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Article

Sustainability in SMEs: Top Management Teams Behavioral Integration as Source of Innovativeness

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Abstract: Top management teams' (TMTs') behavioral integration has received extensive attention from strategic management scholars in recent years. To learn more about the consequences of this phenomenon at the team level, we explore the relationship between TMTs' behavioral integration with their innovativeness and sustainability orientation. To accomplish this, we surveyed 40 TMTs in Iranian small- and medium-sized enterprises (SMEs) at two points in time. We ran a hierarchical multiple regression in order to test the hypotheses of the study. Building a theoretical model based on the Upper-Echelons framework, we found that the extent to which a TMT is behaviorally integrated is positively and significantly related to TMT innovativeness. Furthermore, our result reveals that a highly behaviorally integrated TMT is more likely to engage in sustainability-oriented actions. Hence, behaviorally integrated TMTs offer its team members an increased chance of being innovative and generating new ideas as compared to less behaviorally integrated TMTs. Finally, our results indicate that the generation of novel ideas is higher in teams with younger members, and that highly educated TMTs generate more innovative ideas in the workplace.

Keywords: sustainability orientation; behavioral integration; innovativeness; TMTs; SMEs

1. Introduction

Upper Echelons Theory predicts that TMT characteristics will tend to influence the strategic decisions they make at the firm level [1–3]. To ensure better organizational performance, a refined version of Upper Echelons Theory [1] emphasizes the important role of TMT structure and how the team members interact [4]. Accordingly, [5] (p. 336) uses the term “TMT behavioral integration” to describe the extent to which TMT members “engage in mutual and collective interaction”. This TMT characteristic has attracted the attention of strategic management scholars in recent years [6,7]. Previous studies have shown that behavioral integration leads to higher-quality strategic decisions at the team level [6] and improves service quality at the firm level [8]. Firms can take advantage of a highly behaviorally integrated TMT, for example, by launching in a timely manner to outmaneuver competitors [9] or pursuing ambidexterity [10–12].

Despite the growing recognition of the importance of behavioral integration, our understanding about the major consequences of this phenomenon at the TMT level is not yet complete [6,10,11,13]. Consistent with the call for paper of [1] to extend the study of how behavioral integration influences TMT outcomes as a meaningful unit of analysis, our model focuses on two likely consequences of this construct, namely TMT innovativeness and sustainability orientation.

Drawing on the Upper Echelons literature [3,14,15] and the TMT behavioral integration literature [6–8,10,11], we theorize that a behaviorally integrated TMT offers its team members

an increased chance of being innovative and generating new ideas as compared to less behaviorally integrated TMTs. A behaviorally integrated TMT is characterized by intense interaction among its members that fosters information exchange and ultimately leads to collaborative decisions [7]. This collaboration among team members increases the probability of receiving new ideas and taking novel actions [16]. We further theorize that members of a behaviorally integrated TMT will have more awareness of their surrounding environment and take on more social responsibility than less behaviorally integrated TMTs. We empirically tested these relationships in small- to medium-sized private firms because research has suggested that large companies have very complex organizational systems, which may influence TMT behavioral integration [7]. After surveying 40 TMTs from 40 Iranian SMEs at two points in time, we found strong support for our hypotheses.

This manuscript is organized as follows. Section Two reviews the relevant literature on TMT behavioral integration and sustainability and innovativeness in order to provide the theoretical background for the study. Section Three outlines the research methodology, including the sampling, data collection process, measurement of the variables, and presentation of the descriptive statistics. Section Four presents the findings of the study. Sections Five and Six provide the conclusion and managerial implications of our study. The final section contains the limitations of the study and suggestions for future research.

2. Literature Review and Hypothesis Development

2.1. Behavioral Integration

Early work on the managerial and behavioral theory of the firm (Carnegie School) considered firms' TMTs to be the "dominant coalitions" of individuals that set the directions of these firms and held their strategic decisions to be largely a consequence of behavioral factors [17,18]. Similarly, in Upper Echelons theory, Hambrick and Mason proposed that TMT characteristics impact the strategic choices they make extensively [3]. Many strategic management researchers have attempted to determine how the human side of top executives influences the decisions they make at the organizational level [19]. For instance, [20] found that TMT heterogeneity was an important determinant of a firm's innovative decisions, and [21] found that the higher the proportion of TMT members with finance backgrounds, the more acquisitions companies make. In this line of research, TMT behavioral integration, one of the personal characteristics of TMTs, has received a great deal of attention from researchers in recent years [4,6,7,13]. It is important to explore the consequence of TMT behavioral integration because a behaviorally integrated team usually makes better decisions [6] and provides better service quality [8]. This behavior enhances team members' improvisational skills [13] and makes it possible for firms to jointly pursue both exploitative and exploratory orientations [10,11], ultimately improving both human resource performance and economic performance [8].

