Original Paper

Presenting the Model of Using Crowdsourcing in Formulating an Open Strategy

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Abstract

In terms of the basic practical purpose, in terms of nature, survey research, and in terms of paradigm, combined-exploratory research, sampling in the qualitative part of the research was done in a purposeful way and in the quantitative part in a stratified random manner. In this regard, the project's first step was to conduct library studies and collect information. In this regard, it was investigated with a review of the theoretical foundations and internal and external research related to the use of crowdsourcing in the development of open strategy. In this research, due to the lack of research based on the use of crowdsourcing in developing an open strategy and the need to know how to explain the phenomenon in a real context, it is inevitable to follow a qualitative paradigm. On the other hand, the need to purify the factors, explain the model, as well as examine the state of the model and its components and relationships descriptively requires the use of quantitative methods, so a mixed approach that includes qualitative and quantitative methods will be used. First is the organization's semi-structured interview, which includes crowdsourcing in developing an open strategy and how to rank the factors. The research method was carried out purposefully in the qualitative part of the research and stratified randomly in the quantitative part. They are in the qualitative phase of interviews with managers and vice presidents of Cable manufacturing companies in the United States, interviews will continue until theoretical saturation is reached. The research tool in the qualitative part will be determined by using the exploratory method of using the components of crowdsourcing in developing an open strategy and the factors affecting it, the sampling method in the qualitative part is purposeful. The research tool in the qualitative part of the exploratory interview is semi-structured, and in the qualitative part, the analysis of the interviews was done using the foundational data analysis method. And finally, the final model has been presented and fitted.

Keywords

marketing, crowdsourcing, open strategy

1. Introduction

Strategy development is always a mysterious and important issue. However, recently some organizations have been using information technology to develop strategies in an open manner. Management has a very long history in human civilization, but different manifestations of it have been known under different titles during different ages and eras. By examining the shelves of libraries related to the field of management, one can clearly see the wonder of the application of one of the oldest fields of this field, and this field is strategic management. The most prominent published works on strategic management are war strategies (the art of War and Golden War), which can be referred to in ancient Chinese and Greek texts. The word strategy is derived from the Greek word Strategos, and Strategos means army. By tracing the concept of strategy in ancient Greece, it seems that success in planning (War) goals were due to this concept (Hautz et al., 2017).

Strategy is an important tool for business management in a competitive market, and its main purpose is to prepare the organization to deal with today's turbulent and complex environment. Also, in order to achieve the systematic and objective goal of using skills, documents, and internal organizational resources, it is necessary to use strategy and its management. Today, strategic management has a great role in all organizations, and it is considered necessary for every organization to reach predetermined goals and objectives and also for the implementation and control of organizational strategies, it has made the application of strategic management inevitable. Considering the increasing complexity of the organization and the occurrence of rapid changes, criticisms about the usual methods of strategic planning and the current research about the greater effect of participation in the success of the strategy process were raised, which led to the emergence of a new concept of open strategy in management literature. Today, the concept of openness has spread in organizations, and due to the emergence of the Internet and progress in information technology, organizations have shown a special interest in new approaches. One of these open principles in organizations in the strategic field was approved through transparency in strategy processes, which is called open strategy. The duty of open strategy, in the simplest sense, is to increase transparency and participation in strategic issues (internal and external stakeholders). Chesbrough and Appleyard (2007) proposed the open strategy for the first time. This action was based on Chesbrough's work in open innovation, emphasizing the need for an open approach to the organization's strategy. So far, three important dimensions of the open strategy include transparency (which means how much information is spread in the organization) and the second dimension which is participation and cooperation (which means which people are involved in the organization), and researchers have introduced information technology; But there are questions about how the open strategy goes beyond the traditional boundaries of the organization and how the open strategy creates value and how it sustains the open strategy plans over time. In fact, the open strategy creates a challenge in the traditional perspective of the organization, which is followed by a unique group at the highest level of the organization, and most of the open strategic processes in strategy-making require more transparency and the wide presence of people who are involved in the

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strategy-making process. Organizations are involved (Yakis-Douglas et al., 2017).

