A Participative Process of Strategy-Making and Firm Performance in Iranian Pharmaceutical Companies

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Abstract

Pharmaceutical companies are regarded as principal contributors to national economies all over the world owing to their substantial assistance to public health system; GDP, employment, and market growth. Consequently, pharmaceutical managers must take the necessary steps to improve strategy-making and firm performance. This study investigates the relationship between four conventional modes of strategy-making process and performance in pharmaceutical companies in Iran. This paper argues that small or knowledge-based pharmaceutical companies, similar to large pharmaceutical companies, place differing emphasis on strategy-making and could apply different approaches to strategy-making. Furthermore, the present research offers an explanation of the nature of these processes in pharmaceutical companies and hypothesizes how they are related to firm performance. It then describes the results of an empirical study on the strategy-making processes of pharmaceutical companies in Iran. Analysis of the data obtained from 125 pharmaceutical companies indicates that participative approaches to strategy-making exist in these pharmaceutical companies and could have a significant and strong relationship with firm performance.

Keywords: Pharmaceutical companies, Strategy-making, Participative mode, Firm performance, Knowledge-based pharmaceutical companies, Rotated factor analysis

1. Introduction

Strategy-making processes, including adaptive, entrepreneurial, generative, and symbolic modes have been described over the past four decades by Mintzberg and Hart [1, 2]. The majority of authors such as Hart agree that the rational mode of strategy-making acts as a very important and critical mode in firms.
Strategy-making is the recognition of the rational mode as the predominant strategy-making process found in firms with less than 100 employees [3, 4]. While a number of studies suggest that the rational mode may not be relevant to firms at all, others indicate that such modes as participative strategy-making may be particularly more suitable, due to their efficiency, for firms. In participative strategy-making (PSM), employers allow or encourage employees to share or participate in organizational strategy-making [5]. As Verreyne M.L. states, "participative management (PM) involves the formulation and implementation of the major goals and is characterized by many concepts, including shared leadership, employee empowerment, employee involvement, participative decision-making, dispersed leadership, open-book management, or industrial democracy" [6]. PM is important in cases where an intended strategy may be beneficial to all. These cases encompass strategies for the environment, health care, animal protection, and other similar cases. Participative strategy-making can have a wide array of organizational benefits, including job satisfaction, organizational commitment, perceived organizational support, organizational citizenship behavior, labor-management relations, job performance and organizational performance, and organizational profits. On the other hand, PSM can lead to many possible negative outcomes such as high costs, inefficiency, indecisiveness, and incompetence [7]. Few studies have investigated and developed participative strategy-making (PSM) in firms [8]. The majority of these studies have focused on small or large firms [1]. Investigating PSM can play a vital role in firms that have not yet acquired strategy-making skills, especially small firms [3]. It is worth mentioning that employing different approaches to strategy-making results in differences in the performance of small firms. In general, most participative strategy-making studies have been conducted in companies that are active in the field of health care, but pharmaceutical companies have not been addressed yet. Generally, the research tends to be prescriptive and focuses on discovering the degree to which formal strategy-making processes are employed in small firms [9]. Due to their significant contribution to public health system, GDP, employment, and market growth, pharmaceutical companies are viewed worldwide as major contributors to national economies and the industry sectors in which they operate [10]. Pharmaceutical managers (small or large companies) and other knowledge-based pharmaceutical companies should pay special attention to developing strategy-making and infrastructure in order to boost their performance [11]. The importance of strategy-making in pharmaceutical companies and the lack of research in the field of strategy-making in the pharmaceutical companies confirm the necessity of this research.

The latent question is whether or not approaches to strategy-making in pharmaceutical companies (small, large, and
knowledge-based companies) would be similar. In small firms, strategy-making processes have been described as special, frequently unique [12, 13], sporadic, and reactive [3]. Hence, strategy-making processes are developed in large firms. On the other hand, the basis of knowledge in pharmaceutical companies is developed internally through research and development or acquired from external sources. This basis is vigorously protected by intellectual property rights (IPR). In total, firm managers expect that positive impacts on strategy-making would enhance performance [14]. It is worth noting that strategy-making is a common thread in small, large, and knowledge-based pharmaceutical companies. It can be argued that strategy-making is crucial, and firms can considerably improve their performance through strategy-making [15].

