Designing a Structural-interpretive Model of Information Disclosure Factors related to Sustainable Development Accounting

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Abstract

The current study aims to design a structural-interpretive model for disclosing information related to sustainable development accounting in 2020-2021. Qualitative data were obtained through the study of research and credible sources in the field of sustainable development accounting with content analysis approach and in the form of 4 dimensions (environmental, social factors, economic factors and leadership) in the form of 12 variables using fuzzy Delphi method and matrix questionnaire to determine Pairs of variables were compiled and provided to experts. The study's statistical population includes 25 experts in sustainable development accounting. The data obtained from the questionnaire were analysed using a structural interpretive model and drawn at six levels in an interactive network. Also, these variables' influence and degree of dependence on each other in the influence-dependence power matrix were examined. According to the output of the interpretive structural model, the variables of products and services provided and corporate governance are level one or the most basic elements of the model and the variables of a strategic approach to the environment and promotion of moral awareness as the level six variable and the most influential model variable. This study indicates that by disclosing information related to sustainable development accounting factors, managers and policymakers can provide more transparent information to stakeholders by formulating appropriate policies and standards in sustainable development accounting, which leads to social welfare and environmental protection. For future generations, capital market growth and increasing the quality of reporting will ultimately lead to the sustainable performance of companies in the long run.

Keywords: Accounting, Sustainable Development, Structural-interpretive Model.

1. Introduction

The popularity of sustainable development accounting has increased dramatically in the last two decades. So many companies are choosing new methods and ways to disclose their financial information about the core, social activities, the results of their effects, and so on. The present age is when customers and individuals in society expect companies and organisations to be responsible and consider future generations in their activities and operations. The importance of organisations to future generations in carrying out their activities and resource consumption is a positive step towards achieving sustainable development and demonstrates the organisation's clear accountability to stakeholders, which requires the development of organisational boundaries and reporting to respond appropriately and information transparency to the spectrum. It has a wide range of stakeholders. Sustainable accounting expands the accounting boundaries to consider the environmental, social, and economic costs and benefits that fall to a wide range of different stakeholders in the organisation. Therefore, the distinguishing point between sustainable accounting and conventional accounting is related to the specific costs and benefits that occur directly in an organisation in economic, social and environmental dimensions. The concept of sustainable development accounting requires a connection to sustainability management and sustainability reporting (Bebbington and Unerman, 2018). A sustainability report should provide a balanced and logical presentation of the reporting organisation's sustainability performance (including positive and negative issues). Thus, sustainability reporting is vital for managing change over a sustainable global economy. Sustainability reports may be used to optimise and evaluate sustainability performance to laws, norms, codes, performance standards, and voluntary initiatives, showing how an organisation affects stakeholders and meets expectations in sustainable development. , And compare performance in an organisation and between different organisations over time (Braam and Peeters, 2018). The sustainability report also reflects the organisation's values and governance model and the relationship between the organisation's strategies and its commitment to a sustainable global economy. It also has a theoretical framework, and various theories such as political economy theory, legitimacy theory, stakeholder theory and organisational theory explain the company's motivation to disclose sustainability information. Indicators and standards have been developed to measure corporate sustainability. The guidelines of the World Reporting Organization, the International Integration Reporting Committee and the Sustainability Accounting Standards Board have greatly assisted organisations in preparing sustainability reports. Therefore, with the importance of sustainable development accounting issues in recent years, much research has been done in this field worldwide. Despite the growing importance of voluntary disclosures by companies on sustainability reporting issues, this issue has not been properly addressed in Iran (Abbasi Astamal and Zeynali, 2021). There is no proper understanding of the dimensions of accounting for sustainable development of companies in our country and to explain the operational concept of accounting information disclosure with the approach of sustainable development and understanding its nature, type and content in Iranian companies; no comprehensive research has been done. In Iran, as a developing country with a sustainable development approach based on the Sassanid law, the general policies of the vision document and the Fifth Economic and Social Development Plan and the privatisation process seem necessary to be based on a research study and its results and helped to understand and develop the disclosure of sustainable development accounting information in Iranian companies. Therefore, this study aims to create a reliable and scientific model that considers all aspects, has all the required information in its published report and has positive and useful functions. Therefore, the present study intends to provide a structural-interpretive model for disclosure factors related to sustainable development accounting.