Drawing on the fast-growing Upper Echelons literature [1,2,7,19,22,23], we theorize that TMT behavioral integration plays a prominent role in TMT innovativeness and TMTs' sustainability orientation. According to [1], behavioral integration represents the degree to which a TMT acts as a homogenous team and engages in mutual and collective interaction. Members of behaviorally integrated TMT are able to work together closely, assist other team members, and respect collective decisions [6]. Together, all these increase the attention TMTs pay to the natural and/or social environment and motivate prosocial behavior in TMTs [24]. Furthermore, sharing skills, information, and knowledge may fuel the generation of innovative ideas among TMT members.

2.2. Behavioral Integration and Team Innovativeness

TMT innovativeness has attracted the attention of scholars in a strategic and innovation management context in recent years [25]. Team innovativeness refers to a TMT's tendency to engage with new ideas and support novelty, experimentation, and creative processes within the team, which

may result in new goods, services, or technological processes in the future [26–28]. In this paper, we argue that greater behavioral integration among TMT members enhances their innovativeness.

According to [7], behavioral integration has three major components: collaborative interaction, the quantity and quality of information exchange, and joint decision making. All three dimensions are important in the generation of new ideas and actions in TMTs. A high level of collaboration among team members enhances their levels of interpersonal trust [6] and simultaneously decreases conflict [29]. This uniformity makes their collective actions more proactive and decisive [30]. Furthermore, collaborative spirit within a team enables team members to exchange new ideas freely and without criticism, which ultimately reduces their resistance to new changes [28]. Furthermore, through collaborative behavior, team members learn new ways of doing things, develop new theories of action, change their habits, and may ultimately adopt new behaviors [31].

From an information-processing perspective [32], we should expect the generation of novel ideas among team members when there is a strong tendency among them to systematically disseminate information [33]. Because members of behaviorally integrated TMTs are frequently involved in face-to-face interactions [4], the quantity and quality of information exchange between them should be higher than in teams whose members meet face to face less frequently [34]. The more information that is shared among team members, the higher the probability of offering a novel set of ideas with which to solve work problems [35].

Finally, a behaviorally integrated TMT tends to make decisions jointly. Because the risk of failure in generating innovative ideas is high [36,37], generating new ideas within teams requires a supportive environment, one in which team members have little fear of criticism when offered ideas [38]. Joint decision making within teams promotes TMT members' commitment to their decisions' outcomes because they believe such decisions to be their own. Furthermore, making decisions together provides a protective, nurturing environment for new ideas before they become viable [38]. Thus, we hypothesize that

Hypothesis 1: *there is a positive relationship between level of TMTs behavioral integration and TMTs innovativeness.*

2.3. Behavioral Integration and Sustainability

The term “sustainability-oriented actions” generally refers to those actions that are intended to preserve ecosystems, reduce environmental degradation and deforestation, improve agricultural practices and the fresh water supply, and maintain biodiversity [24]. In our paper, sustainability orientation refers to TMTs' strategic orientation toward environmental protection and social responsibility [39]. Sustainability-oriented actions (acquiring ISO14001 certification, for example) enhance a company's reputation via product quality and image [40,41] and help in achieving environmental action-based competitive advantage [42]. There is remarkable agreement among environmental management scholars regarding the critical role of top executive support in firms' engagement in sustainability-oriented actions and practices [24,43–52]. The specific types of top executives that tend to take advantage of opportunities and strategies that have environmental, social, and intergenerational components (i.e., sustainable outcomes) is less clear [47].

Several theoretical and empirical studies emphasize the critical role of TMT characteristics in firms' attempts at sustainability-oriented actions [3,7,15,53]. [54] emphasized the importance of TMTs' past experiences in pursuing sustainability. [55] highlighted the critical role of TMTs' attitude and their broad awareness of their firms' sustainability orientation. A TMT's awareness of societal and environmental issues will be higher when that TMT has strong social networks [53,56] and constantly interacts with important internal actors, e.g., various employee and management groups, and external actors, e.g., clients [57] or shareholder [58]. Internal and external social networks contain rich sources of information about the worlds inside and outside of the organization, respectively.