This study aims to confirm the existence of participative strategy-making and performance in pharmaceutical companies. To that end, a literature review must be provided to the notion of strategy-making, particularly participative strategy-making. Thereafter, this study is conducted in two phases. In the first phase, the hypothesis that participative strategy-making is employed by pharmaceutical companies is investigated. In the second phase, the key relationship between participative strategy-making and firm performance is explored. Moreover, findings addressing these two hypotheses are presented. The paper concludes with a discussion in which the implications for researchers and managers of small firm are considered.

1.1. Literate Review to Strategy-Making

Strategic management involves the relevant concepts of strategic planning and thinking. Strategic management process is a method by which company’s top management, on behalf of owners, conceives of and implements a strategy that can lead to a sustainable competitive advantage [16]. Strategy-making mainly consists of three parts: vision or mission setting, objective determination or definition, and strategic choice. Several definitions have been provided for strategy-making, among which the following definition is more to the point: ‘a process that involves the range of activities that firms engage in to formulate and enact their strategic mission and goals’ [17]. The concept of strategy-making process was first examined by Henry Mintzberg (over the period of 1960-1970) [1]. Mintzberg has introduced three such approaches which are often called the three modes of strategy-making (rational, adaptive, and entrepreneurial modes). Other researchers have described additional approaches such as symbolic and participative modes to strategy-making [2, 4]. They have typically presented their modes of strategy-making in the form of typologies that include a number of alternative approaches that are available to firms. Few of these typologies comment, in a significant way, on the strategy-making processes applied by small firms. Firms usually employ a variety of approaches during the process of strategy-making and different processes in different situations. Several typologies or approaches to strategy-making have been described in the literature. A great number of these approaches
have been developed in large firms. However, few researchers have investigated the dimensions of strategy-making processes in small firms. Due to this gap in the literature, this paper studies a typology which focuses specifically on the participative mode of strategy-making. This section attempts to explore the participative typology of strategy-making for modes relevant to pharmaceutical companies and examines the relationship between participative strategy-making and firm performance. At the end, a typology of strategy-making process for pharmaceutical companies is provided in the form of Hypothesis 1.

1.2. Participative Strategy-Making Process

Various strategies-making typologies, including rational, adaptive, participative, simplistic, command, and entrepreneurial have been found. In what follows, we aim to describe the participative mode of strategy-making. Participative strategy-making can be defined as a mode of strategy-making in which strategies result from the attention paid to stakeholders’ various views in different stages of the strategy-making process. In some organizations, the interaction between mostly internal stakeholders leads to political activities. The participative mode depends on a high level of involvement in strategy-making and is often achieved through political processes; in addition, the level of participation may also depend on the type of decision being made [18].

Participative approaches to strategy-making process have only received attention in the literature in the last few years [2], while employee participation has been highly regarded throughout this period [19-21]. Among the stakeholders, not including top-level managers, employees’ viewpoints have an important role in the strategy-making process. Thus far, there have been few articles focusing on the explicit and effective role of employees in the strategy-making process. In point of fact, it is generally recognized that participation in the strategy-making process can be undertaken by employees, managers [22], shareholders or corporate boards [23], or other stakeholders. This paper defines participative strategy-making as a mode of strategy-making in which strategies are the result of the inclusion of stakeholders firms engage in to formulate and enact various views in different stages of the strategy-making process.

1.3. Participative Strategy-Making In Firms

The question is whether or not the typologies of strategy-making employed for large firms can be generalized to other firms [24]. Strategy-making processes in smaller firms can be described as special and frequently unique [12]. Generally, strategy-making is more centralized in smaller firms than that in larger firms, again due to the relatively fewer number of managers found in small firms. In smaller firms, strategic planning is a less formal and almost continuous process. Robinson and Pearce characterize strategic planning in small firms as informal, unstructured, irregular, incomprehensive, short-term, and reactive [3],
probably because the correlates of performance differ between large and small firms [25]. This is particularly proven in the case of firms that employ fewer than 100 full-time equivalent employees, as is the case with New Zealand small and medium enterprise firms (SMEs) [26].