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2. Theoretical Foundations and Research Background

The concept of sustainable development accounting is practically related to a period in the last 40 years, the process and foundation of which is due to changes in accounting and attention to the concepts and roots of accounting as a concept much broader than the financial dimension. Its infancy has been raised over the past few years. This change and development reflect two independent lines of thought that in the first line expresses a philosophical view of the process, and the role of accountability of organisations and how they relate to sustainable development and states that these factors are among the factors that move organisations Stability side are effective. Accordingly, accounting concepts are designed on a completely new accounting system and effectively promote sustainability strategies in this approach. The second line is to pay attention to the management perspective about various conditions and effective tools for sustainability. In this report, the development of an organisation or its cost may be identified as standard financial costs or in management accounting as controllable costs (Rezapour, 2014). The concept of sustainable accounting in an international environment should be examined and measured with a wide range of experience, thinking, and the attitude of creating growth and development in society, which is a tool for financial accounting that organisations should use. Because to become a dynamic and economically sustainable society, pay attention to the existence and role of financial information recognised in all professional societies and shows how this information can lead to the strengthening and growth of society's social and environmental level. However, there is no clear reporting framework for the content of a company's financial statements, and it can be largely determined by determinants, including financial reporting standards, guidelines, and regulations. But this will lead to companies having more flexibility in preparing and presenting financial statements. But preparing and presenting reports requires providing information according to the general goals of the company and interacting with the audience in a way that promotes the exchange of ideas and communication (Karami and Salehi, 2019). Therefore, an increasing number of companies and organisations want to sustain their operations and participate in sustainable development, and sustainability reporting can help organisations to measure and inform their economic, environmental, and social and governance performance. Sustainability is the ability to sustain something long or indefinitely based on performance in these four key areas. Systematic sustainability reporting helps organisations measure the impacts they create or experience, set goals, and manage change. Sustainability reporting is a key platform for reporting performance and performance effects, both positive and negative. (Manes-Rossi et al., 2018). Sustainability reporting is the process of measuring, disclosing, and responding to internal and external stakeholders for an organisation's performance toward sustainable development goals. Sustainability reporting is a broad term similar to other terms such as corporate social responsibility used to describe economic, environmental and social impacts. A sustainability report should provide a balanced and logical presentation of the reporting organisation's sustainability performance (including both positive and negative issues). Thus, sustainability reporting is vital for managing change over a sustainable global economy. A resource that combines long-term profitability with ethical behaviour, social justice, and environmental care. Sustainability reports may be used to optimise and evaluate sustainability performance concerning laws, norms, codes, performance standards, and voluntary initiatives, showing how an organisation affects stakeholders and meets expectations in sustainable development. , And compare performance in an organisation and between different organisations over time (Abbasi Astamal et al., 2021). An effective sustainability reporting cycle; should benefit all reporting organisations. Internal benefits for companies and organisations can include the following: Increased understanding of risks and

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opportunities; Emphasis on the relationship between financial and non-financial performance; Apply long-term management of business strategy, policy and plans; Facilitate processes, reduce costs and improve efficiency; Optimisation and evaluation of sustainability performance according to rules, norms, codes, performance standards and voluntary initiatives; Comparing performance internally, inter-organizationally and between different sectors of the industry. However, the external benefits of sustainability reporting include improved brand reputation and loyalty; the ability of stakeholders to understand the true value of the organisation and its tangible and intangible assets; Demonstrate how the organisation is impacted and impacted based on expectations about sustainable development. The guidelines of the World Reporting Organization, the International Integration Reporting Committee and the Sustainability Accounting Standards Board have greatly assisted organisations in preparing sustainability reports. Indicators of the World Reporting Organization are now very popular and used as disclosure indicators in various studies. But these indicators are general indicators of sustainable development that should be applied to local accounting. Accordingly, the literature and research conducted in this field were reviewed.

Abbasi Astamal et al. (2021) examined explaining and prioritising information disclosure factors related to sustainable development accounting with a fuzzy approach. The results showed that among the main criteria, environmental dimension with weight 0.405 in rank 1, The social dimension with a weight of 0.296 was ranked 2nd, the economic dimension with a weight of 0.186 was ranked 3rd, and the leadership dimension with a weight of 0.113 was ranked 4th. Finally, based on the calculated final weight, the strategic approach to environmental impacts with a weight of 0.955 in the first place, management and efficiency in consumption in the second place, social development and humanity in the third place and management of waste and waste came in fourth.

Giang et al. (2020) conducted an empirical study in Vietnam which shows factors such as managers' perceptions of costs and benefits, environmental change, production scale characteristics, and corporate business activities, pressures to announce sustainable environmental information and reports have a significant impact on the development of environmental accounting for sustainable development.

Akhtarshenas, Khodamipour and Pourheidari (2020) developed a Model of effective factors on corporate sustainability in Iran. The results showed that 4 dimensions including company characteristics, managerial factors, market factors and macro factors, 9 components including; structural features, performance characteristics, Individual-level, organisational level, capital market, business factors, economic factors, social and political factors and 60 indicators are practical on corporate stability. In addition to confirming many of the factors identified in previous research, new factors such as community culture, governing policy, adherence to ethics, legal requirements, corporate social reputation, intellectual capital, and product market competition have been identified as Effective factors for corporate sustainability.

Abdi, Kordestani and Rezazadeh (2020) examined that the findings showed that the Sustainability Reporting stimulus is classified into 5 main groups and 24 indicators. Among the stimuli, the stimuli of environmental requirements, corporate governance characteristics and structural characteristics of the company are the most important for experts, and also, the ranking of indicators showed that the indicators of legal requirements, independence of board members and profitability have the highest rank.