In the second hypothesis, we propose that a behaviorally integrated TMT allows its members to learn more about societal and environmental issues (please see Figure 1). Team members can attain this sort of knowledge by interacting frequently with other team members and exchanging information [4]. Because each TMT has members with diverse backgrounds [59], a variety of social and environmental knowledge and information exists within a TMT [60]. Thus, a behaviorally integrated TMT has a higher capacity to assimilate and incorporate social and environmental information into its decision making. Having sufficient prior knowledge of the natural, ecological, and social environments [61,62] is precondition for becoming involved in environmental issues.

The main goal among highly sustainability-oriented managers is to contribute to solving societal and environmental problems [63], and this behavior may emerge when there are friendly and collaborative behavior interactions among team members. By working in a highly collaborative workplace, team members learn how to respect one another and be sensitive to the consequences of their behavior for other peoples. When team members are careful with one another, they may simultaneously pay the same level of attention to the social and surrounding environment. Collaborative behaviors provide a positive atmosphere among team members, which may lead to them pursuing more sustainability-oriented actions. Thus, we hypothesis that

Hypothesis 2: *there is a positive relationship between TMTs behavioral integration and TMTs sustainability orientation.*

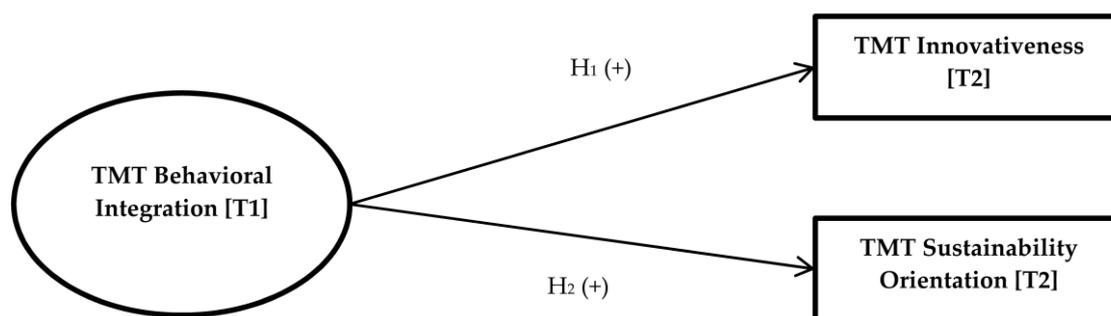


Figure 1. Hypothesized model, arrows represent hypothesized paths. H = Hypothesis; T = Time.

3. Research Methodology

To test our hypotheses, we surveyed SMEs in the manufacturing industry in Iran. We selected SMEs as the context for our study because SMEs have fewer external influences (e.g., boards, capital markets, and stakeholders) than bigger firms [64]. As a result, the key members of their upper echelons, TMTs, play a more pivotal role in shaping the firms' strategies and outcomes than in other firms [65]. In doing this, we randomly selected 150 SMEs from the directory of the Association of SMEs in the South-East of Iran. After contacting participants, 45 SMEs verbally agreed to be surveyed. The TMTs of each SME were identified by asking the human resource (HR) departments of these enterprises. We asked the departments to provide the names of at least ten TMTs for each enterprise. Then, seven top-level managers were selected from each enterprise. There is a technical challenge regarding the term SME in Iran. There is no well-accepted definition for such firms [66]. According to the Ministry of Industry and Mines and Trade and the Ministry of Agriculture in Iran, companies with fewer than 50 employees are usually referred to as SMEs. In our sample, the average number of employees per firm was 25.2.

We used back-translation [67] to translate the survey items from English to the Iranian official language, Persian. The translated version of the survey was first distributed among six business professors to confirm the appropriateness of the survey items for the Iranian context. These professors provided detailed feedback regarding each survey item. In the next stage, we pre-tested the Persian questionnaire with ten managers, who were not included in the final sample. Any confusing words

were revised in this stage, before launching the final survey. The first set of surveys was distributed in early 2016 to 315 individuals (seven managers from 45 companies). The surveys were personally delivered to and collected from each TMT at a scheduled time (within a week). In the respective cover letter, we ensured the TMTs' anonymity and information confidentiality.