Several authors have commented on the nature of the participative strategy-making processes employed by firms. Analysis of the data of SMEs in New Zealand indicates that participative approaches to strategy-making exist in these SMEs and may have a significant impact on them. However, the importance and impact of these relationships will change when accounting for the effects of industry life cycle stage [27]. This fact, coupled with findings that small firms do engage in this approach to strategy-making [28], leads to the hypothesis that:

A synthesis of Dess, Lumpkin, and Covin’s [4] approach to hypothesize the strategy-making processes used by firms suggests that:

H1: Participative strategy-making would be an important mode of strategy-making in pharmaceutical companies.

1.4. Participative Strategy-Making and Firm Performance

Participative approaches to strategy-making could have a significant effect on firm performance. Few studies have reported the effect of participative strategy-making processes on firm performance. Some researches indicate a positive relationship between strategy-making and formal planners achieving higher performance. For example, Wooldridge and Floyd showed that participation in strategy-making in large firms is associated with improved firm performance [29]. We believe that the improvement in firm performance is a result of one or two paths: involvement in path A leads to improved decision-making, superior strategies, and, therefore, improved performance; otherwise, involvement in path B leads to higher strategic consensus, improved implementation, and, therefore, improved performance. This positive impact is confirmed by Nutt who found that participation is used in less than one of five decisions on average, but when it is used, it is very effective [30]. This effectiveness is dependent on the degree of involvement as well as the role of the participants. Parnell and Crandell also demonstrated that participative decision-making techniques are capable of improving decision quality, and, therefore, organizational effectiveness [31]. In small firm setting, these results are supported by van Gelderen et al. [28]. Accordingly, it is hypothesized that:

H2: Pharmaceutical companies that employ the participative modes of strategy-making would have a better performance than those employing other modes of strategy-making.

2. Research Methods

Initially, an empirical study was conducted to test both hypotheses. A questionnaire was designed to elicit the four modes (participative, entrepreneurial, adaptive, and simplistic) of strategy-making and firm performance. In this section, a brief overview
of the survey instrument and data-collection and analysis is provided.

2.1. Measurement Instrument

A questionnaire was constructed in order to collect information for the scales described below. Although a variety of contingency variables were also included in the questionnaire, the present study focused only on the aspects of strategy-making and firm performance. Strategy-making mode was measured with the Hart’s scale (1991) as modified by Dess et al. (1997) [2, 4] (Table 1). Their scale consists of 25 items and is scored on a 5-point Likert scale (1. Strongly disagree, 2. Disagree, 3. Neither agrees nor disagrees, 4. Agree, 5. Strongly agree).

2.2. Data Collection

The questionnaire was developed based on the literature review and experts’ guidelines on their field. It was mailed to 125 Pharmaceutical companies in Iran which were selected randomly from the stock database. The pharmaceutical companies (small, large, and knowledge-based companies) were active in the field of drug manufacturing (chemical, herbal, and biological). A total of 95 usable questionnaires were returned, entered into an Excel datasheet, and analyzed.

2.3. Data-Analysis

The data were investigated to ensure that they would satisfy the underlying assumptions for parametric testing. It was concluded that the assumptions for random sampling, normality, linearity, and homoscedasticity were satisfied. The measurement instrument was also tested for reliability and validity. Further data analyses were conducted. First, a factor analysis was conducted, using principle factors with promax rotation of the strategy-making scale to investigate the existence of the participative mode of strategy-making [2], as stated in Hypothesis 1. Principal axis factoring was employed to extract factors by applying a promax rotation to allow for correlations between the factors. Second, Pearson’s correlations were performed to test Hypothesis 2. Pearson’s correlation coefficient is a measure of the strength of the association between the two variables (strategy-making and firm performance).