Abdi, Kordestani, and Rezazade (2019) argued that corporate sustainability reporting could have consequences such as increasing social trust, improving the quality of human life, preserving the environment for future generations, growing capital markets and increasing the quality of reporting. This study's findings can help develop this type of report in Iran.

Jafari Jam, Ali Asgari, and Zarei (2019) show that increasing the disclosure of corporate sustainability information leads to improved financial performance and value.

Saunila et al. (2019) showed that smart technologies directly affect the economic dimension of corporate sustainability but do not directly affect the environmental and social dimensions.

Naciti (2019) showed that in companies with more diversity in the board and a dichotomy between the role of chairman and CEO, corporate sustainability performance is higher. The findings also showed a significant negative relationship between the independence of board members and corporate sustainability performance. Manes-Rossi et al. (2018) examined the effective factors on sustainability reporting in European countries. The results showed that companies have shown an increasing interest in the issue of sustainability reporting and placed great emphasis on the three elements of the environment, staff and community. Bravo and Reguera - Alvarado (2019) showed that the presence of women in the board improves the quality of disclosure of sustainable development information; However, no significant correlation was observed between the workload of the board and the size of the board and the quality of disclosure of sustainable development information. Braam and Peeters (2018) showed that in countries that care more about stakeholders, companies have better performance and accounting processes in these companies are more transparent it has much more. In addition, it was found that the specific characteristics of each company play a role in determining the accounting contribution to sustainable development. Kim, Kim, and Qian (2018) show that while the intensity of competition is high, social responsibility significantly improves financial performance; In contrast, when market competition is low, irresponsible behaviours have a greater impact on improving financial performance. Ahmed (2018) addressed the quality of sustainability reporting in Bangladesh and found that sustainability reporting information did not meet GRA standards. Yabloi Khumslui, Izadi Nia, and Arabsalehi (2018) discussed the effect of disclosed stability indicators on earnings quality. The amount of disclosed sustainability indicators has a comprehensive positive and significant effect on earnings quality. Khozin et al. (2018) showed that the percentage of shares of the largest shareholder and government shares does not affect the stability reporting of companies listed on the Tehran Stock Exchange. Masoumi, Saleh Nejad, and Zabihi (2018) showed that company size, liquidity, institutional shareholders and duality of CEO duties have no significant effect on sustainability reporting companies. Namazi, Rajab Dori, and Rousta (2018) developed a model for the sustainable development of accounting professional ethics. The prepared model, which is based on the content of articles, consists of 4 structures and 69 factors. The priority of each structure is individual structure, social structure. , Is an economic-organisational structure and an environmental structure. Fakhari, Malekian and Jafaei (2018) explained a model for ranking companies in terms of environmental and social reporting and corporate governance (ESG) by hierarchical analysis, the findings of which show that the average score of disclosure of "ESG" G "in Iran is about 29%. Disclosure of corporate governance information in the reports of Iranian companies has had an upward trend during the studied years, while the disclosure of environmental and social information and finally the disclosure of "ESG" has had a changing trend. Jizi. (2017) examined the factors Effective the disclosure of sustainable development accounting information that with increasing the level of board independence, the quality of disclosure of sustainable development accounting information improves, and this factor has a direct impact on improving the company's image among investors. And as the number of women on the board increases, so does the willingness of companies to disclose sustainable development accounting information. Afzalianmand and Abdullahzadeh (2016) showed a positive and significant correlation between sustainable development accounting and environmental management accounting and maintaining the sustainable development of the

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industrial sector. Huang, Wu, and Yan (2015) identified indicators and criteria for sustainable development. These researchers identified economic considerations, ecological considerations, green city index, and economic factors as sustainable urban development indicators. Akbas (2014) showed that the size of the company and the type of industry are positively related to the amount of environmental disclosure, while profitability is negatively related. Leverage and life variables are not statistically related to the amount of disclosure. Aktas, Kayalidere, and Kargin (2013) found that the disclosure of organisational profiles, including the dimensions of corporate governance and management attitudes, is mainly present in companies' annual reports. But indicators of sustainable performance in economic, social and environmental dimensions were not observed in these reports.

3. Research Methodology

The present research is applied in terms of purpose; a mixed method has been used in the research method. The hybrid method used is of the sequential-exploratory hybrid type. Combined research emphasises the collection, analysis and combination of two types of qualitative and quantitative data in a single research or a set of researches divided into three categories: intertwined, descriptive and exploratory (Zareian, Heyrani and Moeinadin, 2020). In the first stage, the disclosure variables of sustainable development accounting information were identified using the qualitative content analysis method. The data collection tool in the qualitative part is phishing. The statistical population of this research in the qualitative section includes all studies conducted to disclose sustainable development accounting information. According to the research strategy, theoretical sampling has been used in the qualitative part. The data collection tool in the quantitative section is the Delphi questionnaire, confirmatory factor analysis. Compared to traditional surveys, where the focus is on generalisation among a randomly sampled population, Delphi method experts are not randomly selected. Still, experts are selected based on their knowledge in a specific area related to the subject under study. Given the above, the sampling and snowball methods were slightly unlikely. Thus, the views of 25 experts in the field of sustainable development accounting; Having sufficient expertise and experience, deep knowledge of the research topic and breadth of views related to the research field, were used as panel members whose opinions and views were collected and quantified for the selection of research variables as well as for structural-interpretive modelling.