We collected our data at two points in time because a two-stage survey approach can provide superior quality data [68–70]. Furthermore, the potential common-method variance bias increases when using cross-sectional datasets and obtaining both dependent and independent measures from the same individuals [71–73]. Thus, time-variant measures of our constructs help to ensure the reliability and validity of our measurement scale [73]. In the first wave of data collection, we only surveyed respondents regarding the control and independent variables (TMTs' behavioral integration). After six months, we collected data from the same respondents regarding the dependent variable (innovativeness and sustainability orientation). This temporal separation helps establish causality [73,74]. Following [10], we excluded surveys with many missing values and surveys from SMEs that had TMT member response rates of less than 50%. Accordingly, 160 usable and completed responses from 40 TMTs were included in the final dataset [13] (4 TMT member from 40 SMEs). Considering previous studies conducted in the TMT context, our sample size was within the acceptable range of 20–100 teams [5,13,29,34,53,75–78].

The average age of TMT members were 40.80 years (S.D. = 8.47), the average firm age was 14.95 years (S.D. = 6.99), and the average number of employees was 25.20 (S.D. = 13.95). Almost 75% of firms have 20 to 30 employees, 20% of firms have 31–40 employees and 5% of firms have 41 to 50 employees. The average TMT tenure was 13.38 months (S.D. = 4.95). In addition, 85.6% of TMT members held academic degrees, and the majority of them were men (70.1%). The fowling bar chart (Figure 2) represent the area of specialization of 160 top level managers participated in our study.



Figure 2. The area of specialization of respondents in the company.

3.1. Common Method Bias

In order to determine whether there was any significant common variance, a Harman one-factor test was conducted [74]. The first factor only explained 23.5 percent of the variance. Thus, no single factor emerged, nor did any single factor account for the majority of the variance [79]. In our analysis,

three factors emerged with eigenvalues greater than 1, and 57.91% of the variance was explained by these three factors. In order to reduce the common-method variance, the order of the measurement items was randomized [80]. We also found no significant difference regarding the variables between the early and late respondents, indicating that non-response bias was not a critical concern in our paper [81]. Finally, to ensure the reliability of all three scales used, a Cronbach alpha test was applied. We aggregated all measurements at the TMT level.

3.2. Measurement

3.2.1. Behavioral Integration

According to [7] (p. 74), a TMT is a “group of senior managers that generally makes decisions that are important to the firm’s future.” TMT members deal with high-level firm-related task responsibilities [11] and play an important role in organizational failure and success [53]. Behavioral integration reflects the extent to which a TMT’s members share information, knowledge, resources, and decision making [14]. Reference [7] considers three dimensions of TMT behavioral integration, namely collaborative behavior, information exchange, and joint decision making. In this paper, we adopted nine items from [7] to measure TMT behavioral integration (three items for each dimension). The Cronbach’s alpha for TMT behavioral integration was 0.94.

3.2.2. Team Innovativeness

Team innovativeness refers to the willingness of team members to accept new ways of creating knowledge-based solutions [39]. We used five items from [28] to assess the teams’ self-perceptions of innovativeness for each TMT member. The five-point Likert scale ranged from 1 = highly stable (few changes introduced) to 5 = highly innovative (many changes introduced). The Cronbach’s alpha for team innovation was 0.906.

3.2.3. Sustainability Orientation

Sustainability orientation refers to a TMT’s strategic orientation towards environmental protection and social responsibility [82]. We adopted six items from [82] to measure TMT sustainability orientation. The items were rated on a 5-point Likert scale ranging from 1 = not at all accurate to 5 = very accurate. The sustainability scale has a Cronbach’s alpha of 0.857. The Appendix A provides the wording of the items for all dependent and independent variables.

3.2.4. Control Variables

We included two groups of control variables at the team and firm level, which may have influenced TMT innovativeness and sustainability orientation. At the team level, we controlled for average team education (1 = Primary school; 2 = Elementary school; 3 = High school; 4 = Undergraduate; 5 = Master’s; 6 = Doctorate), age, gender (1 = Male; 2 = Female), tenure, and three types of experience, namely the team’s previous management, marketing, and technology experience. According to [62,83], TMT member age, gender, tenure, and education play important roles in the successful adoption and implementation of policies related to environmental sustainability. To measure TMT tenure, we first asked the respondents to provide the number of months they had worked as part of a TMT. Following [10], we calculated the average tenure reported by all members of a TMT. Because the experience levels of individuals influence their sustainability orientation [54,82], we controlled for three types of respondent experience [84].

