

Presenting an Executive Sustainable Development Model Based on the Corporate Social Responsibility (CSR) and Green Management with Accountability in Executive Organizations¹

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Abstract: Sustainable development is about balancing the economic, social, environmental and political dimensions of development, which the complexity of dimensions' sectors requires considerations of development stage and futurism. In developing countries like Iran, overlooking the environmental social responsibility dimensions of sustainable development in governmental organizations have undermined their performances and credibility. Hence, the main purpose of this study is to provide an implementation model of Sustainable Development strategies based on Corporate Social Responsibility and Green Management in executive bodies. This is a developmental-applied research with a comparative-inductive logic for data collection and descriptive method research. The statistical population consists of two groups of experts with sample size of 32 persons and managers and deputies of provincial executive bodies with sample of 360 persons. Data were collected using a questionnaire and field survey; Confirmatory Factor Analysis was used for data analysis and SPSS and AMOS were used for modelling structural equations. The reliability of the research was studied by a survey filled by university professors and Cronbach's alpha coefficient. Results approved the suggested model and showed that corporate social responsibility has a positive and significant association with green management and accountability. In other words, corporate social responsibility can predict green management in the executive organizations. Based on the experts' opinions, corporate social responsibility (the leadership component and internal organizational processes), Green Management (leadership component) and accountability (organizational accountability) have the highest importance among all factors in this research.

Keywords: Development Strategies, Sustainable Development, Corporate Social Responsibility, Green Management, Accountability.

Introduction

The 6th document of the development plan was presented to the parliament 60 years after passing the enactment of the sustainable development plan, while what is evident in the strategic development plans is the main focus on economic development with fewer concerns about environmental and social issues and their consequences (Parliamentary Research Center, 2017). Despite the goals of development,

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current realities continue with long-term gains and issues such as: social inequality, economic growth combined with environmental damage, and inefficiency of resource supply, so the current development agenda is to design an integrated framework to achieve balanced and sustainable development (International Sustainable Development Group, 2016). According to Norris, Kockhar and Ricka, (2015) economic, social and environmental inequality is a sign of underdevelopment (Nazarfar, Mohammadi and Akbari, 2018) and biological and social instabilities are the consequences of incomplete industrial development (Bazrafkan and Iman, 2017).

According to the World Sustainable Development Index (2017), Iran ranks 89th out of 157 countries (Environmental Protection Agency, 2016); the absence of proper understanding and development, uncontrolled growth and disregard for the concept of "social responsibility" has been accepted as the most important strategy and unparalleled principle for sustainable development (Chavosh Bashi 2008; Talimi, 2018) and the importance of social responsibility over time, research and practice have grown and developed with the gradual recognition of its strategic role, and today it has become essential in many organizations that institutional dynamism is characteristic of strategic development and its strategy and the reason for examining the effects of activity on the environment and society (Arena, Azzone & Mapelli, 2019). The social consequences of activities on performance have become significant with the growth and development of the organization, and its positive image requires social responsibility (Abzari and Yazdanshenas, 2007); According to Zhou, Luo and Li-Ping, 2018, corporate social responsibility is a manifestation of positive employee engagement that maintains organizational commitment and engagement with stakeholders and enhances employee financial success and long-term value. Preventive and corrective behavior should be used to manage the effects of decisions and activities on the environment and society (Barthorpe, 2010; Fazli and Ansari, 2018; Consortium for Evaluation and Credit of Companies, 2015) to social benefits, environmentally and economically align the most successful practices (Szcuka, 2015); however it has not been welcomed by the public sector; the social and environmental issues of organizations should go beyond the slogan and become operational (Ahmadi, Alvani and Memarzadeh, 2011).

Environmental issues are one of the most important public issues in the government (Aslipour and Khan Mohammadi, 2018). Thus, green management, as a modern environmental approach with integrity, social, economic and environmental responsibility of organizations is one of the government priorities. The government has been following the consumption pattern by establishing a green management system from the strategies of achieving and accelerating development, increasing national wealth (Environmental Protection Organization, 2014; Abbaspour and Khadivi, 1979) and is a good indicator in the field of resistance economy (Nasiri, 2016). A review of the successful experiences of implementing green management in many countries shows a 30% reduction in current expenditures and a source of new government revenue (Land Management Working Group, 2015) and the implementation of green management is a powerful tool in implementing Article (190) of the Fifth Plan Law and Article (38) of the Sixth Development Plan on the implementation of green management in executive bodies (Law on the Sixth Five-Year Development Plan, 2017-2021; Green Management Procedure, 2018).

The need for research underscores the importance of sustainable development; according to Wilson et al, 2007, due to the coherence and intertwining of its goals and multidimensional nature, it requires simultaneous attention to the economic, social and environmental sectors. However, the discussion of Green Management and Corporate Social Responsibility (CSR) has been the subject of academic studies for more than six decades, and more research has been done in the last decade (Tingchi et al, 2014; Anadol, 2015., Youssef & Thiruvattal) and is considered as one of the new management studies of academic sciences (Bahar Moghadam, Sadeghi and Safarzadeh, 2013), but the absence of applied research and the absence of concern in the official and macro structure of the country is one of the reasons for the weakness of development activities in Iran (Khanifar et al., 2018). Therefore, the current paper aims at describing and identifying an executive model for sustainable development strategies based on organizational social responsibility and green management in executive bodies (with the approach of provincial development) seeking an appropriate answer to the question: "What are the characteristics of the implementation of sustainable development strategies based on organizational social responsibility

and green management taking into account accountability in the executive organizations and what is the validity of this model?"