3.1. Structural-interpretive Modelling

Structural-interpretive modelling is a suitable model for analysing the effect of an element on other elements. This methodology is the tool by which groups can overcome complexity between elements.
The steps of implementing the ISM technique are as follows:
1. Determine variables
2. Formation of structural self-interaction matrix
The following symbols are used to determine the relationships between elements:
V: Variable I (row) affects variable J (column).
A: Variable J (column) affects variable I (row).
X: The variables I and J help to reach each other.
O: The variables I and J are not related.
3. Formation of the received matrix
The matrix can be reached by converting the SSIM matrix relationship symbols to zeros and ones.
4. Match the achievement matrix
5. Determining relationships and grading

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Table 1. Descriptive statistics of experts

Row	Gender	Field of study	degree of education	Work experience	Main job	Number of respondents
1	Man	Management and Finance	PhD	10 to 15 years	science Committee	2
2	Man	Management and Finance	MSc	Over 15 years	Capital Market	1
3	Man	Management and Finance	MSc	10 to 15 years	financial manager	1
4	Man	Accounting and auditing	P.H.D	Over 15	science Committee	9
5	Female	Accounting and auditing	P.H.D	Over 15	science Committee	2
6	Man	Accounting and auditing	MSc	10 to 15 years	Independent auditor	3
7	Man	Accounting and auditing	MSc	Over 15	Head of Accounting	2
8	Man	Accounting and auditing	P.H.D	Over 15	Independent auditor	3
9	Man	Financial Economics	P.H.D	Over 15 years	financial manager	1
10	Man	Other	P.H.D	Over 15	Researcher	1

In this step, the output set (access set / received set) and the input set (prerequisite set / preliminary set) for each variable is extracted from the access matrix. The row corresponding to that component is examined in the access matrix to determine the output set for each component. And to determine the input variables, the column of each variable must be checked.

Variables that have the number 1 in the corresponding row from the output set of that variable and variables that have the number 1 in the column of a variable form the input set.

6. Drawing a model (diagram)

7. Analysis (Mick Mac) (Razini, Azar and Mohammadi, 2014).

4. Research Findings
4.1. Fuzzy Delphi Method

The fuzzy Delphi technique has been used to identify the evaluation indicators of disclosure of sustainable accounting information. To fuzzy the experts' point of view, the five-degree spectrum according to Figure 2 has been used.

Table 2. Five-degree fuzzy spectrum for index evaluation

Linguistic variable	Fuzzy value	Triangular fuzzy equivalent
Very unimportant	1	(0, 0, .25)
Very unimportant Up to Unimportant	2	(0, .25, .5)
Unimportant	3	(.25, .5, .75)
unimportant Up to Medium importance	4	(.5, .75, 1)
medium	5	(.75, 1, 1)

In the next step, the fuzzy mean of the individual scores must be calculated. The fuzzy mean of the triangular fuzzy number will be calculated as follows:

Relationship 1 $$\tilde{F}_{AVE} = (L, M, U) = \frac{\sum l_i^k}{n}, \frac{\sum m_i^k}{n}, \frac{\sum u_k^i}{n}$$

In this regard, the triangular fuzzy number $\tilde{f}_i = \left(l_i^k, m_i^k, u_i^k \right)$ the fuzzy equivalent is the k's expert

view of the i criterion. Eventually, de-fuzzing will take place. For de-fuzzy, the surface centre method is used as follows:

Relationship 1
$$DF_{ij} = \frac{[(u_{ij}-l_{ij})+(m_{ij}-l_{ij})]}{3} + l_{ij}$$

In this study, the tolerance threshold is considered 0.7. Therefore, the de-fuzzy value greater than 0.7 is acceptable, and any indicator with a score above 0.7 is approved (Wu and Fang, 2011).

Table 3. Summary of fuzzy Delphi results, factor analysis, validity and reliability

Agents	Variables	Factor load	Test statistics	AVE	CR	Fuzzy average	Definite amount
Social dimension	Q1	0.74	12.17	0.532	0.948	(0.616,0.804,0.938)	0.786
	Q2	0.72	9.29			(0.58.0.772.0.918)	0.757
	Q3	0.69	10.87			(0.616,0.804,0.938)	0.786
Environmental dimension	Q4	0.68	10.66	0.538	0.920	(0.572,0.766,0.904)	0.747
	Q5	0.69	13.51			(0.552.0.754.0.896)	0.734
	Q6	0.73	9.97			(0.562,0.758,0.904)	0.741
Economic dimension	Q7	0.80	10.18	0.533	0.941	(0.594,0.784,0.912)	0.763
	Q8	0.67	8.68			(0.75,0.9,1)	0.883
	Q9	0.71	9.82			(0.71,0,876,0,984)	0.857
Leadership dimension	Q10	0.81	4.01	0.526	0.935	(0.592,0.774,0.92)	0.762
	Q11	0.70	5.37			(0.644,0.826,0.952)	0.807
	Q12	0.74	4.14			(0.7,0.87,0.98)	0.850

Source: Researcher Calculations

The value of the combined reliability of all variables is greater than 0.7, so the reliability is confirmed. The value of AVE is also greater than the threshold of 0.5 in all cases, so convergent validity and combined reliability are established.