At the firm level, we controlled for firm age (logarithm of years of operation), firm size (logarithm of number of employees), and environmental dynamism. Firm size contributes to TMT innovativeness [85] and sustainability orientation [86]. Larger firms tend to have more resources with which to enhance their innovation performance [87]. Firm age is a significant control variable because younger companies are more innovative than older companies [88]. Furthermore, firm age

can explain variations in firms' adoption of sustainable environmental management practices [86]. Previous studies also considered the important role of environmental changes in the flourishing of innovation [89,90] and engagement with environmental sustainability [86]. We controlled the impact of environmental dynamism by using three items from [91]. The dynamism items ask respondents about the frequency of marketplace changes and the rate of obsolescence for goods and services.

4. Findings

Table 1 presents the mean standard deviation and correlation among the variables. Among the main variables, it is worthwhile to note that TMT behavioral integration was positively correlated with TMT innovativeness ($r = 0.509$; $p = 0.01$). The Pearson's correlation coefficients indicate that TMT behavioral integration had a strong positive relationship with TMT sustainability ($r = 0.436$; $p = 0.01$). As expected, we also found a positive correlation between TMT innovativeness and sustainability ($r = 0.439$; $p = 0.01$). As shown in Table 1, the correlations among our main variables are within reasonable ranges in that they are not so high (more than 0.60) as to suggest multicollinearity problems [92].

We ran a hierarchical multiple regression in order to test the hypotheses of the study. Hypothesis 1 predicted that TMT behavioral integration would be positively associated with TMT innovativeness. In order to test the first hypothesis, we first entered only the control variables and TMT innovativeness as the dependent variables (see Table 2, Model 1). In this analysis, we found that TMT age ($\beta = -0.038$; $p < 0.05$) was negatively related to team innovativeness. The generation of novel ideas is higher in teams with younger members than in teams with older members. This result is consistent with previous studies that have found that younger managers are more likely to be risk takers and are less resistant to change than older managers [93]. We found a positive relationship between TMT education ($\beta = 0.257$; $p < 0.01$) and team innovativeness. This means that highly educated TMTs generate more innovative ideas in the workplace. Our result supports [94] arguments that educated TMT members exhibit more innovativeness. We also found a negative relationship between TMT tenure and TMT innovativeness ($\beta = -0.051$; $p < 0.05$). This result is consistent with [25], who argue that TMT tenure is an effective factor with which to explain TMT innovativeness. In the second step, we entered the control variables, TMT behavioral integration, and TMT innovativeness as dependent variables (see Table 2, Model 2). The results showed that TMT behavioral integration was positively and significantly related to TMT innovativeness ($\beta = 0.279$; $p < 0.05$). Thus, the first hypothesis was supported.

Table 1. Correlation and Descriptive Statistics.

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. TMT Age	40.80	8.465	1											
2. TMT Gender	1.625	0.490	0.086	1										
3. TMT Education	3.650	1.231	-0.406 **	-0.096	1									
4. Manag. Exp.	3.225	1.310	-0.098	-0.224	-0.093	1								
5. Market. Exp.	3.375	1.514	0.004	-0.082	-0.134	0.099	1							
6. Tech. Exp.	3.200	1.324	0.011	-0.039	-0.066	0.358 *	0.473 **	1						
7. TMT Tenure	13.37	4.949	0.186	0.102	-0.209	-0.057	-0.016	0.113	1					
8. Firm Age	14.95	6.998	-0.391 *	0.069	0.075	0.116	0.135	0.200	0.009	1				
9. Firm Size	25.20	13.945	-0.225	-0.008	0.183	-0.119	0.115	-0.155	-0.048	0.090	1			
10. Dynamism	3.938	1.271	0.136	-0.060	-0.378 *	0.029	0.059	-0.142	-0.210	-0.180	0.054	1		
11. Integration	3.490	0.847	-0.422 **	-0.056	0.406 **	-0.001	0.070	-0.025	-0.125	0.213	0.333 *	-0.356 *	1	
12. Innovativeness	3.142	0.818	-0.536 **	-0.084	0.575 **	-0.052	-0.048	-0.235	-0.504 **	-0.045	0.300	0.021	0.509 **	1
13. Sustainability	3.133	0.646	-0.343 *	0.138	0.197	-0.483 **	0.167	-0.263	-0.062	0.147	0.359 *	-0.028	0.436 **	0.439 **

** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Table 2. Regression analysis with TMT Innovativeness and Sustainability as criterion variable.