A strategy is an important tool for the success of organizations in this competitive business world, and this competitive success largely depends on the different types of strategies that companies use. During the past years, the process of strategy has changed, including environmental, technological, cultural, and organizational changes that have reduced the efficiency of traditional approaches to strategy, which in traditional strategy, small groups of people participate in the process of strategy formulation and key decisions (Nketia, 2016). While open strategy is an emerging and dynamic phenomenon that promotes a modern form of strategy development intending to increase transparency, flexibility, and the number of participants using information technology tools. This strategy completely differs from up-down strategy development and qualitatively from down-up strategy. Therefore, open strategy is a new, strategic, and unique phenomenon that requires a separate study that this process leads to. It becomes a coherent and complete strategic plan in organizations. Open strategy leads to a better understanding of strategic decisions, increased commitment to those decisions, and access to more diverse sources of information that can improve the overall quality of decision-making.

Also, with the increased openness, more strategic information is available, and more stakeholders are able to engage in strategic dialogue (Adobor, 2019). The open strategy focuses on creating better value through stakeholders. It also increases flexibility and the willingness to take risks, and the development of this strategy causes more acceptance of innovative approaches and entrepreneurial opportunities (Hutter et al., 2017).

About 70-80 years ago, when the science of organization and strategy officially entered the academic literature and organizations were very fond of strategic planning, it was believed that strategy had a mysterious nature. About 50 years ago, Fred Borch, the CEO of General Electric Company, determined the company's strategy alone without informing other people and even without the help of his advisors and closest colleagues. In contrast, Jim Whitehurst, the CEO of the Red Hat software company, has adopted an open approach in the 21st century. He adopts the strategy from different levels and departments of the organization. His desired strategy is a transparent strategy based on the participation of stakeholders. In this case, more people are involved in creating the organization's strategy. The digital world and the ease of hearing people's voices from social networks, blogs, or the like, have made it possible for the strategy not to be the exclusive domain of the organization's top managers. In general, it can be said that strategy has gone through three paradigms since the middle of the 20th century; Strategic Planning, Strategic Management, and Open Strategy. Chandler, one of the early thinkers of strategy, considers the strategy creation process exclusive to the organization's elite class (senior managers), and even hearing the voice of middle managers calls it the prevalence of short-sightedness in the organization. But now it turns out that strategy is not only in the hands of senior managers and business owners; Rather, it has an inter-subjective and collective nature. Managers, employees, suppliers, and shareholders also have a serious stake in the strategy creation process.

Previous research has mostly explained the concept of open strategy and some of its dimensions and

benefits, and no research has been done that comprehensively explains the influencing factors in this process. Therefore, considering this process's benefits for organizations, it seems necessary to provide a model to help implement this process in organizations and express the influencing factors. In order to operationalize this strategy and involve a large number of stakeholders, it is necessary for organizations to be aware of all the conditions that are necessary for implementation, and by examining these conditions and the benefits that they get from opening up, they decide to implement, which in this The research has tried to present all the factors that are necessary for the opening of organizations and finally, by using the extracted model, organizations can efficiently implement this strategy. One of the innovations of this research is extracting a comprehensive list of factors affecting the use of crowdsourcing in developing an open strategy. By using the presented model and considering all these factors, a big step can be taken to increase productivity toward successfully implementing the open strategy. Collected in organizations and benefited from all its benefits. Open strategy is a new concept adapted from the concept of open innovation to design and implement strategies and policies with the participation of a wide range of internal and external stakeholders of the organization. Executive experiences have shown the effectiveness of this approach compared to the traditional approach that considered strategy decision-making limited to senior executive managers and in a mysterious way. This approach creates the necessary transparency by disseminating strategic information and makes it possible for stakeholders to participate and accept their opinions in identifying, prioritizing, choosing, and solving strategic issues (compilation, formulation, and formulation of strategy). Considering that these studies have mostly explained the concept and dimensions of open strategy as well as its benefits and relationship with other components, and there is no research that deals with the comprehensive expression of the influencing factors in this process and its implementation, conducting research in this field, It seems necessary for organizations to take the right actions in order to implement the open strategy by being aware of these factors.