Literature Review

Experimental literature

Here we refer to some previous related papers given that there is no similar research found so far: Research of Khanifar et al. (2018) with pathologies of social responsibility of organizations and effective factors: communication, rules and indifference of institutions and the absence of its index in evaluating the performance of the organization; Por Fathi (2017) with emphasis on the social responsibility of banks to create the value of stakeholders (shareholders and customers); Madhooshi and Nowruzi (2015) with promoting social responsibility with moral leadership and serious support from managers; Memarzadeh and Vaziri Nezamdoost (2010) with study the economic, moral and environmental factors, environmental dimension as the most important factor in social responsibility; Yazdanparast (2015) with green management and social responsibility, the most effective factors in reducing environmental pollution in various industries; Bahrinizadeh, Nusratabadi and Shakeri (2014) with social responsibility creating a good image of the organization with three key elements: government, organizations and consumers; Hasas Yeganeh and Barzegar (2013) with the most important components of the social dimension in terms of stakeholder expectations: business ethics and participation in community development, as well as (Fleming, 2011) emphasis on social responsibility with different attitudes on the sustainability of companies; an Riliarng qu, (2009) pointing out the positive effects of social responsibility on the performance of organizations and improving its effectiveness (Mehregan, 2013). Also Abzari and Yazdanshenas (2007) with attention to the external environment in the quality of accountability and responsibility of the organization's strategies and activities; Minaei (2017) with structural analysis of social responsibility with ISO 26000 role on responsibility; Ahmadi, Alvani and Memarzadeh (2011) with presenting the model of corporate social responsibility and extending it in organization; Barzegar (2011) with the study of government responsibility and organizations in government services; Purkiani (2007) with the study of the status of accountability of the administrative system of Kerman city in relation to the type of organizations; Mirsepasi and Bagherzadeh (2006) with the pathology of the response system of government organizations with a systemic approach and the reasons for failure and functional barriers. According to Irannejad Parizi and Tavassoli (2008), social responsibility and green management are two related categories and different views have been expressed regarding social responsibility, social responsibility and green management. According to Alwani (2010) and Samadi et al. (2012) there is a two-way and direct relationship between social responsibilities with accountability.

Theoretical literature

Sustainable Development

Development as a post-World War II intellectual paradigm has expanded since the 1910s and numerous, diverse and conflicting theories. Various schools, such as the School of Renovation, Dependence, and the World System, were developed for more than six decades in the discussion of the growth and development. Western scholars such as Daniel Lerner, Samuel Eisenstadt, Gabriel Almond, etc. took development from the perspective of Western developed countries into account as the process of transition from traditional societies to modern societies (Etaat et al., 2013); development was a model of "economic development" after the Industrial Revolution, for decades, (Tahmasebi, 2015), and since the 1980s, economic theories of sustainable development have been proposed that are not associated with environmental degradation and future resources (report by Analytical Managers of the Environmental Protection Agency, 2014). According to the 1987 World Development and Environment Commission, Sustainable Development "Our Common Future" introduced the Global Agenda for Change, which was recognized by international organizations after 1987, and culminated in 2002's Sustainable Global Development (Amiri, 13) and the seventeen goals of sustainable development (2015-2030) were introduced as effective tools for the success of development goals of countries (United Nations Development Programme- UNDP 2018). The evolutionary course of development literature has led to corporate sustainability and advanced to the term Corporate Social Responsibility" (CSR); a new

concept that has a strong link with sustainable development and by creating long-term value for the organization in line with development global and regional (Fazli and Ansari, 2018; Tahmasebi, 2015).

Assessing the levels of development of the provinces

Regional justice is one of the approaches of sustainable development, which in the long run, its imbalance will be an obstacle to development (Fateh Elahi, Kafili and Taghizadegan, 2017). Reducing regional development inequalities is an important policy issue for developing countries (Goletsis & Chletsos, 2011). Extensive research on the development of provinces are similarly evaluated by various methods including: inequality analysis, factor and clustering analysis, or combined indicators compared to other foreign researches on the issue (Cziraky et al, 2006), such as Economic and Social Development Level Classification of the Regions Using Factor and Cluster Analysis by (Dev, 2014), Inequality and Geographical Distribution of Income; (Piketty & Saez, 2014) Long-term Inequality in Income and Wealth by (Cheong & Wu, 2012), Inequality of Provinces with the Criterion of Income and Consumption of Public Services (Nazarfar, Mohammadi Hamidi and Akbari, 2018). In the meantime, the combined indicators were introduced as suitable and applied tools to examine the economic, social, environmental and technological performance of countries (Organisation for Economic Co-operation and Development - OECD, 2008). The current paper has been cited the leveling studies of the development of the provinces with domestic combined indicators (economic, social and environmental) that are few in number (the study of the distinction between the research indicators is not the current paper objective), including that of Nazmifar, Mohammadi Hamidi and Akbari (2018); Fateh Elahi, Kafili and Taghizadegan (2017); Maleki and Sheikhi (2009); "Ranking of the country's provinces based on statistical indicators" of the State Planning and Budget Organization (2016-2017); Por Asghar Sangachin et al. (2012); with combined indicators (13 economic, social and environmental indicators); Abdullah Zadeh and Sharifzadeh).

Corporate Social Responsibility (CSR)

this is the term emerged and widely used since the 1990s, with the liberalization of the economy and the gap between roles (Nouri Yohanloui and Johar, 2014) and for decades focused on trade and the term "union social responsibility". According to Omidvar (2008) in the new form of the concept it is a new management process that splits from the economic-industrial gap and maladaptation that pervades the economic space to complement the traditional role of government in formulating effective social policy (Zappala, 2013). However, Murphy (2010; Lokman et al., 2015) considers social responsibility as a mechanism for organizational development between companies, business development between the company and society, and in the current competitive situation of the pervasive phenomenon; strategy for business managers (Campbell, 2007; Castello and Lozano, 2009); political issues for governments (Steurer et al., 2012); it has become a popular research topic for academics in various fields (Lindgreen and Swaen, 2010), but it is not a common interpretation and cannot be explicitly referred to as a set of coherent measures, but a term (CSR) as the umbrella concept includes a diverse set of ways in which companies and corporations pursue the expectations of stakeholders rather than broad activities such as: participation in the activities of local communities, environmental management measures, biological and social activities such as the use of renewable energy and technologies based on energy efficiency and empowerment which make employees more efficient and effective (Arena, Azzone, Mapelli, 2018). World Council of British Organizational Governance (2014), for the establishment of social responsibility, envisioned the "Golden Award" to advance the path of development towards highlighting its programs. With a forward-looking approach, the success and continuity of the corporation with a kind of social investment and not only economic efficiency, although after two decades does not have a relatively clear definition (Mortazavi and Nasserpour, 2010).

