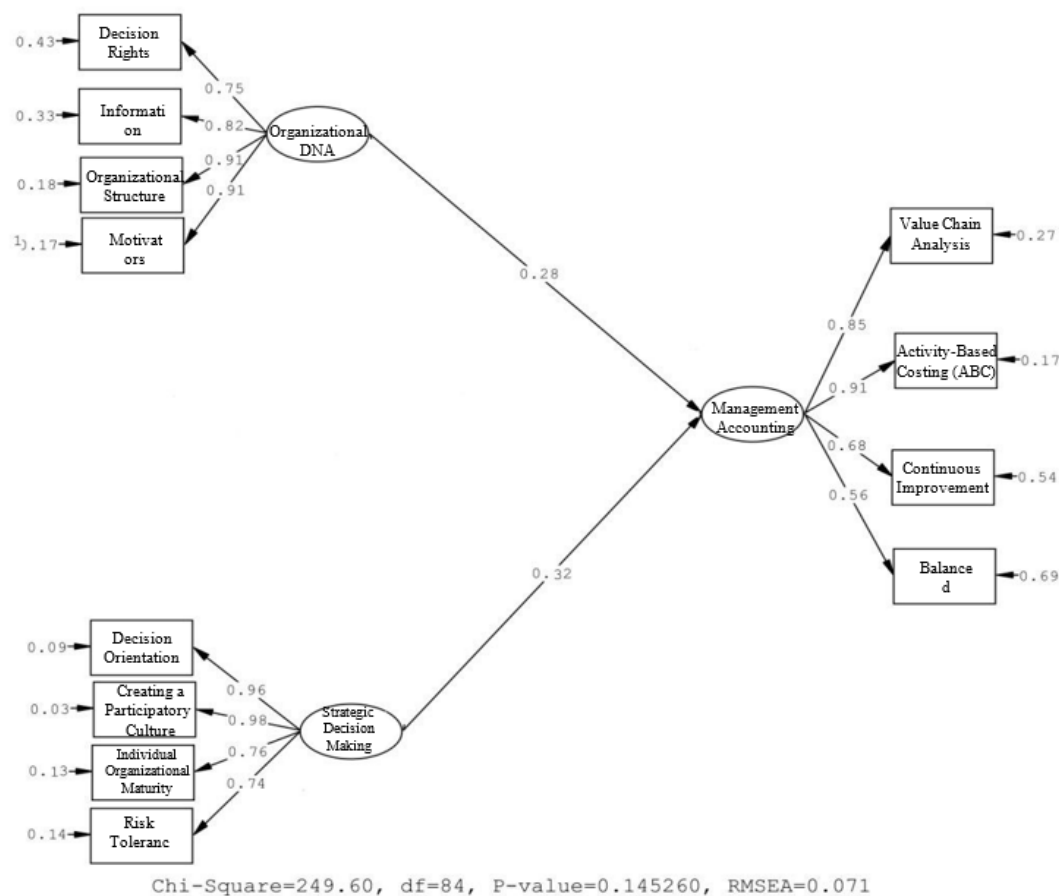
* $p < 0.05$, ** $p < 0.01$

According to Table 2, there is a positive and significant relationship at the 0.01 level between organizational DNA (0.52) and strategic decision-making (0.58) with management accounting.

Examining Research Hypotheses

In this study, a hypothetical model was designed based on the theoretical and empirical background to examine the direct

and indirect effects of the research variables on management accounting. The presented hypotheses also indicate the causal relationships among the variables in the model. In this research, the simultaneous examination of hypotheses is carried out within the framework of the initial model. To evaluate the hypothetical model of this study, we first estimate the parameters using the maximum likelihood method.