2. Literature Review

Amrollahi et al. (2014), "Open Participatory Strategic Planning: A Methodology and Case Study." The crowdsourcing model has helped Open Strategy Planning develop collaborative strategic planning stages and identify stakeholders related to the strategy process. Nketia (2016) examines the effect of employee participation on their commitment to strategy, and this study also discusses the important role of technology in open strategy that facilitates employee participation. Tavakli et al. (2017) examine the history of the emergence of "open strategy" and present the conceptual development. This article presents a comprehensive model of open strategy from a practical perspective. The results of this article show that the open strategy combines two sets of processes. The first set is what can be called traditional strategic actions. The second set is what can be called "open methods". These methods are usually not found in the traditional and closed strategy development methods. This article briefly overviews the methods used in developing the traditional strategy.

Appleyard and Chesbrough (2017) discussed the dynamics of open strategy: from adoption to return. The open strategy includes two main dimensions: process dimensions that examine significant effects and greater participation in strategy-making. Pursuing an open strategy means building business models that lead to economic life and create and absorb value. With a case analysis, Aten & Thomas (2016) explored the use of crowdsourcing technology by an organization that has moved from a traditional approach to an open strategy approach. It has also investigated the financial capabilities of technology in developing organizational strategy. The results showed that the crowdsourcing strategy is multi-media, divergent, fair, and comprehensive.

Baptista et al. (2017) discussed social media and the emergence of rethinking as a new capability for open strategy. By expanding participation, social media increase transparency and comprehensiveness in formulating organizational strategy. Hutter et al. (2017) state that our study shows that the open strategy can help develop better strategies, understand and implement these strategies and increase organizational learning due to the increased social sense of employees and stronger organizational commitment. This research further expands on comprehensiveness and transparency to develop a "more accurate understanding of open space" and emphasizes that open strategy should be continuously viewed alongside these two main dimensions.

Morton (2017) examines how an open strategy approach can be used to manage organizational legitimacy in a pluralistic context. Also, this research is comprehensive and in-depth research on the organization of the new four-year strategic plan using the open strategy approach. In this study, the theoretical framework of practice-based activity is used to discover legitimacy in relation to the directions and priorities of the organization.

Dobusch and Kapeller (2017) discussed unlocking strategy through communities. In the wake of new digital technologies, organizations increasingly emphasize the participation of external stakeholders for innovation or even for carrying out their core tasks, including strategy creation processes. Amrollahi and Rowlands (2017) designed a method for open strategy planning. This study has presented a method for open strategy planning using a scientific perspective, the proposed method is to meet the strategic needs of planning. Adobor (2019) states that synergy makes jobs more exciting and efficient when employees can make decisions and plan, and employees who are invited to participate feel valued, creating a sense of responsibility in them as members. It is from the group.

This article attempts to answer the question of how we can better understand the key features of stakeholder relationships, such as collaboration. The research contributes to the instrumental approach of stakeholder theory, which shows how organizational goals are achieved through stakeholder management. This article describes the risks and benefits of the open strategy and makes some suggestions.

3. Methodology

In terms of the basic-applied purpose, nature, survey research, paradigm, and combined-exploratory research, sampling in the qualitative part of the research was done in a purposeful way, and the quantitative part in a stratified random manner. The statistical population of the research is presented in two parts. In the first stage: university professors and senior managers of Cable manufacturing companies in the United States, and in the second stage, all experts and managers of Cable manufacturing companies in the United States have been proposed as the research community. In the first (qualitative) stage, the purposeful theoretical sampling method is based on reaching the saturation point. The cluster sampling method is used in the second part, and the third stage is also targeted. Library studies are used in the information gathering method section in the research literature section. In the primary data section, interview tools are used in the qualitative section to identify the components. In the second stage, for the purpose of factor analysis, a researcher-made questionnaire based on the five-choice Likert spectrum is used, and in the third stage, a questionnaire is used.