Understanding the perceptual background and emergence of CSR in the world requires linking it to socio-economic challenges and social expectations and cultural attitudes (of each country), and a sign of the transition from overly focused humanitarian understanding to perspective. It is based on local values and norms and the expectations of the international community (Melissen et al., 2018). The following three models are among the proposed models for explaining social responsibility:

- The Davis Model of Social Responsibility: with defaults: social ability, open systemic attitude, cost-social benefit, transparency of social costs and social participation, to improve and develop the organization and the welfare of society;
- Carrol CSR Model: with economic, legal, moral, general and national dimensions, for responsible performance in environmental conditions subject to legal and economic requirements;
- Five-dimensional model of corporate social responsibility: Iran Corporate Responsibility Promotion Center (Omidvar, 2014) whose dimensions and indicators are in accordance with the criteria of organizational excellence model and most of the top companies report social responsibility reports with this published dimensions. According to Appendix 1- Corporate Social Responsibility including: 1- Leadership and processes within the organization 2- Market and industry 3- Work environment; 4- Environment; 5- Society and Country (Omidvar, 2014; Conference on Social Responsibility of Economic Enterprises, 2016).

Green Management

The term green was expanded from the mid-1980s in the virtual sense of policy compatibility with the environment and following the 1992 World Summit, it was established in developed and developing countries in various fields (Abbaspour and Khadivi, 2006). According to Rezaei (2013), a comparative study of developed countries showed that Canada, the United States and the United Kingdom took action to achieve the goals of sustainable development, and Canada was the first country in 1995 to have a green government and green management. Iran government took into account a green management system on the budget of 2003 with the aim of reducing the government's current expenditures and optimal consumption of resources and the environment in the public sector (Land Management Working Group, 2015). Green management is a set of comprehensive, purposeful and continuous studies and actions that improve the current situation of the corporate to the green corporation. In other words, it is a set of processes, mechanisms for optimal implementation of the green approach (economic convergence, environmental and social) and achieving sustainable success in the world class (Green Management Method, 2018; Secretariat of the Green Management System, 2014; Kamalzadeh, 2015) allow corporates the benefit of a new management approach with minimal environmental damage caused by consumption and sustainable production (Hajizadeh and Ghasemi, 2012). Thus, the "Green Management Model" by (Green Management Association of Iran, 2011) was developed with the aim of developing environmental knowledge and transferring national and international experiences to integrate corporate social, environmental and economic responsibility. According to Figure 2 criteria for green management model include: empowerment (leadership, policy and strategy, corporate resources, corporate partners, green processes, creativity, innovation and learning) and the results of sustainable success (social, environmental, economic)(Kamalzadeh, 2015) which is undoubtedly important for the thinking and green performance of managers (Mirzaei Dariani, Amini and Farahbakhsh, 2015).

Public Sector Accountability

Accountability is the main pillar of improving the effectiveness of public administration, the image of justice, equality and trust that is expected from government organizations to be responsible and accountable in front of citizens (not just beneficiaries) (Vaziri Kermani, 2009; Abzari and Yazdanshenas, 2007). Governments need a system of accountability approved by society, which is undoubtedly different from the public sector accountability with the private sector (lack of political accountability) (Alvani and Danaeifard, 2001; Rafizadeh Bagherabad and Manourian, 2009). The general response of the public sector is complex and sometimes the corporatate is the cause of other problems in society (Alvani and Ahmadi, 2013). According to Alvani (2003), corporatates face a conflict in responding to citizens and corporatates in the requirements and sometimes contrary to the expectations of citizens (Faqihi, 2001). Some accountability models include that of Marshall (1987); Hicks (1988); Alvani (2000); Danaeifard (2003) and the accountability of the public sector is the Ramzek model (Ramzek, 2000) with four: political, legal, corporate and professional accountability; with two dimensions, the source of control and supervision (internal and external) and the degree of independence (high or low) with corporates supervising managers actions in all values (Vaziri Kermani

2009; Faghihi, 2001). Accordingly, the theoretical framework adopted to present the executive model of sustainable development strategies based on corporate social responsibility "CSR five model" and green management (criterion variable) tries to explain and analyze its changes; which is from the "Green Management Model" and accountability mediator from the "Ramzek Accountability Model":