3. Results and Discussion

In this section, the results are reported according to the two hypotheses formulated in this article. Hypothesis 1 was examined by Varimax rotated factor analysis (Table 1) following the method set out by Dess et al. [2]. The resulting four factors revealed that these factors still describe constructs similar to those defined by Dess et al. [2], namely participative (the mode of this article), entrepreneurial, simplistic, and adaptive strategy-making. All of the variables have significant factor loadings (≥0.30) [32].

Four results are obtained from the findings presented in this paper.

The first result is the ‘Participative SM’ (strategy-making) factor which shows a very idyllic picture of a firm in which a large amount of cooperation, teamwork, and values
Table 1. Results of the rotated factor analysis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1 (PSM) Participative SM</th>
<th>Factor 2 (ESM) Entrepreneurial SM</th>
<th>Factor 3 (ASM) Adaptive SM</th>
<th>Factor 4 (SSM) Simplistic SM</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is a clear blueprint for this organization’s strategy that was set some time ago and has changed very little</td>
<td>0.376</td>
<td></td>
<td></td>
<td>0.319</td>
</tr>
<tr>
<td>Strategy for this organization is primarily provided by the owner/manager/chief executive officer and a few of his/her fellow top managers/executives</td>
<td></td>
<td></td>
<td></td>
<td>0.532</td>
</tr>
<tr>
<td>Our organization continually adapts by making appropriate changes in its strategy based upon feedback from the market place</td>
<td></td>
<td></td>
<td>0.660</td>
<td></td>
</tr>
<tr>
<td>Business planning in our organization is ongoing and involves everyone in the process to some degree</td>
<td></td>
<td></td>
<td>0.523</td>
<td></td>
</tr>
<tr>
<td>We spend as much time as possible with customers and other key stakeholders, listening to what they have to say about the organization</td>
<td></td>
<td></td>
<td>0.676</td>
<td></td>
</tr>
<tr>
<td>Our business and product planning process involves various stakeholders such as customers, suppliers, and providers of funds</td>
<td></td>
<td></td>
<td>0.709</td>
<td></td>
</tr>
<tr>
<td>Business and product planning in this organization is largely an internal process that seeks to contain the amount of information leading to the outside</td>
<td></td>
<td></td>
<td></td>
<td>-0.658</td>
</tr>
<tr>
<td>There is a clear and consistent set of values in this organization that governs the way we do business</td>
<td>0.746</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This organization has a characteristic ‘management style’ and a common set of management practices</td>
<td>0.555</td>
<td></td>
<td>0.400</td>
<td></td>
</tr>
<tr>
<td>Decisions in this organization are usually made at the level where the most accurate information is available, even if it is not top management</td>
<td></td>
<td></td>
<td>0.598</td>
<td></td>
</tr>
<tr>
<td>Most people in this organization have input into the decisions that affect them</td>
<td></td>
<td></td>
<td>0.543</td>
<td></td>
</tr>
<tr>
<td>Most people in this organization are willing to take risks</td>
<td></td>
<td></td>
<td>0.776</td>
<td></td>
</tr>
<tr>
<td>Most people in this organization are treated equally, regardless of rank or status</td>
<td>0.547</td>
<td></td>
<td>0.409</td>
<td></td>
</tr>
<tr>
<td>People in this organization are very dynamic and entrepreneurial</td>
<td></td>
<td></td>
<td></td>
<td>0.690</td>
</tr>
<tr>
<td>Conflict in this organization is often suppressed rather than dealt with openly</td>
<td>0.502</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific work roles and expectations are clearly defined in this organization</td>
<td>0.488</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
drive the strategy-making process. It includes aspects such as similar values, set practices, decision inputs from employees, equality, cooperation, teamwork, consensus, and a negative conflict suppression. Participative SM in this context was, therefore, considered as internally directed participation.

The second result is ‘Entrepreneurial SM’ factor that identifies one approach by which employees can be involved in the strategy-making process; actually, this mode is the opposite of the command mode. In this mode, employees generate ideas and consequently influence the strategic direction of the firm. This mode implies independent behavior by innovative employees who are encouraged and sponsored by top managers to experiment and take risks [18]. This mode includes aspects such as risk-taking, a dynamic process, and experimentation. This study argues that Dess et al. labeled this particular factor incorrectly, since the command mode that should form a part of the entrepreneurial mode [2] is actually loaded negatively in the study conducted by Dess et al.