In this method, based on the typology of the exploratory plan, the foundation data is first analyzed. In the data analysis of the foundation, in order to identify the components, the open, central, and selective coding method is used. According to the said material, in this research, in order to identify the components of using crowdsourcing in formulating an open strategy, the research first started with qualitative data and continued with the quantitative method in the later stages. In the second part, Structural Equation Modeling (SEM) measures the model's fit and evaluates the main indicators. For this purpose, AMOS software is used in this research to analyze and identify indicators.

4. Results and Discussion

In order to interview the target people, information about the research subject and the purpose of the study was provided to the interviewee after the researcher's introduction. Then they were asked to answer the interview questions. After the researcher collected, extracted, and classified the data. A frequency distribution table and distribution ratios should be prepared, and then a new stage of the research process, which is known as data analysis, should begin. In the analysis stage, the important thing is that the researcher must analyze the information and data in the direction of the goal, answer the research question or questions, and also evaluate his hypotheses. In the following Table, the descriptive statistics (mean, standard deviation, minimum and maximum value) related to the components of the core coding paradigm of the crowdsourcing model in developing the open strategy have been observed and reported.

Table 1. The Results of Descriptive Statistics for the Components of the Axial Coding Paradigm

	Category	Component	Symbol	Average	Standard deviation	Min	Max
		Business model	q1	3.01	0.840	1	5
	Nature of the organization	The formality of the organization	q2	3.26	0.691	1	5
		Private or public organization	q3	3.24	0.762	1	5
		Systematic thinking	q4	3.28	0.613	1	5
	Organizational thinking	Contingent thinking	q5	3.22	0.811	1	5
Causal conditions		Strategic thinking	q6	3.16	0.742	1	5
		Vision, mission, and policy of the organization	q7	3.06	0.769	1	5
	Strategic orientation	Industry dynamics	q8	3.11	0.744	1	5
		Environmental interaction	q9	3.11	0.758	1	5
		Management support	q10	3.15	0.729	1	5
	Individual preparation	The ability of employees and stakeholders	q11	3.06	0.750	1	5
		Motivate employees and stakeholders	q12	3.13	0.765	1	5
Background conditions		The attitude of Managers and stakeholders	q13	3.15	0.818	1	5
	Cultural readiness	The openness of organizational culture	q14	3.17	0.786	1	5
		Trust building	q15	3.14	0.720	1	5
	Technological	Absorption	q16	3.20	0.683	1	5

	readiness	capacity					
		Communication technologies	q17	3.22	0.723	1	5
		Hardware and software knowledge	q18	3.26	0.742	1	5
		Complexity, formality, and organizational focus	q19	3.26	0.651	1	5
	Structural readiness	Organization processes	q20	3.24	0.749	1	5
		Enterprise Architecture	q21	3.30	0.756	1	5
The central category		Transparency	q22	3.10	0.834	1	5
	Market strategy	Participation	q23	3.17	0.792	1	5
		Market technology	q24	3.10	0.834	1	5
	The challenge of transparency	Disclosure of organizational information	q25	3.06	0.829	1	5
		Protection of intellectual property	q26	3.20	0.799	1	5
Intervening conditions	The challenge of participation	Attracting participation and access to stakeholders	q27	3.23	0.753	1	5
	The technology challenge	Maturity of Stakeholder Technology	q28	3.05	0.852	1	5
		Technology integration	q29	3.17	0.740	1	5
Strategies	Technological strategies	Crowdsourcing	q30	3.21	0.687	1	5
		Use of social networks	q31	3.13	0.757	1	5