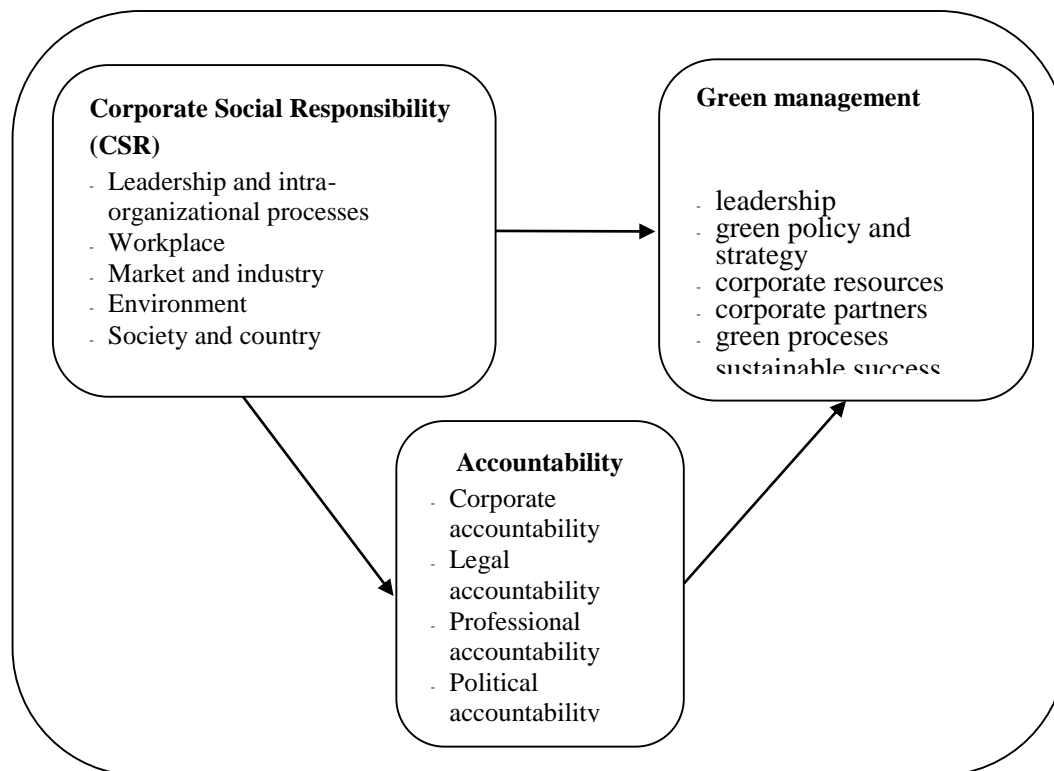


Figure (1): Research conceptual model

Methodology

This is a developmental applied descriptive survey using library and field studies to collect data. In terms of data collection logic this is a deductive-inductive type, with a combined methodological approach (quantitative-qualitative); in the quantitative section, written questionnaires and data analysis of structural equation modeling were used to collect data and for qualitative sampling of experts, the qualitative method of 13 snowballs and interviews were used.

Study population and statistical sample

Statistical population consists of the first group: managers and deputies of executive bodies based on 31 provinces and 60 corporates per provinces equivalent to 1860 corporates (estimated by the heterogeneous population) were estimated at a total of 5692 people and with the Cochran's formula the sample size was selected 360 people using two-stage-random cluster sampling. The size of the sample is proportional to these corporates, by stratified-random sampling and based on available documents, as well as the selection of corporates by cluster sampling (multi-stage-stochastic) and after the lottery with the approach of development levels among the provinces classified provinces as: Tehran, Kerman and South Khorasan, classified more developed, developing, less developed, respectively. the sample size was tested in corporates and 315 questionnaires were obtained. The second group of experts; with the snowball sampling method, the sample size of 32 unidentified experts was selected to validate the model.

Data collection tools

In order to measure the variables, four questionnaires of green management, social responsibility, accountability and validation of the model (along with interviews of experts) were used and the validity of them was determined by eight university professors. The Green Management, Social Responsibility and Accountability Questionnaires validity are (.892), (.934), and (.881), respectively. The internal

reliability of all 16 questionnaires was confirmed, with the construct validity and Cronbach's alpha values above (.7), according to Table (1).

Table (1): Internal compatibility (reliability)

Questionnaire	Cronbach's alpha	Items
Green management	0.975	41
Corporate Social Responsibility	0.963	34
Accountability	0.964	25

Experimental Analysis

The findings were performed in two parts: descriptive statistics obtained from data analysis and inferential statistics of hypothesis testing. Exploratory and confirmatory factor analysis and structural equation modeling using SPSS and Amos software were used to examine the defaults of structural equations (data screening, multiple inequality, assuming variables to be normal), to test the hypotheses. By analyzing the confirmatory factor with the scale of "Bazargan" scoring according to Tables (2) and (3), the variables are all more than satisfactory at the level and the dimensions criteria, and structures were well explained.

Table (2): Describing variables among subjects

Variables	Average	Mean	Median	SD	Minimum	Maximum
Corporate Social Responsibility	3.153	3.102	3.83	0.679	1.54	4.61
Green management	3.145	3.171	2.09	0.675	1	4.73
Accountability	3.482	3.511	4	0.689	1.30	5

Table (3): Standard factorial load and t values of variables

Variables	Dimensions and indicators	Standard factorial load	t- value	p-value
Corporate Social Responsibility	Leadership and inter-organizational processes	0.880	13.443	0.000
	Workplace	0.974	13.591	0.000
	Market and industry	0.923	13.040	0.000
	Environment	0.699	9.890	0.000
	Society and country	0.955	15.031	0.000
	Leadership	0.811	11.003	0.000
Green management	Green policy and strategy	0.900	12.657	0.000
	Corporate resources	0.938	14.833	0.000
	Corporate partners	0.905	14.722	0.000
	Green processes	0.943	12.441	0.000
	The results of sustainable success*	0.901	11.215	0.000
	Environmental results	0.951	15.144	0.000
	Social results	0.971	12.994	0.000
	Economic results	0.913	15.396	0.000
Accountability	Corporate Accountability	0.994	16.064	0.000
	Legal accountability	0.940	13.586	0.000
	Professional accountability	0.999	15.386	0.000
	Political accountability	0.986	15.604	0.000

According to the available documents, despite the different combination indicators, the results of the provincial rankings in the division of rank levels are relatively similar. According to the research results of Por Asghar Sangachin et al. (2012) Tehran, Kerman and South Khorasan provinces are second, 15th and 17th rank. According to Abdullahzadeh and Sharifzadeh (2012) the regional development leveling with combination index approach result shows the developments levels of Tehran, Kerman and South Khorasan provinces as (0.331), (0.580), (0.677) respectively.

Testing Hypotheses

Hypothesis (1): There is a significant relationship between corporate social responsibility (its components) and green management in executive bodies. The model fitness index and the significance of the relationship between variables were examined to examine the hypothesis.