The third result is ‘Adaptive SM’ factor indicating that adaptation in small firms is driven by the firm’s responsiveness to its stakeholders. Therefore, the firms exhibiting this mode adapt themselves to suggestions from, for example, customers and suppliers. These suggestions influence the strategy of the firm. This mode also includes aspects such as adaptation, ongoing process. Adaptive SMP in this context was externally directed participation and adaptation.

The fourth result is ‘Simplistic SM’ factor which is characterized by ‘single-mindedness, narrowly construed decision-making, and excessive attention to a specific internal strength or external opportunity [2]. This factor includes aspects such as a blueprint of the existing strategies, top-down behavior, an internal process, set practices, and the fact that

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-operation and collaboration across functional roles are actively encouraged</td>
<td>0.621</td>
</tr>
<tr>
<td>People with unpopular views are given a fair hearing in this organization</td>
<td>0.545</td>
</tr>
<tr>
<td>Working in this organization is like being part of a team</td>
<td>0.689</td>
</tr>
<tr>
<td>Failure is something to be avoided in this organization at all cost</td>
<td>-0.501</td>
</tr>
<tr>
<td>People are encouraged to experiment in this organization so as to identify new, more innovative approaches or products</td>
<td>0.476</td>
</tr>
<tr>
<td>Long-term potential is valued over short-term performance in this organization</td>
<td>0.523</td>
</tr>
<tr>
<td>Long-term potential is valued over short-term performance in this organization</td>
<td>0.567</td>
</tr>
<tr>
<td>Decisions concerning business strategy are made on a consensus basis, involving people from different departments or areas in the organization</td>
<td>0.508</td>
</tr>
<tr>
<td>The chief executive officer of our organization insists on placing his/her mark on virtually every major initiative</td>
<td>0.590</td>
</tr>
</tbody>
</table>

Note: Items are from Dess, et al (1997: 685-686)
the CEO makes decisions. At this point, it can be concluded that the scale is factorable and that participative strategy-making is employed by pharmaceutical industry, supporting Hypothesis 1.

3.1. the Relationship between Participative Strategy-Making and Firm Performance

Pearson’s correlation coefficient was utilized to explore the relationships between the modes of strategy-making and firm performance. These correlations measure ‘how well the relationship between two interval variables can be described by a straight line’ [33]. Furthermore, Pearson’s product moment correlations were used to investigate whether or not linear relationships exist. In this study, the correlations investigated were tested for significance by using two-tailed tests and assuming a normal distribution for each variable. This means that direction cannot be established for the alternative hypothesis. A significant positive relationship was found between firm performance and the participative mode of strategy-making (Table 2). The relationship between the adaptive and simplistic modes of strategy-making and firm performance showed a lower, yet statistically significant, correlation. Although these correlations are weak (r < 0.3), they are interesting. However, only was a weak relationship found between firm performance and the entrepreneurial mode of strategy-making. Thus, this result supports Hypothesis 2.

Pharmaceutical companies use participative, adaptive, simplistic, and entrepreneurial modes of strategy-making processes; however, it is more important to investigate the effect of stakeholders’ involvement in strategy-making. This paper showed that the participative strategy-making (PSM) is a suitable approach applied by pharmaceutical companies. Exploratory factor analysis revealed that the simplistic, adaptive, entrepreneurial, and participative modes of strategy-making are important modes of strategy-making that Iranian pharmaceutical companies exhibit. In particular, the participative mode identified by the data shows an idyllic picture of a firm in which a large amount of cooperation, teamwork, and values drive the strategy-making process. This indicates a slight deviation from the participative mode of strategy-making recommended in the literature review. Rather than being driven by coercive politics [34], the participative mode in this study is driven by values or culture. It appears likely that a convolution of size and national firm may contribute to the strong trend towards involvement and participation in strategy-making processes. The use of participative mode of strategy-making has an effective role in advancing the goals of firms, especially pharmaceutical firms. An investigation of the literature [30] on the possible relationship between all four modes of strategy-making and firm performance in previous studies suggests that the participative approach is likely to be associated with high performance in pharmaceutical firms. This study suggests that participation either leads to improving decision-making through consultation or
improved implementation. Results showed that adaptive strategy-making and participative strategy-making contribute directly to firm performance; additionally, adaptive strategy-making contributes to firm performance indirectly by affecting participative strategy-making. This is because it can be argued that strategic decisions may lead to more impetus when they are implemented, increasing the likelihood of their success. It is noteworthy that this study does not suggest that participative strategy-making necessarily leads to success. Nevertheless, it is also possible that more successful pharmaceutical industries are more likely to delegate decision-making to the most appropriate levels of the pharmaceutical industry.