			Mean	SD	Min	Max
	Communication strategies	Use of smart technologies	q32	3.05	0.720	1	5
		Open communication	q33	3.20	0.816	1	5
		Strategic discourse creation	q34	3.17	0.772	1	5
		Co-creation	q35	3.17	0.764	1	5
		Border expansion	q36	3.14	0.866	1	5
	Structural strategies	Networking	q37	3.21	0.761	1	5
		Process improvement	q38	3.15	0.792	1	5
	Control strategies	Monitoring of employees and other stakeholders	q39	3.23	0.646	1	5
		Monitoring received ideas	q40	3.17	0.695	1	5
	Behavioral consequences	Acceptance of organizational citizenship strategy	q41	3.22	0.690	1	5
		Empowering employees	q42	3.20	0.776	1	5
	Organizational implications	Development of organizational capabilities	q43	3.20	0.745	1	5
Consequences		Acquisition and dissemination of knowledge	q44	3.07	0.794	1	5
		Organizational compliance	q45	3.03	0.805	1	5
	Environmental consequences	Environmental intelligence	q46	3.00	0.928	1	5
		Power and credibility in the industry	q47	3.01	0.831	1	5

It can be seen that the mean of all components is higher than the mean of the Likert scale of 3. And this means that the respondents have chosen the completely agree options more than the other options. The highest average related to the impact of the sub-component of organizational architecture is related to the structural readiness component of causal conditions with a value of 3.33, and the lowest average related to environmental intelligence is related to the component of environmental consequences of consequences with a value of 3.00.
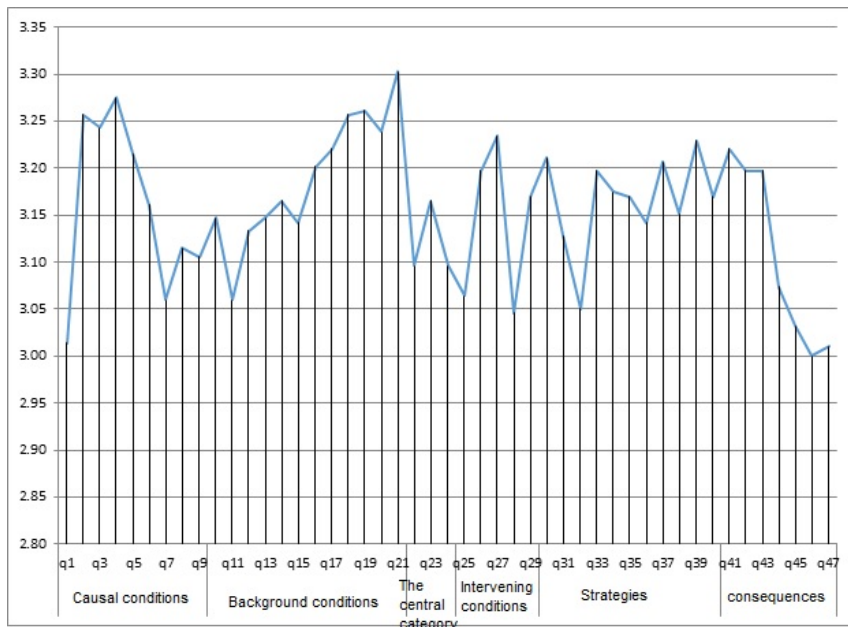
**Figure 2. Comparative Line Graph of Sub-Component Means**

Checking the normality of data distribution. In order to check the normality of the data distribution, the skewness coefficient and the skewness coefficient, which are two basic indicators of the data distribution, have been used. Skewness is a measure of symmetry or asymmetry of the distribution function, and Skewness represents the height of a distribution. In other words, elongation is a measure of the height of the curve at the maximum point. Always compare the kurtosis with the kurtosis of the normal distribution. For these values, different sources have provided different values. For example, Schumacher and Lomax (2004) consider the values of these two indices to be between (2 and -2) for the normality of the data. As shown in Table 2, the amount of elongation and Skewness is between the interval (2 and -2), which indicates the normality of the related data.