Table (4): Model fitness indicators

Indicator	The optimal statistical limit	The reported value
Root Mean Square Error of Approximation (CMIN / df)	≤0/08	0/060
(GFI)	Less than 3	2/144
(AGFI)	0/90≤	0/950
(CFI)	0/90≤	0/910
(IFI)	≤0/90	0/986
(TLI)	≤0/90	0/986
(NFI)	≤0/90	0/974

Table (5): Coefficient of path and its significance

Studied relation	Standard coefficient	t-value	p-value	Result	Relation type
Social responsibility→ Green management	0.831	13.971	0.000	Confirmed	Direct

Table 5 shows the positive and significant relationship between social responsibility and green management. In other words, the five models of corporate social responsibility can predict green management in executive bodies.

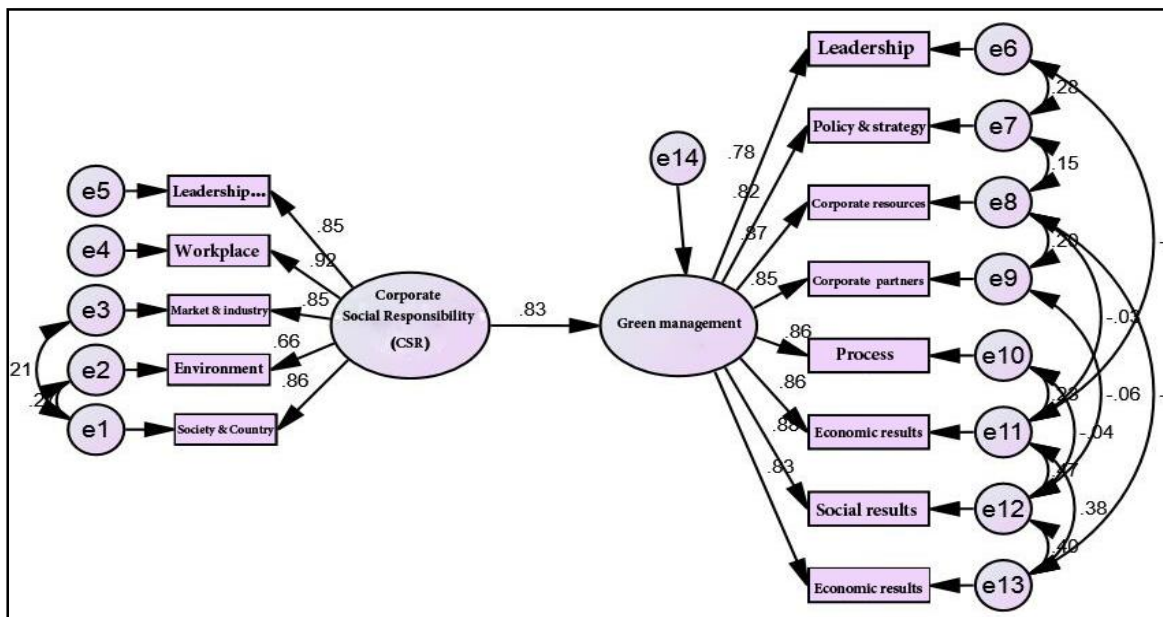


Figure (2): Structural Equation Model Assessment of Hypothesis (1) (Standardized Coefficients)

The results of Table 6 show that there is a significant relationship between leadership dimension and intra-organizational processes and green management; also, there is a significant relationship between work environment and green management. There is no significant relationship between market and industry and green management (weakening of the relationship in the public sector); and a there is a significant relationship between the environment and green management. There is no significant relationship between society and the country and green management (significant at .05)

Table (6): Coefficient of path significance

Studied relation	Standard coefficient	t-value	p-value	Result	Relation type
Leadership and Processes →Green Management	0.331	5.462	0.000	Confirmed	Direct
Workplace → Green management	0.178	5.462	0.015	Confirmed	Direct
Market and Industry →Green Management	0.038	.592	0.554	Rejected	None
Environment →Green management	0.296	6.075	0.000	Confirmed	Direct
Society and Country →Green Management	0.122	9.568	0.077	Rejected	None

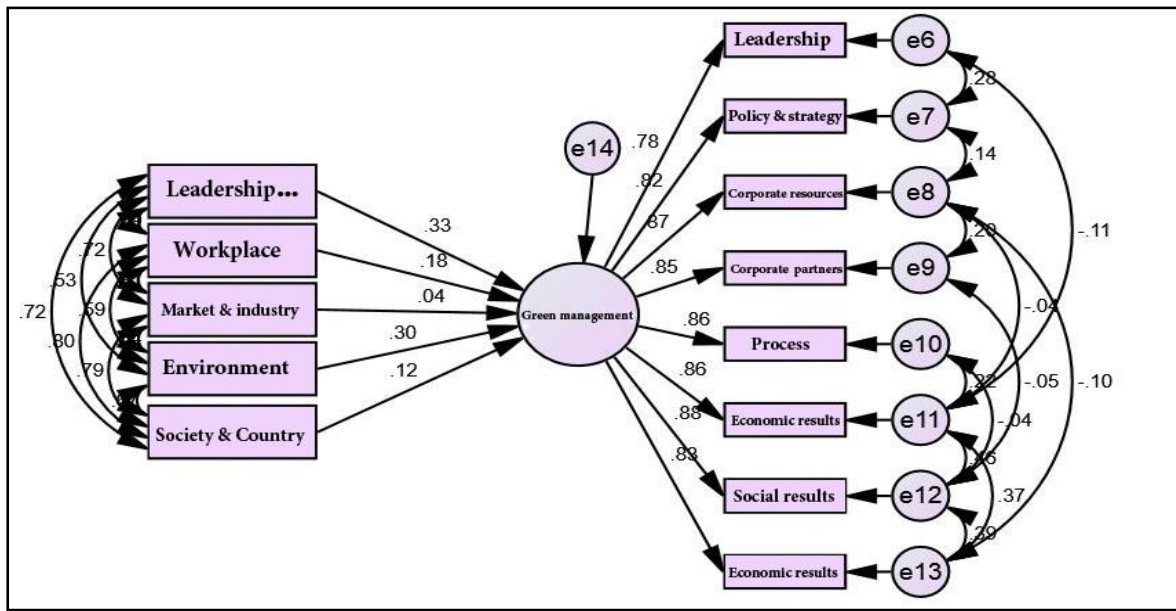


Figure (3): Structural Equation Results for Components (CSR)

Hypothesis (2): There is a significant relationship between corporate social responsibility and green management with the mediator of accountability in corporates.