It is important to note that the present research faced a number of limitations to the strategy-making modes in the measurement model suggested. These modes are comprehensive, but certainly not exhaustive. The results of the data analysis revealed that some strategy-making modes are more strongly related to firm performance. The data cannot indicate that firms not performing well are not at all engaged in strategy-making. Another limitation we faced was that the data were collected from pharmaceutical companies in one country, namely Iran; however, it can be argued that in small firms, the manager of the firm should have sufficient knowledge about organizational processes to complete such a questionnaire. Further studies in other settings or countries are required to confirm the results.

4. Conclusion

This study offered several implications. More importantly, it indicated clearly that the approach to strategy-making adopted by a pharmaceutical company can have a significant effect on its performance; furthermore, it was found that managers of pharmaceutical companies should, therefore, pay close attention to this issue. We noticed that participative strategy-making is an important mode of strategy-making employed by pharmaceutical companies. When examining this mode more closely, we discovered that participative strategy-making does not encompass the aspects of politics, but it is driven by the values of the firm. In effect, this means that the informality of the culture existing in many small firms makes it natural for these firms to engage in participative strategy-making. Moreover, decisions involve internal stakeholders, mostly employees, rather than external stakeholders, as might be expected. Employees can be at any level of the firm, suggesting that decisions are made at the most appropriate level. This ensures that a

<table>
<thead>
<tr>
<th>Performance index</th>
<th>Pearson’s correlation coefficient</th>
<th>Significance (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simplistic SM</td>
<td>0.287</td>
<td>0.01</td>
</tr>
<tr>
<td>Adaptive SM</td>
<td>0.289</td>
<td>0.01</td>
</tr>
<tr>
<td>Entrepreneurial SM</td>
<td>0.119</td>
<td>0.03</td>
</tr>
<tr>
<td>Participative SM</td>
<td>0.374</td>
<td>0.05</td>
</tr>
</tbody>
</table>
more considered decision is made, affecting firm performance positively. This comment leads to the second conclusion: participative strategy-making is significantly related to firm performance. This suggests that the involvement of employees in the strategy-making process is a suitable way for pharmaceutical companies to ensure that the decisions resulting from the process will improve the competitive position of the firm.

We also found that SME managers concerned with the development of the strategy-making processes in their firms can expect little benefit from employing highly rational processes such as those taught in most business schools. Instead, small firms should choose to concentrate on exploiting the advantages that stem from their small size so that they can benefit from aspects such as involving employees in the strategy-making process. The strategy-making modes suggested in this study are comprehensive, but certainly not exhaustive.

In addition, this study demonstrated that the maturity of the company will change the nature of the optimum strategy-making process. The strategy-making process becomes less important in new companies but more important in mature companies, where a greater number of firms are jockeying for position. Furthermore, we also found that mature firms will not benefit from allowing a participative mode to invade their strategy-making. However, in the case of small and knowledge-based pharmaceutical companies, blueprints and a top-down strategic management style could actually promote the development of ongoing adaptive stakeholder-centered strategy-making. Finally, it appeared that the involvement of internal and external stakeholders in strategy-making will improve the performance of pharmaceutical companies. However, in the case of growing pharmaceutical companies, the internal stakeholders play a more important role, while the external stakeholders are crucial for more mature firms.

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