Table 2. The Results of Skewness, Kurtosis

	Category	Component	symbol	Skewness	kurtosis
Causal conditions	Nature of the organization	Business model	q1	0.521	-0.686
		The formality of the organization	q2	0.501	-0.473
		Private or public organization	q3	0.518	-0.694
	Organizational thinking	Systematic thinking	q4	0.833	-0.360
		Contingent thinking	q5	0.626	-0.676
		Strategic thinking	q6	0.354	-0.472
	Strategic orientation	Vision, mission, and policy of the organization	q7	0.448	-0.471
		Industry dynamics	q8	0.713	-0.527
		Environmental interaction	q9	-0.409	-0.114
Background conditions		Management support	q10	0.238	-0.378
	Individual preparation	The ability of employees and stakeholders	q11	0.708	-0.494
		Motivate employees and stakeholders	q12	0.453	-0.542
		The attitude of Managers and stakeholders	q13	0.276	-0.736
	Cultural readiness	The openness of organizational culture	q14	1.058	-0.818
		Trust building	q15	-0.475	-0.145
		Absorption capacity	q16	0.561	-0.366
	Technological readiness	Communication technologies	q17	0.821	-0.508
		Hardware and software knowledge	q18	0.339	-0.521
	Structural readiness	Complexity, formality, and organizational focus	q19	-0.090	-0.322
		Organization processes	q20	0.416	-0.621
		Enterprise Architecture	q21	0.839	-0.761
The central category	Market strategy	Transparency	q22	0.750	-0.808
		Participation	q23	0.005	-0.528
		Market technology	q24	0.190	-0.616
Intervening	The challenge of	Disclosure of organizational information	q25	0.169	-0.562

conditions	transparency	Protection of intellectual property	q26	0.969	-0.863
	The challenge of participation	Attracting participation and access to stakeholders	q27	1.131	-0.808
	The technology challenge	Maturity of Stakeholder Technology	q28	0.362	-0.765
		Technology integration	q29	0.904	-0.627
Strategies	Technological strategies	Crowdsourcing	q30	1.243	-0.558
		Use of social networks	q31	1.078	-0.797
		Use of smart technologies	q32	1.188	-0.524
	Communication strategies	Open communication	q33	0.722	-0.840
		Strategic discourse creation	q34	0.458	-0.614
		Co-creation	q35	0.552	-0.611
	Structural strategies	Border expansion	q36	0.281	-0.839
		Networking	q37	1.063	-0.873
		Process improvement	q38	0.546	-0.670
	Control strategies	Monitoring of employees and other stakeholders	q39	0.919	-0.465
		Monitoring received ideas	q40	0.719	-0.657
Consequences	Behavioral consequences	Acceptance of organizational citizenship strategy	q41	1.776	-0.829
		Empowering employees	q42	1.128	-0.837
	Organizational implications	Development of organizational capabilities	q43	-0.252	-0.472
		Acquisition and dissemination of knowledge	q44	0.197	-0.578
	Environmental consequences	Organizational compliance	q45	0.109	-0.539
		Environmental intelligence	q46	0.213	-0.235
		Power and credibility in the industry	q47	-0.109	-0.406

Fitting the structural model of using crowdsourcing in formulating an open strategy. The results of fitting the structural equation model of using crowdsourcing in developing an open strategy are shown in Table 3.
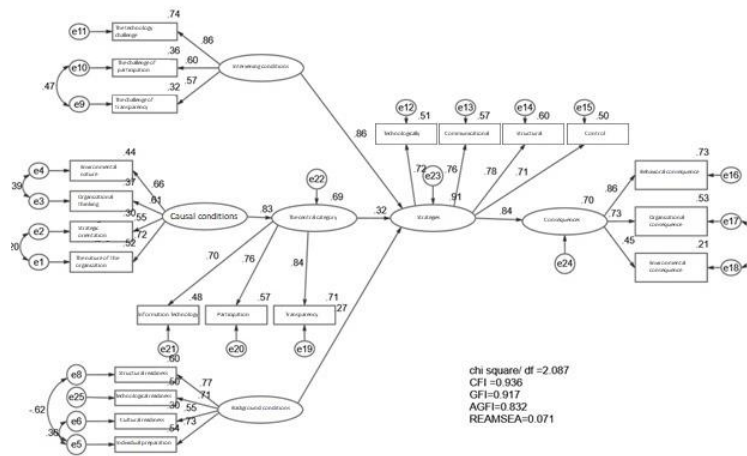
Figure 3. The Structural Model of Using Crowdsourcing in Developing an Open Strategy