Table 4. Factors of disclosure of sustainable development accounting information

Main dimensions	Category
The environment	1. Strategic approach to the environment 2. Energy consumption accounting 3. Investment management and environmental financing
Social factors	4. Corporate social accounting for the community 5. Company social accounting for employees 6. Company social accounting for customers
Economic factors	7. Stable financial performance 8. Products and services provided 9. Risk management
Leadership	10. Orbital law 11. Corporate governance 12. Promoting awareness of accounting ethics

4.2. Structural-interpretive Analysis
4.2.1. Determine Variables

The studied variables present experts approved the model using the fuzzy Delphi technique. These variables are shown in Table 5.

Table 5. Research variables

Variables	Code
A strategic approach to the environment	1
Energy consumption accounting	2
Investment management and environmental financing	3
Corporate social accounting for the community	4
Company social accounting for employees	5
Company social accounting for customers	6
Stable financial performance	7
Products and services provided	8
Risk management	9
Orbital law	10
Corporate governance	11
Promoting awareness of accounting ethics	12

4.2.2. Formation of Structural Self-interaction Matrix

The first step in structural-interpretive modelling is to calculate the internal relationships of the indicators. Experts' perspectives are used to reflect the internal relationships between the indicators. The matrix obtained in this step shows which variables a variable affects and which variables it is affected. Symbols such as Table 6 are commonly used to identify the pattern of elemental relationships.

Table 6. Modes and symbols used to express the relationship between variables

Symbol	X	A	V	O
Relation	Two-way relationship	The variable j affects i	The variable i affects j	Lack of relationship

The structural self-interaction matrix consists of the dimensions and indicators of the study and their comparison using four modes of conceptual relationships. The obtained information is based on the summative interpretive structural modelling method, and the final structural self-interaction matrix is formed. According to the signs in Table 6, the structural self-interaction matrix will be shown in Table 7.

4.2.3. Formation of the Received Matrix

The resulting matrix is obtained by converting the structural interaction matrix into a two-value matrix of zero and one. In the received matrix, the elements of the original diameter are equal to one.

Table 7. Structural self-interaction matrix

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1		A	O	O	X	X	V	X	A	V	A	O
2			V	V	V	X	V	V	V	V	V	X
3				O	O	X	X	V	X	X	A	X
4					O	V	V	V	V	V	A	A
5						V	V	V	V	V	A	A
6							V	V	O	V	A	A
7								A	A	X	A	A
8									A	O	A	A
9										V	A	A
10											A	A
11												A
12												

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Secondary relationships must also be controlled to ensure. Suppose a lead to B and B leads to C. In that case, A must lead to C. If direct effects should be considered based on the secondary relationship, but this has not happened in practice, the table should be corrected, and the secondary relationship should also be shown. Therefore, the received matrix of research variables is presented in Table 8.

Table 8. Input matrix of research variable

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1	1	0	0	0	1	1	1	1	0	1	0	0
2	1	1	1	1	1	1	1	1	1	1	1	1
3	0	0	1	0	0	1	1	1	1	1	0	1
4	0	0	0	1	0	1	1	1	1	1	0	0
5	1	0	0	0	1	1	1	1	1	1	0	0
6	1	1	1	0	0	1	1	1	0	1	0	0
7	0	0	1	0	0	0	1	0	0	1	0	0
8	1	0	0	0	0	0	1	1	0	0	0	0
9	1	0	1	0	0	0	1	1	1	1	0	0
10	0	0	1	0	0	0	1	0	0	1	0	0
11	1	0	1	1	1	1	1	1	1	1	1	0
12	0	1	1	1	1	1	1	1	1	1	1	1

4.2.4. Determining Relationships and Levelling Dimensions and Indicators

To determine the relationships and level the criteria, a set of outputs and a set of inputs for each criterion must be extracted from the received matrix.