	TMT Innovativeness		TMT Sustainability	
	Model (1)	Model (2)	Model (3)	Model (4)
1. TMT Age	−0.038 *	−0.031 *	−0.025 *	−0.019 †
2. TMT Gender	0.070	0.080	0.113	0.121
3. TMT Education	0.257 **	0.231 **	0.014	−0.008
4. Manag. Experience	0.009	0.003	−0.210**	−0.215 **
5. Market. Experience	0.042	0.026	0.131*	0.117 *
6. Tech. Experience	−0.086	−0.072	−0.115	−0.103
7. TMT Tenure	−0.051 *	−0.047 *	0.001	0.005
8. Firm Age	−0.024 †	−0.025 *	0.005	0.004
9. Firm Size	0.007	0.002	0.007	0.004
10. Envir. Dynamism	0.058	0.117	−0.003	0.050
11. Behavioral Integration		0.279 *		0.246*
R^2	0.657	0.709	0.511	0.576
Adj. R^2	0.538	0.595	0.342	0.409
F	5.550 ***	6.199 ***	3.207 **	3.452 **

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; † $p < 0.10$. All analyses were based on $n = 40$ teams.

Our second hypothesis predicted a positive relationship between TMT behavioral integration and TMT sustainability orientation. In order to test the second hypothesis, in the third step, we entered the control variables and TMT sustainability as dependent variables (see Table 2, Model 3). In this stage, we found a negative relationship between TMT management experience and TMT sustainability ($\beta = -0.210$; $p < 0.01$) and a positive relationship between TMT marketing experience and TMT sustainability ($\beta = 0.131$; $p < 0.05$). In the final step, we entered control variables, along with TMT behavioral integration and TMT sustainability, as dependent variables (see Table 2, Model 4). Our result revealed that TMT behavioral integration has a statistically significant positive relationship with TMT sustainability orientation ($\beta = 0.246$; $p < 0.05$). Therefore, Hypothesis 2 is fully supported. In general, the findings support our general thesis that in SMEs, a behaviorally integrated TMT represents a more innovative and sustainability-oriented TMT.

5. Discussion and Conclusions

The major goal of our paper has been to increase our understanding of the consequences of TMTs' behavioral integration on their strategic choices and actions in SMEs. Our first hypothesis predicted a positive association between TMTs' behavioral integration and innovativeness. The data collected from 40 TMTs confirmed that more behaviorally integrated TMTs were more innovative than less behaviorally integrated TMTs. Our results are consistent with [95]'s findings, which showed that we should expect a large number of innovative idea when collaboration among team members is high. In the same line of research, [96] showed that a behaviorally integrated founding team is more likely to become involved in product innovation. We also provide empirical evidence for [7]'s argument that a behaviorally integrated TMT has a broad set of insights that sensitize its SME to a variety of inputs, such as innovation. Lastly, our results are consistent with earlier research [10] that showed a strong relationship between TMT behavioral integration and firms' engagement in both exploratory and exploitative innovation. Supporting [10], we provide further empirical evidence that the level of TMT behavioral integration play a pivotal role in organizations' tendency to pursuing exploratory and exploitative innovation.

Another goal of our research paper was to determine why some of top-level managers are more willing to pursue opportunities and strategies that have environmental, social, and intergenerational components (i.e., sustainable outcomes) [24,43–47]. Specifically, in this paper, we attempted to shed light on the role of TMT behavioral integration in SMEs' decisions to take sustainability-oriented actions. In doing so, we tackled a promising avenue of strategic and environmental management research

related to the way an SME can cultivate sustainability-oriented actions [97]. Our results confirmed that a highly behaviorally integrated TMT will tend to take more sustainability-oriented actions than less behaviorally integrated TMTs. In this line of research, [98] holds that a firm's top management plays an important role in that firm's engagement in sustainability. Also, [99] hold that both a firm's human capital and its business leaders are important to that firm's sustainability orientation.

Both collaborative behavior and joint decision making as two main dimensions of behavioral integration necessitate each TMT member to work closely together and meet each other frequently [4,7]. This collaboration and exchanging knowledge may provide a rich information stream about social issues inside and outside the organization [6]. Thus, behavioral integration may lead to more health and well-being of organization employees, creating ethical and fair products for organization customers and establishing fair trading with company suppliers. Our results supported the notion that a behaviorally integrated TMT will be more aware of what is going on in its surrounding business environment [6] and interested in taking actions that do not harm society or the environment. Our empirical results from 40 TMTs suggest that future strategic and environmental management research should continue to examine the role of TMT characteristics in team-level outcomes.