Suppose the quality of the structural equation model is suitable. In that case, we will use the significance test of the coefficient of the estimated paths to formulate the model of crowdsourcing in formulating an open strategy. In Table (4), the goodness of fit indices of the model are reported. According to the Table related to the model indices, it can be seen that the chi-square indices to the degree of freedom of the appropriate fit of the model and the RMSEA index, CFI also reports the reasonable fit of the model. Also, GFI and AGFI index are acceptable, and it is concluded that the fit of the structural equation model is accepted.

Table 3. Goodness Indicators of the Fit of the Crowdsourcing Model in Formulating an Open Strategy

Name	symbol	Value	Acceptable fit
Chi-Square degrees of freedom	chi-square/df	087.2	Less than 5
The goodness of fit index	GFI	917.0	GFI > %90
The adjusted goodness of fit index	AGFI	832.0	AGFI > %90
The comparative fit index	CFI	936.0	CFI > %90
The root mean square error of approximation	RMSEA	071.0	10%> RMSEA

Investigating relationships between variables. The results of fitting the structural equation model are shown in Table 4. According to the estimated T and P-values that can be seen in Table 4, it can be said about accepting or not accepting the significance of relationships between constructs. He made a decision. If the observed values of the T statistic in the significance test of the relationship between two

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variables are estimated to be larger than 1.96 or smaller than -1.96, or if the P-value of the paths is less than 0.05, it indicates the correctness of the relationship between the constructs has 95% confidence.

Table 4. The Results of Fitting the Crowdsourcing Model in Formulating an Open Strategy to Examine the Direct Relationships of Variables

Direction			Coefficient	Standard error	T-test	P-value	Result
Causal conditions	<---	The central category	0.832	0.176	7.815	001.<0	Meaningful
The central category	<---	Strategies	0.316	0.031	5.729	001.<0	Meaningful
Background conditions	<---	Strategies	0.272	0.058	4.443	001.<0	Meaningful
Intervening conditions	<---	Strategies	0.858	0.113	7.242	001.<0	Meaningful
Strategies	<---	Consequences	0.836	0.094	9.928	001.<0	Meaningful

Considering that the test statistic related to the path of causal conditions to the central category is estimated to be 7.815, which is greater than 1.96, and its P-value is less than 0.05, the coefficient of this path is also estimated to be 0.832, which is a positive value. It can be said that the causal conditions directly and significantly affect the central category of using crowdsourcing in developing a barrier strategy.

Table 5. The Results of Fitting the Model to Check the Indirect Relationships of the Variables

	Total			Direct			indirect		
Independent	The central category	Strategies	consequences	The central category	Strategies	consequences	The central category	Strategies	consequences
Intervening conditions	0	0.858	0.717	0	0.858	0	0	0	0.717
Background und	0	0.272	0.234	0	0.272	0	0	0	0.234

conditions									
Causal conditions	0.832	0.245	0.205	0.832	0	0	0	0.245	0.205
The central category	0	0.316	0.257	0	0.316	0	0	0	0.257
Strategies	0	0	0.836	0	0	0.836	0	0	0