Table (7): Model fitness indicators

Indicator	The optimal statistical limit	Reported value
(RMSEA)	0.08<	0.058
(CMIN / df)	Less than 3	2.067
(GFI)	≥ 0.90	0.931
(AGFI)	≥ 0.90	0.900
(CFI)	≥ 0.90	0.981
(IFI)	≥ 0.90	0.981
(TLI)	≥ 0.90	0.974
(NFI)	≥ 0.90	0.965

Table (8): Coefficient of path significance

Studied relation	Standard coefficient	t-value	p-value	Result	Relation type
Social responsibility →Green management	0.885	10.891	0.000	Confirmed	Direct
Accountability →Green Management	0.072	-1.157	0.247	Rejected	None
Social responsibility→Accountability	0.754	14.733	0.000	Confirmed	Direct

Table (9): Direct, indirect and total effects on the main path analysis model

Studied relation	Direct	Indirect (p-value)	Total (p-value)
responsibility →Green management	0.885 (0.001)	- 0.055 (0.359)	0.830 (0.001)

According to Table (7), the model has a good fit and Table (8) shows there is a significant positive relationship between social responsibility and green management and accountability. Table 9 shows a review of the total, direct and indirect effects of the Bootstrap method 2000 times; there is no significant relationship between social responsibility and green management through accountability; the indirect effect of social responsibility on green management was not significant (significant at .05).

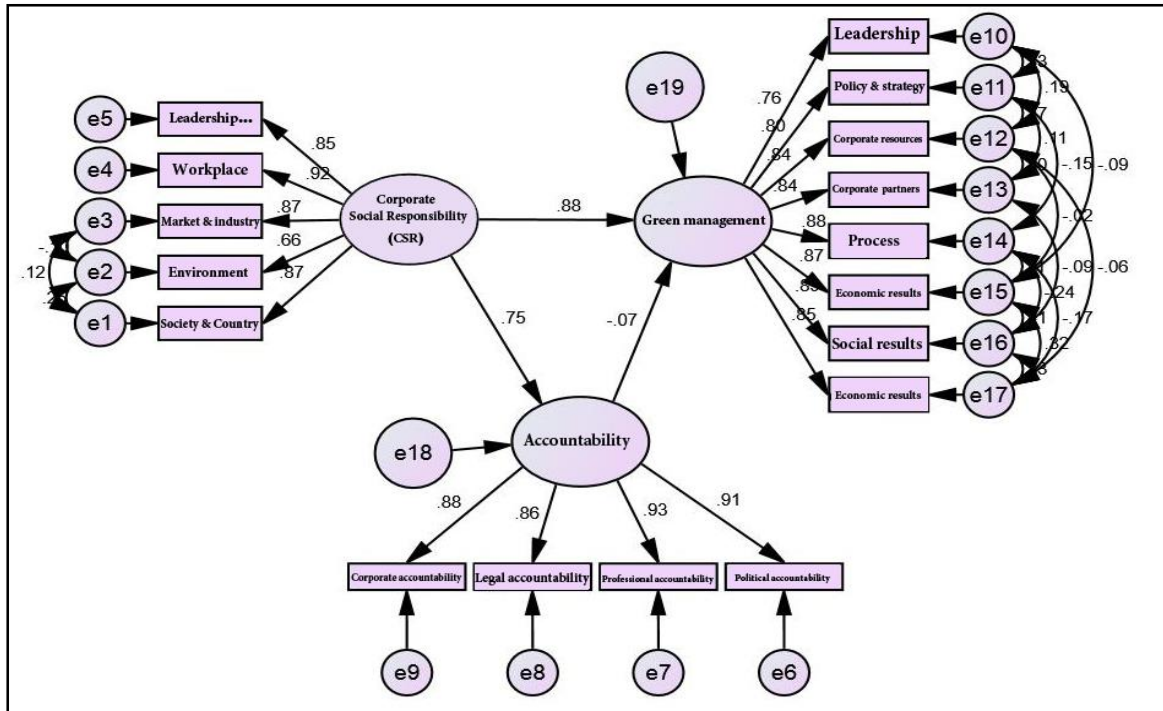


Figure (4): Structural Equation Results for Hypothesis (2)

Table (10): Coefficient of path significance

Relation (Hypothesis)	Standard coefficient	t-value	p-value	Hypothesis result	Relation type
Leadership and Intra-Organizational Processes→Green Management	0.698	8.981	0.000	Confirmed	Direct
Accountability →Green Management	0.146	2.478	0.013	Confirmed	Direct
Leadership and Intra-Organizational Processes→ Accountability	0.650	10.453	0.000	Confirmed	Direct
Workplace → Green management	0.762	8.596	0.000	Confirmed	Direct
Accountability →Green Management	0.037	0.537	0.591	Rejecter	None
Work environment → Accountability	0.734	11.981	0.000	Confirmed	Direct
Environment→ Green management	0.567	8.873	0.000	Confirmed	Direct
Accountability →Green Management	0.344	6.902	0.000	Confirmed	Direct
Environment → Accountability	0.443	7.055	0.000	Confirmed	Direct
Society and Country→Green Management	0.705	8.232	0.000	Confirmed	Direct
Accountability → Green Management	0.107	1.697	0.090	Rejected	None
Society and Country → Accountability	0.693	10.431	0.000	Confirmed	Direct

Table (11): Direct, indirect and total effects on the main path analysis model

Studied relation	Direct (p-value)	Indirect (p-value)	Total (p-value)
Leadership and Processes → Green Management	0.698 (0.001)	0.095 (0.036)	0.793 (0.001)
Workplace → Green management	0.762 (0.001)	0.027 (0.608)	0.789 (0.001)
Market and Industry → Green Management	0.616 (0.001)	0.090 (0.211)	0.706 (0.001)
Environment → Green management	0.567 (0.001)	0.152 (0.000)	0.719 (0.001)
Society and Country Green Management	0.705 (0.001)	0.074 (0.131)	0.779 (0.001)

Hypothesis 3: There is a significant relationship between corporate social responsibility and accountability in executive bodies.