6. Managerial Implications

This research paper identified two new outcomes of TMTs' behavioral integration that both have potential to increase firm performance [62] and affect the firm survival significantly [100]. CEOs should pay attention to behavioral integration in their TMTs because a behaviorally integrated TMT promotes interaction among professionals within the organization, which will ultimately facilitate the development of innovative solutions and strategies. It is well-accepted that innovation is a way of achieving and sustaining competitive advantages [101,102].

Similarly, a behaviorally integrated TMT will tend to be more sustainability-oriented. Sustainability-oriented actions can positively influence both corporate social and financial performance [103]. Engaging in sustainable behavior entails creating ethical and fair products for an organization's customers and establishing fair trading with company suppliers. Both of these factors can improve corporate image and add considerable business and market value [104]. Because members of a behaviorally integrated TMT share helpful information, knowledge, skills, and resources and act collectively to take on firm-wide challenges [14], when CEOs support a behaviorally integrated TMT, this can create sustainable competitive advantages. Moreover, our results indicate that the generation of novel ideas tends to be higher in teams with younger members, and highly educated TMTs tend to generate more innovative ideas in the workplace (also in line with earlier research [93,94]).

Sustainability-oriented top managers consider environmental problems to be major challenges in society and believe that their companies should take on a more social responsibility [82]. Thus, it is important to identify sustainability-oriented top-level managers because sustainability entrepreneurs and top managers could become true sources of wealth creation and economic development in the future [46].

7. Limitations and Future Work

We provide empirical evidence for the usefulness of behavioral integration (as the central element of real teamwork at the top) in terms of team innovativeness and sustainability-oriented actions in firms. However, our work suffers from certain limitations, which may provide opportunities for future research in this context. First, we collected our data from small- and medium-sized enterprises in Iran. This may have reduced the generalizability of our results to large-sized companies. Future studies may take the next step and test these relationships in large-sized companies. We collected data from only manufacturing industries. It may be profitable for future studies to explore the consequences of TMT behavioral integration at the team level by using data from both manufacturing and service companies. A previous study has shown a positive relationship between TMTs' past experiences and firms' involvement in sustainability-oriented practices [54]. We found a negative relationship between

TMTs' management experience and sustainability orientation and also a positive relationship between TMTs' marketing experience and sustainability orientation. Future research might explore these relationships more deeply by using different methods, such as interviews or case studies. Finally, we would like to acknowledge that there is a certain lack of comparability between our results and those of others due the Iranian definition of an SME [105,106]. So we would like to encourage researchers to collect data also in other regions in the world to see if the results differ.

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Appendix A. Construct Measures

Behavioral integration (adopted from [7])

1. When a team member is busy, other team members often volunteer to help manage the workload—*Collaborative behavior*
2. Team members are flexible about switching responsibilities to make things easier for each other—*Collaborative behavior*
3. Team members are willing to help each other complete jobs and meet deadlines—*Collaborative behavior*
4. Team members usually let each other know when their actions affect another team member's work—*Joint decision making*
5. Team members have a clear understanding of the joint problems and needs of other team members—*Joint decision making*
6. Team members usually discuss their expectations of each other—*Joint decision making*

Please think about situations over the past two years when your TMT made important decisions regarding the firm's future, assessed your teams on

7. Quantity of ideas—*Information exchange*
8. Quality of solutions—*Information exchange*
9. Level of creativity and innovation—*Information exchange*

TMT sustainability orientation (adopted from [82])

1. Firms that are environmentally oriented have advantages in recruiting and retaining qualified employees
2. Iranian firms should take an internationally leading role in the field of environmental protection
3. The environmental performance of a company will in future be considered more and more by financial institutions
4. I think that environmental problems are one of the biggest challenges for our society
5. Corporate social responsibility should be part of the foundations of each company
6. I think that top level managers and companies need to take on a larger social responsibility

TMT innovativeness (adopted from [28])

Compared with other similar top management teams, how innovative do you consider your team to be?

1. Setting work targets
2. Setting work objectives
3. Deciding the methods used to achieve targets
4. Deciding the methods used to achieve objectives
5. Initiating new procedures or information systems

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