Considering that the test statistic related to the path of intervention conditions to strategies is 7.242 and its P-value is estimated to be less than 0.001. Also, the coefficient of this path is estimated to be 0.858, which is a positive value, it can be said that the intervention conditions. It has a direct and significant effect on the strategies of the crowdsourcing model in formulating a barrier strategy and considering that the test statistic related to the path of background conditions to strategies is 4.443, and its P-value is estimated to be less than 0.001. Also, the coefficient of this path is estimated to be 0.272, which is a positive value, it can be said that the background conditions. It directly and significantly impacts the strategies of using the crowdsourcing model in formulating an open strategy. Considering that the test statistic related to the path of the central category to strategies is estimated at 5.729 and its P-value is less than 0.001, and also the coefficient of this path is estimated at 0.316, which is a positive value, it can be said that the central category of influence directly and meaningfully on the strategies of using the crowdsourcing model in formulating the strategy. Considering that the test statistic related to the path of strategies to outcomes is 9.928 and its P-value is estimated to be less than 0.001, and the coefficient of this path is estimated to be 0.836, which is a positive value, it can be said that strategies have a direct and meaningful impact. It affects the consequences of using the crowdsourcing model in formulating a strategy. In Table 5, the indirect relationships of the variables have been examined.

In Table 5, all relationships are significant, and as it can be seen from Table 5, the intervening conditions, background conditions, and the central category of the model of using crowdsourcing in formulating an open strategy indirectly with the consequences and causal conditions Indirect have a positive and significant relationship with strategies and outcomes, so the final model of using crowdsourcing in formulating an open strategy does not need to be modified and is shown in Figure 4.

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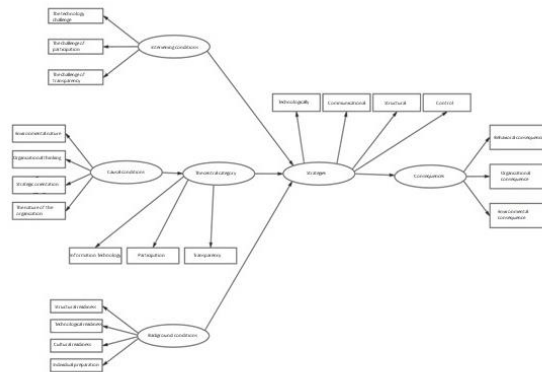
Figure 4. The Final Model of Using Crowdsourcing in Strategy Formulation

5. Conclusion

Research shows that in many companies, the strategy formulation process is much easier than its implementation, and the obstacles to strategy implementation have become very challenging. Most big companies and organizations are looking for this issue in their management and strategic planning process to remove the obstacles to implementing the strategy so that what they have formulated can be profitable and gain competitive advantages. Keeping the existing Open strategy is a process that, through increasing transparency and participation and the extensive use of information technology, makes organizations take a new path for their plans and achieve their goals. According to the current complex and turbulent environment, traditional strategies are no longer responsive to the organization's needs and need a newer process, which is an open strategy. In the open strategy approach, the two principles of transparency and universality increase people's participation in the decision-making process. There are many questions and issues surrounding the implementation of such an idea. Among those questions, we can mention things such as choosing the type of problems to be solved, the extent of stakeholder participation, discussing the rights of stakeholders, how to respect company secrets, tools for creating partnerships, and how to prioritize issues and strategies created on the platform. Although by interpreting these issues, opening the strategic management process at the level of organizations and businesses seems very complicated, the participation of stakeholders in the strategic management process can increase the quality of the value proposition to a wide range of stakeholders. Attracting a wide range of stakeholders creates more added value for the organization and business. As a result, the organization will develop, and managers will be more motivated in terms of wealth acquisition. According to the research of Whittington et al. (2011), open strategy is considered a collaborative strategic plan based on information technology and knowledge sharing in strategic management processes. Note that this cooperation has expanded beyond the boundaries of the organization.

In this part, after the descriptive part, in order to evaluate the fit of the final model of using crowdsourcing in developing an open strategy, the model was fitted using AMOS software. The results

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of fitting the measurement and structural models indicated that both models are of good quality and all the goodness of fit indices have reached their acceptable quorum, and the fitting results can be used with confidence. The results of fitting the model showed that the path of the causal conditions to the central phenomenon, the paths of the central phenomenon, the background conditions, and the intervening conditions to the strategies and the path of the strategies to the outcomes were significant, as well as the intervening conditions, the background conditions and the central category of the crowdsourcing model in the formulation. The open strategy has an indirect effect on the consequences, and the causal conditions have an indirect effect on the strategies and consequences.

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