Hypothesis 4: There is a significant relationship between accountability and green management in executive bodies.

Table (12): The path coefficient significance

Studied relation	coefficient	t-value	p-value	Hypothesis result	Relation type
Hypothesis 3: Social responsibility → Accountability	0.769	15.276	0.000	Confirmed	Direct
Hypothesis 4: Accountability → Green management	0.599	10.171	0.000	Confirmed	Direct

The results of Table (12) showed that there is a positive and significant relationship between corporate social responsibility and accountability and also there is a positive significant relationship between accountability and green management and thus the third and the fourth hypotheses were confirmed.

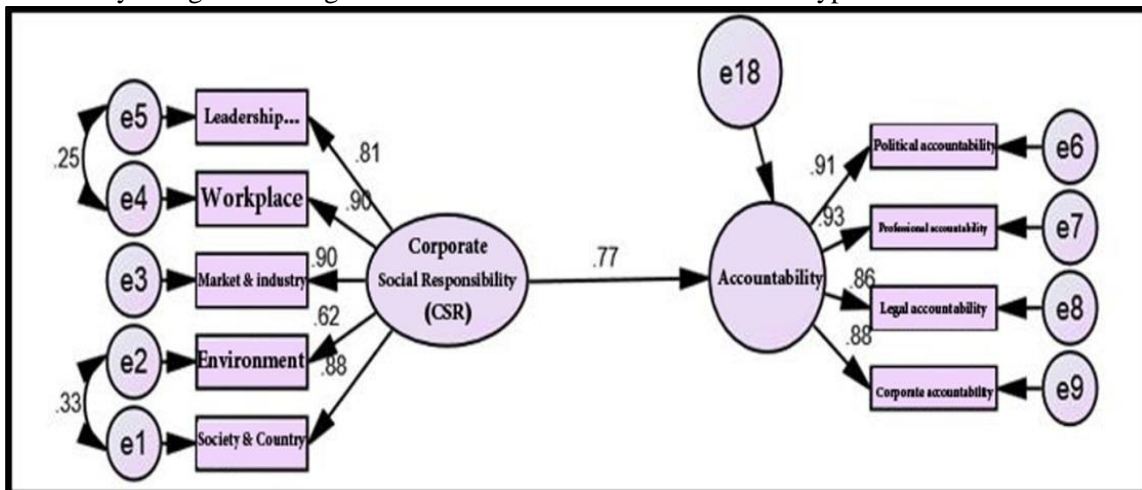


Figure (5): Structural Equation Model Assessment of Hypothesis (3)

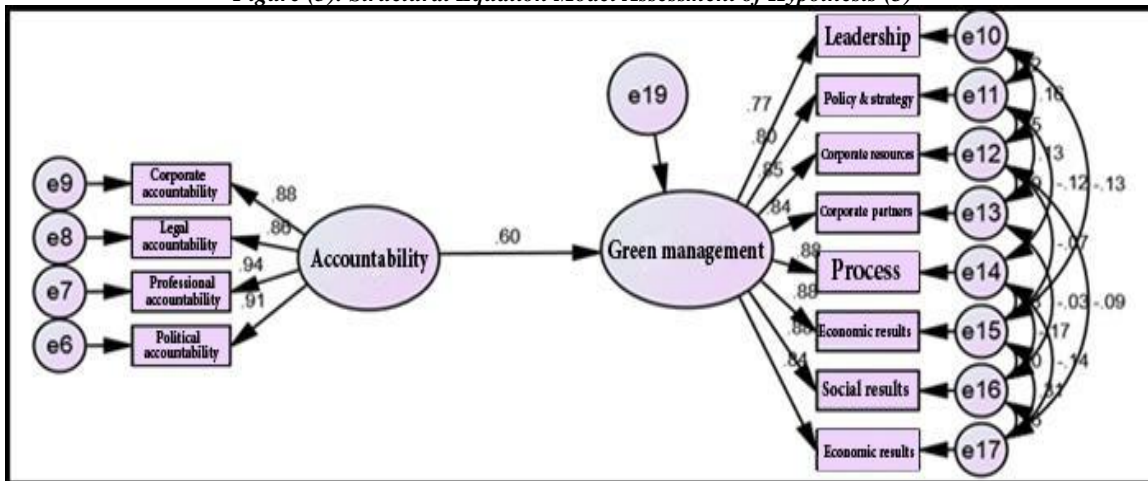


Figure (6): Structural Equation Model Assessment of Hypothesis (4)

Hypothesis (5): The executive model of sustainable development based on corporate social responsibility and green management has the necessary credibility through the mediation of accountability in the executive bodies.

The results of Figure (3) and Table (7) showed that the model has a suitable fit and validity; According to a survey of 32 experts, prioritization of the dimensions of research variables according to Table (14) and validation of the final model in their opinion: 30 people (94%) agreed and 2 people (6%) disagreed. According to the significance of the two-sentence test (p - value = 1), the experts agreed on the research model and Table (13) confirms the hypothesis that all three variables have the necessary validity.