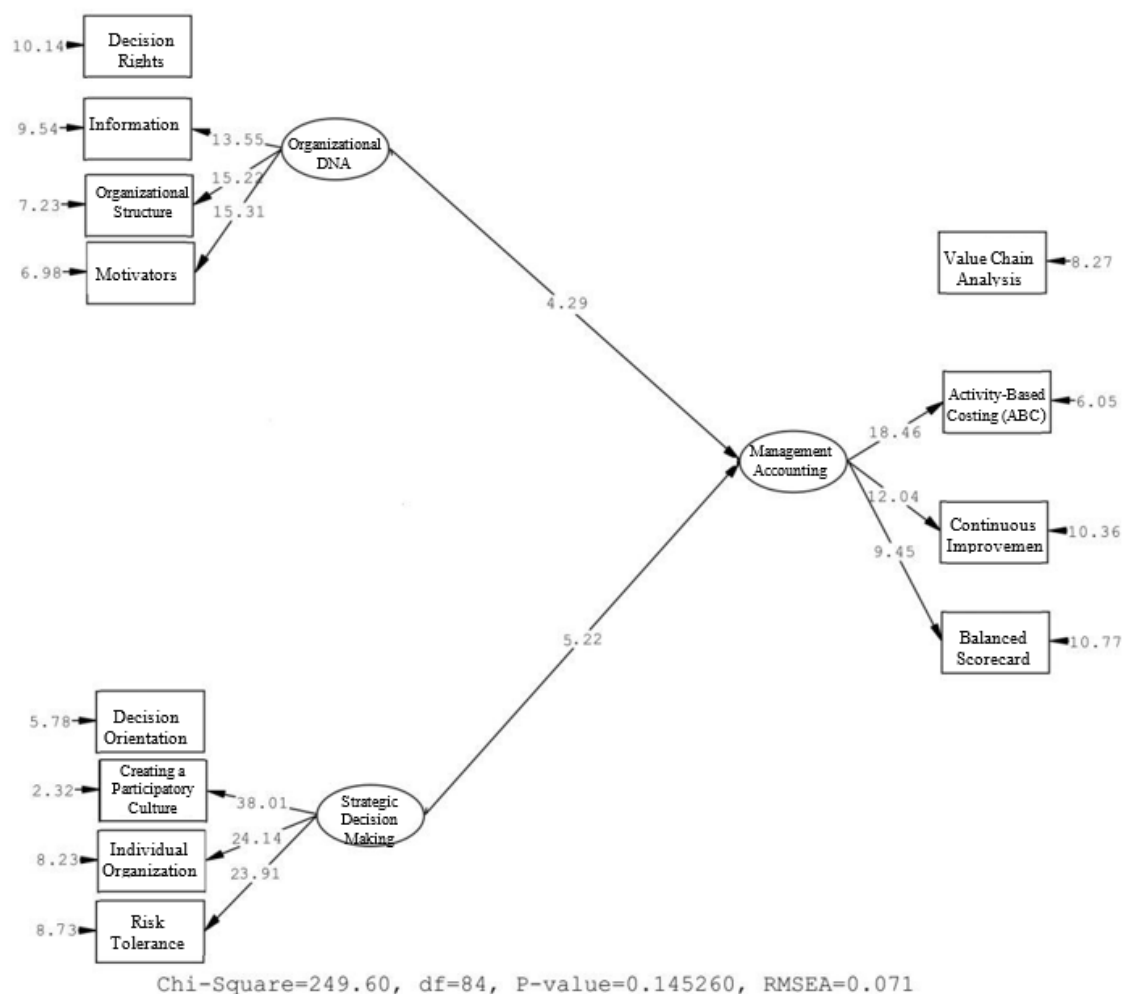
Figure 2.*Tested Research Model in Standard Mode*

According to Figure 2, the direct effect of organizational DNA (0.28) with a t-statistic of 4.29, and strategic decision-making (0.32)

with a t-statistic of 5.22 (t-statistic = 9.42), on management accounting is positive and significant at a significance level of 0.01."

Figure 3.

Tested Research Model in Significant State



The absolute, incremental, and parsimonious fit indices are reported separately in the table. In this research, the Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), and Standardized Root Mean Square Residual (SRMR) were considered as absolute fit indices. The Comparative Fit Index (CFI),

Normed Fit Index (NFI), and Non-Normed Fit Index (NNFI) were considered as incremental fit indices. The Chi-Square to Degrees of Freedom ratio (X^2/df), Parsimony Normed Fit Index (PNFI), and Root Mean Square Error of Approximation (RMSEA) were considered as parsimonious fit indices.