Table 9. A set of inputs and outputs to determine the level

Variable	Input: Impact	Output: Impact	Subscription	Level
1	1,2,5,6,8,9,11	1,5,6,7,8,10	1,5,6,8	2
2	2,6,12	1,2,3,4,5,6,7,8,9,10,11,12	2,6,12	6
3	2,3,6,7,9,10,11,12	3,6,7,8,9,10,12	3,6,7,9,10,12	3
4	2,4,11,12	4,6,7,8,9,10	4	4
5	1,2,5,11,12	1,5,6,7,8,9,10	1,5	4
6	1,2,3,4,5,6,11,12	1,2,3,6,7,8,10	1,2,3,6	3
7	1,2,3,4,5,6,7,8,9,10,11,12	3,7,10	3,7,10	1
8	1,2,3,4,5,6,8,9,11,12	1,7,8	1,8	2
9	2,3,4,5,9,11,12	1,3,7,8,9,10	3,9	3
10	1,2,3,4,5,6,7,9,10,11,12	3,7,10	3,7,10	1
11	2,11,12	1,3,4,5,6,7,8,9,10,11	11	5
12	2,3,12	2,3,4,5,6,7,8,9,10,11,12	2,3,12	6

The set of outputs includes the criterion itself and the criteria that affect it. The set of inputs includes the criteria themselves and the criteria that affect them. Then the set of bilateral relations of criteria is determined. For variable C_i, the set of access (output or effects) includes variables accessed through variable C_i. The set of prerequisites (inputs or effects) includes the variables through which the variable C_i can be reached. After determining the access settings and the prerequisite set, the subscription of the two sets is calculated. The first variable whose share of the two sets is equal to the achievable set (outputs) will be the first level. Therefore, the first level elements will impact the model most. After determining the level, the criterion whose level is determined is removed from the whole set and again forms the set of inputs and outputs, and the next variable level is obtained. Therefore, the variables of corporate governance and the products and services offered are the first level or dependent. After identifying the first level variable (s), these

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variable (s) are deleted, and the set of inputs and outputs is calculated without considering the first level variables. The common set of identifiers and variables whose share is equal to the inputs are selected as second-level variables. According to the computational output of the structural-interpretive model, the accounting variables of energy consumption management and stable financial performance are the second level. To determine the third level elements, the second level variables are removed and once again, the set of inputs and outputs is calculated without considering the second level variables. The common set of identifiers and variables whose share is equal to the set of inputs are selected as third level variables. According to the output of the model calculations, the variables of corporate social accounting for society and corporate social accounting for employees in environmental management and corporate social accounting for customers and risk management are the third level. The variables of investment and financing and social accounting of the company for customers are in the fourth level. The variable of the rule of law is the fifth level. The sixth and most effective model variables are the strategic approach to environmental accounting and promoting accounting ethics.

4.2.5. Drawing the Final Structure-interpretive Model

The final pattern of the levels of the identified variables is shown in Figure 1. In this figure, only the meaningful relations of each level on the elements of the lower level and the meaningful internal relations of the elements of each line are considered.

4.2.6. Influence-dependence Power Analysis

In the ISM model, the interrelationships and effectiveness between criteria and the relationship of criteria at different levels are well shown, which leads to a better understanding of the decision-making space by managers. To determine the key criteria of penetration power and dependence of the criteria in the final access matrix. The power-dependence diagram for the studied variables is shown in Figure 2.

Based on the power of dependence and the influence of variables, a coordinate system can be defined and divided into four equal parts. In this study, a group of variables were placed in the stimulus subgroup; these variables have high penetration and low dependence. In the next category are dependent variables resulting from the product development process and less likely to underlie other variables.

In this analysis, the variables are divided into four groups: autonomous, dependent, connected (independent) and independent.