Table (13): One-Sample Wilcoxon Test Results - Variables Review

Variable	Mean	Standardized test statistics	P - value (one-way)	hypothesis result
Social responsibility	4.40	4.959	0.000	Confirmed
Green management	4.38	4.946	0.000	Confirmed
Accountability	4.5	4.955	0.000	Confirmed

Table (14): Prioritize the dimensions of the variables

Variables	Highest priority	Percentage of expert opinions
Social responsibility	Leadership and inter-organizational processes	62.5
Green management	Leadership	56.1
Accountability	Organizational Accountability	40.6

Conclusion

The research was conducted with the aim of providing an executive model of development based on corporate social responsibility and green management with regard to accountability in executive bodies. In this regard, the components and indicators required to explain the model were studied and identified by library and field studies. While confirming the research model, the results of the hypothesis test with previous research (no research with this title was found to directly compare the results) addressed the issue of their adaptation:

- The results of the first hypothesis showed; There is a significant and positive relationship between corporate social responsibility and green management in executive bodies and the social responsibility model can predict green management; The current paper results are consistent with that of result is based on the research of Bahrainizadeh and Nusratabadi and Shakeri (2014) on social responsibility as the driving force of green studies; Memarzadeh and Vaziri Nezamdoost (2010) on environmental dimension as the most important factor affecting social responsibility; and Irannejad Parvizi and Tavassoli (2008) believing that social responsibility and green management are interrelated.
- The results of the second hypothesis showed; there is a significant relationship between corporate social responsibility and green management due to the mediator of accountability in the executive bodies; there is a direct and significant relationship between social responsibility and green management. The positive effect of the corporate social responsibility on green management and the positive effect on accountability were confirmed. The indirect effect of social responsibility on the mediator of accountability on green management has not been significant; this result has not been unexpected in the mentioned society; evidence suggests that the bodies do not see themselves as responsible for the implementation of green management; it could be due to the uncertainty of the trustee and the lack of legal obligation to answer; although in the Sixth Plan Document, the living environment in the cross-sectorial part, with the prediction of small goals during the years (2016 to 1399), has dealt with strategies and executive measures, but to the explicitness of the executive body, the trustee and the collaborating bodies has not been determined (Parliamentary Research Center, 2016-2017). Therefore, in the executive regulations of June 2017; The Ministry of Energy, the Environmental Protection Agency and the Program and Budget Program have been notified of the need to provide green management strategic planning programs, but there are still

ambiguities in the implementation, indexing and evaluation of green management based on sustainability results. There is a green budget allocation and (legal) requirements in the bodies, similar to this hypothesis and the relationship of the variables, no available research was observed. According to Mirsapasi and Bagherzadeh (2006), one of the important reasons for the failure and functional barriers of the public sector accountability system is the absence of commitment of managers to the implementation of laws (legal accountability of the Ramzek model), failure to implement the participation system, inappropriate methods of evaluating managers, ignorance of the people (stakeholders); according to Atai (2013), the relationship between social responsibility and accountability to stakeholders is not the only social dimension that includes environmental and economic dimensions.

- The results of the third hypothesis showed; There is a significant relationship between corporate social responsibility and accountability in executive bodies; the results of Mohammadi and Hakimi (2017); Minaei (2017) showed that the increasing social responsibility provides more accountability (social responsibility in the dimension of society and country; have the greatest effect on professional accountability); Samadi et al. (2012); Chi Hong Chi (2011) believe accountability to the core of social responsibility is effective in predicting the level of social responsibility; Alvani (2010) believes that social responsibility has a two-way relationship with social accountability, which is consistent with the current paper results.
- The results of the fourth hypothesis show; There is a significant relationship between accountability and green management in the executive bodies; Similar to the hypothesis and relationship, two research variables have not been observed; According to Irannejad Parizi and Tavassoli (2008), managers are responsible for answering questions about the organization's impact on the environment; This recognition of the relationship between organizational decisions and actions and its impact on the environment is the concept of green management. (France & Timo, 2009) Reminded the need for balance between economic, social and environmental goals in responsible organizations.
- The results of the fifth hypothesis indicate; Executive model of sustainable development based on corporate social responsibility and green management has the necessary credibility in terms of accountability in the executive bodies; the results of structural equation modeling and model fitness index indicate appropriate fit.
- The results of the two-sentence test indicate the sum of the opinions of experts to validate the model; the variables of social responsibility, green management and accountability are valid and experts agree on the model. thus, (Russell et al., 2016), social responsibility is one of the main areas of development projects; Daniela & Rupert, 2006) and Yazdanparast (2015) found green management and social responsibility as the most effective factor on organizational green management standards; Hajizadeh and Ghasemi (2012) The Green Management Association of Iran (2011) considers the role of the green management model in the development and sustainable production and survival of the organization, depending on social and environmental responsibility, to benefit from this model; In line with those studies (Birch & Moon, 2009) managers of organizations create a kind of balance between the social, environmental and economic sectors of the organization; According to Abbaspour and Khadivi (2006), the challenges of establishing a green management system in organizations are due to the problems and obstacles of management at the national level; Riahi (2004) considered it as a tool for national and transnational environmental executive measures of development goals in the executive bodies; Barzegar (2011) noted the responsibility of accountability and development of qualitative information in the activities and performance of organizations to participate in society. In line with that research (Ahmadi, Alvani and Memarzadeh, 2011; Vaziri, 2009; Purkiani, 2007) is about the accountability system of government organizations.

According to the results of the research, it is suggested that managers with the priority of the organization's leadership, to achieve the goals of development at the organizational and provincial level to implement the policies and strategies of social and environmental development of the Sixth Development Plan; take into account the social responsibility and the implementation of green

management and improve the accountability of organizations. It is necessary for the trustees to create a supra-ministerial structure for the coherence and coordination of the implementation of sustainable development programs (Soltanipour and Damari, 2016) and managers, consider the importance of sustainable reporting in providing accountability to the public sector, provided the necessary grounds (Vaziri, 2009; Rahimi and Imanpour, 2018). Growth and development of social and environmental reporting as a tool can help governments implement leadership programs in the process of sustainable development (Daryaei, Hashemnejad and Talebian, 2012). It is suggested that in future research to address the shortcomings and gaps in the existing study and applied gaps of sustainable development of the country, with a view to future research on strategic development plans 1404 to feasibility and validation of existing and possible models, along with review and studies comparison and comparison of new models of other developed and leading countries, with a realistic view, not only theoretical and non-practical, to provide more appropriate local and semi-comprehensive executive models in this field, especially the public sector.

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