Table 3.*Goodness-of-Fit Indices for the Tested Research Model*

Fit Index	Category	Obtained Value	Acceptable Threshold
GFI	Absolute	0.92	> 0.90
AGFI	Absolute	0.85	> 0.80
SRMR	Absolute	0.03	< 0.05
CFI	Incremental	0.94	> 0.90
NFI	Incremental	0.92	> 0.90
NNFI	Incremental	0.92	> 0.90
X ² /df	Parsimonious	2.97	< 3
PNFI	Parsimonious	0.67	> 0.60
RMSEA	Parsimonious	0.07	< 0.08

In Table 3, the values obtained in the present study and the acceptable threshold for each of the fit indices are reported. According to this

table, all fit indices are within acceptable limits, and it can be concluded that the tested model has a good fit with the collected data.

Table 4.*Summary of Research Questions Results*

Hypothesis	Path Coefficient	t	p	Result
Does organizational DNA have an impact on management accounting?	0.28	4.29	0.001	Supported
Does strategic decision-making of management have an impact on management accounting?	0.32	5.22	0.001	Supported
Does organizational DNA have an impact on web-based management?	0.58	8.98	0.001	Supported
Does strategic decision-making of management have an impact on web-based management?	0.53	8.48	0.001	Supported

Discussion and Conclusion

The present research aimed to investigate the influence of organizational DNA and management's strategic decision-making on management accounting. The analysis of the research hypotheses showed that organizational DNA can directly impact management accounting. This finding is consistent with the study by Azudin and Mansor (2017).

Another result indicated that the impact of strategic decision-making, both directly and with the mediating role of web-based management, on management accounting is positive and significant. This finding is consistent with the study by Sheikhal Shahi and Nakhaei (2021) and Mohammadi and Davachi (2020).

Further results of the research showed that web-based management has a positive and significant impact on management

accounting. This finding is consistent with the study by Moradzadeh Fard et al. (2021).

Based on the obtained results, it can be stated that the rapid development of technologies and computers has changed the methods of internal organizational communications, and words related to this communication method have emerged, such as online communication, web-based management, computer-based management, electronic communication, and remote communication. Web-based management can be considered the delivery of organizational communication through electronic media. This type of management uses the specific capabilities of the internet as a method for learning, communicating, training, etc., for individuals. Web-based management in the organization refers to the use of internet technologies that offer a wide range of solutions to increase the knowledge and performance power of employees. Just as information and communication technologies are used in many daily work processes such as electronic banking, e-commerce, e-mail, and e-government, the field of management and organization has also benefited from this type of technology. Web-based management networks have accessibility capabilities 24 hours a day and in any location. They can be easily accessed, and it is possible to communicate with many people in the shortest amount of time. Members of the organization, given its security strength, can work comfortably within it and communicate with their colleagues. Capabilities such as discussion forums and electronic task boards can interact with each other in line with the organization's goals. The characteristics of these capabilities - growth and evolution is such that every day we witness more diverse

capabilities being added to them, and this can increase the interest and desire to use them. In short, it can be stated that web-based management, alongside other management methods, is helpful in carrying out organizational plans and activities. When these capabilities are used by managers in the organization in line with the organization's goals, we can witness the development of management accounting. The following suggestions are made for future study and research:

1. It is suggested that company managers, by adapting the organizational structure to the building blocks of organizational DNA in companies listed on the stock exchange, help guide and lead organizational development and transformation programs in a strategic way and give a unique identity and personality to their structure as a harmonious whole.
2. Given the long-term benefits, strategic decision-making is suggested. Companies, by focusing on the internal environment, through encouraging and setting employee challenges, helping them achieve personal and organizational goals, create a (context/ground) for the development of strategic decision-making. At the same time, ensure that external challenges are addressed and unfavorable conditions are resolved and threats are examined to turn them into potential opportunities.
3. The strategic decision-making process is an ongoing process. Accordingly, it is suggested that at every level of the company, members of the organization evaluate the concepts of strategic decision-making and, if necessary, modify and adjust the strategies. In addition, as

the company grows and changes, existing strategies will also change and new strategies will be created. All of this is part of the ongoing process of business development and decision-making in an effort to succeed and achieve the company's goals.

4. It is suggested that managers provide a (context/ground) such as holding public meetings, setting days for face-to-face meetings, a suggestions box, so that members of the company can freely express their views on matters related to the company without any fear or apprehension, so that managers can use their abilities to provide appropriate solutions for dealing with and solving problems. This can provide a (context/ground) for the development of strategic decision-making at all levels of the company.

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