Autonomous: Autonomous variables have a small degree of dependence and conductivity. These criteria are generally separated from the system because they have poor connections to the system. A change in these variables does not cause a severe system change.
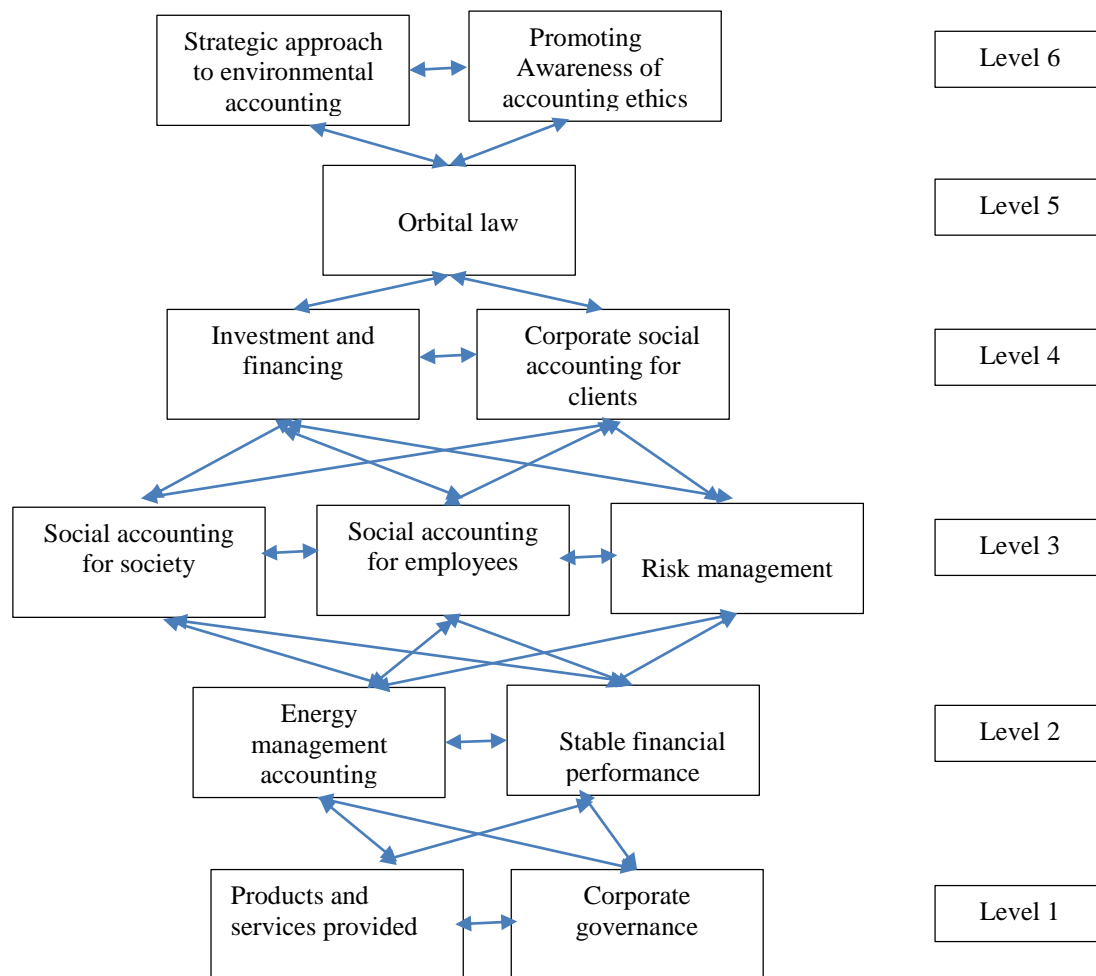
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Figure 1. Structural-Interpretive Model of Sustainable Development Accounting Information Disclosure Factors

Table 10. Influence power and degree of dependence of research variables

|	Research variables	Degree of dependence	Leverage
1	Energy management accounting	8	6
2	Strategic approach to environmental accounting	4	12
3	Social accounting for society	9	8
4	Investment and financing	5	6
5	Corporate social accounting for clients	6	7
6	Social accounting for employees	9	7
7	Products and services provided	13	3
8	Stable financial performance	11	3
9	risk management	8	6
10	Corporate governance	12	3
11	Orbital law	4	10
12	Promoting awareness of accounting ethics	4	11
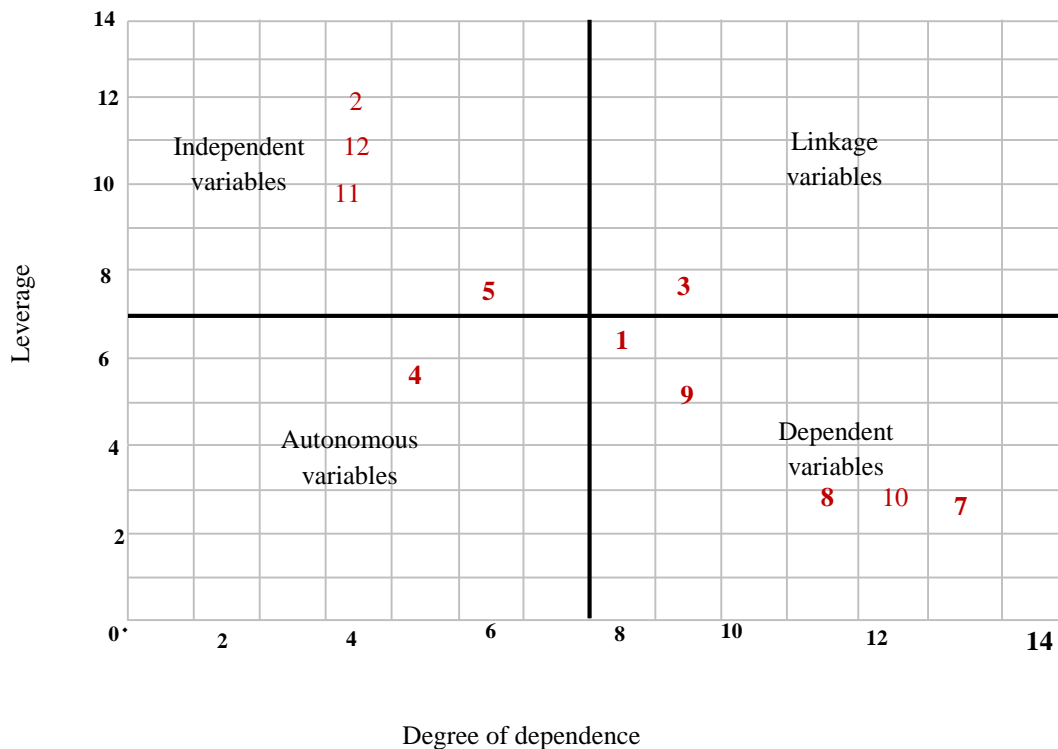
Figure 2. Infiltration power diagram and degree of dependence (MICMAC output)

Dependent: Dependent variables have strong dependence and poor conductivity. These variables generally have a high impact and low impact on the system.

Independent variables have low dependence and high conductivity; in other words, high impact and low impact are the characteristics of these variables.

Linkage: Interface or link variables have high dependence and high conductivity; in other words, the effectiveness of these criteria is very high, and any small change on these variables causes fundamental changes in the system.

According to the infiltration-dependency power diagram, variables No. 2, 11 and 12 have high penetration power and have little impact and are located in the area of independent variables. Variables 1, 6, 7, 8, 9 and 10 are highly dependent but have little influence, so they are considered dependent variables. Variables 3 and 5 have the same penetration power and degree of dependence, linked variables. Variable number 4 is also located in the first quarter, is the autonomous region and can be removed from the model.

5. Conclusion and Discussion

The popularity of sustainable development accounting has increased dramatically over the past two decades. So many companies are choosing new methods and ways to disclose their financial information about the core, social activities, the results of their effects, and so on. Sustainable development accounting must be linked to the company's strategies and follow a sustainable framework. As a result of this; Shareholders, suppliers, and government agencies want to understand better how a resource management company allocates itself to achieve the organisation's goals and

achieve sustainable development. Despite the introduction of sustainable development accounting in Iran, there is a research gap in information disclosure with a sustainability approach. In this regard, this study was conducted to present an interpretive structural model of sustainable accounting information disclosure factors. In order to identify the research variables, the research content and reliable sources in the field of disclosure of sustainable development accounting information were analysed, which included 4 dimensions (environmental, social factors, economic and leadership factors) in the form of 12 variables and then a matrix questionnaire to determine the pairwise relationship of variables. Compiled and provided to experts. The data obtained from the questionnaire were analysed using an interpretive structural model and plotted at 6 levels in an interactive network. Also, the influence power and the degree of dependence of these variables on each other in the influence-dependence power matrix has been examined according to the output of the structural-interpretive model of the variables of products and services, and corporate governance is the first level or the most basic elements of the model. Accounting variables of energy management and sustainable financial performance are the second level. Social accounting variables for the community and social accounting variables for employees and risk management are the third level. The variables of investment, financing and social accounting for customers are in the fourth level, the variable of the rule of law is the fifth level, and the variables of the strategic approach to the environment and promotion of moral awareness are the sixth level variable and the most influential model variable. Therefore, the results of this study are consistent with the findings of Giang et al. (2020), Braam and Peeters (2018), Manes-Rossi et al. (2018), Naciti (2019), Abdi, Kordestani and Rezazadeh (2020), Akhtarshenas, Khodamipour and Pourheidari (2020), Aktas, Kayalidere, and Kargin (2013) and Abbasi Astamal et al. (2021).

The governance system determines the governance dimension with internal factors such as corporate ownership structure, economic status, regulatory and legal system, government policies and organisational culture. Ethical awareness is an essential part of the accounting profession of an accountant. In other words, ethical awareness in the accounting profession is essential. Every accountant must have the moral ability because this is an important aspect of the quality of the services provided to customers. For this reason, accounting professional organisations train or recognise the ethical knowledge of accounting to their members to improve professional ethics. In describing the results, it should be noted that sustainable development accounting should be linked to the company's strategies and follow a sustainable framework (Yang, Li and Feng, 2017). From a social perspective, social accounting seeks to account for the cost and benefits of corporate activities about the community and the environment. Social accounting makes it possible to assess the ability to meet social obligations by measuring and reporting the interactions between the business unit and the surrounding community. From the environmental point of view, awareness of the natural system's sensitivities and delicacies and understanding the opportunities and threats in the environment is an undeniable necessity for sustainable development planners. With the help of conscious management and using new management tools, especially environmental accounting, irrational human behaviours in the environment can be curbed. Better management of environmental costs is often beneficial to industry and society, and accountants use it to identify opportunities to reduce environmental costs or support environmental projects that generate revenue streams. From an economic point of view, due to scientific and technical advances on the one hand and rapid economic growth on the other, it has created the need for accountants to acquire the necessary skills in related specialised fields. Today's world economic system provides and reports accurate financial and other economic information to decision-making centres. As part of the information system, accounting plays a

significant role in economic development decisions. Therefore, the successful work of development programs requires relevant and reliable information that can support the decisions of relevant programs in this regard (Abbasi Astamal, 2020).

According to the research findings, solutions to promote the disclosure of sustainable development accounting information are presented. Therefore, the Tehran Stock Exchange Organization is suggested to calculate the efficiency score of companies' sustainability reporting and rank them based on the proposed model to improve disclosure quality in terms of subject matter for users of reports and information provided by the stock exchange. Also, in their organisational structure, establish a unit or independent committee for reporting the sustainability of companies to formulate strategies and goals, to consider how to disclose it. One of the general limitations of this research is the lack of access to some experts.

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