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Interaction among intra-organizational factors effective in successful strategy execution

An analytical view

Mostafa Safdari Ranjbar and Mohsen Akbarpour Shirazi
Department of Industrial Engineering and Management Systems, Amirkabir University of Technology, Tehran, Islamic Republic of Iran, and
Mojtaba Lashkar Blooki
Department of Management and Economy, Sharif University of Technology, Tehran, Islamic Republic of Iran

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Abstract

Purpose – The purpose of this paper is to identify the intra-organizational factors effective in a successful strategy implementation, measure the interaction intensity, analyze relation patterns among those factors, and lastly, prioritize the factors according to the level of importance and effect in the success of a strategy implementation.

Design/methodology/approach – A review of the literature produced 13 key intra-organizational factors involved in successful strategy implementation. The factors were then prioritized and the interaction among them was identified using interpretive structural modelling (ISM). DEMATEL was employed to quantitatively calculate the importance, intensity and effect in the interaction among the factors. Finally, combining both the aforementioned methods an integrated ISM-DEMATEL model was devised through which the factors were prioritized while the importance, intensity and effect of each factor were quantitatively calculated.

Findings – Prioritization and establishing relations and interactions among the identified factors by ISM; determining the priority of each factor and their intensity of effect and interaction on a quantitative basis through DEMATEL method and developing the integrated model of ISM-DEMATEL for intra-organizational factors effective in successful strategy implementation.

Research limitations/implications – Due to time limitation, the hybrid model could not be practically applied to any organizations or businesses and in this research, only 12 experts were consulted to construct the model. If the experts involved were increased both quantitatively and qualitatively no doubt the final model would be upheld.

Practical implications – Managers who are involved in strategy implementation or who intend to enter this phase are advised to apply the integrated ISM-DEMATEL model that presented in this paper in order to obtain good perspective about interaction and prioritization among the intra-organizational factors effective in strategy implementation success.

Originality/value – Identification of 13 key intra-organizational factors effective in successful strategy execution, by studying through the literature; prioritization and establishing relations and interactions among the identified factors by ISM; determining the priority of each factor and their intensity of effect and interaction on a quantitative basis through DEMATEL method; developing the integrated model of ISM-DEMATEL for intra-organizational factors effective in successful strategy execution; improving the integrated model through ISM by applying the findings obtained through DEMATEL.

Keywords Strategy implementation, Interpretive structural modelling, DEMATEL, Integrated ISM-DEMATEL model, Intra-organizational factors

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Introduction

Larry Bossidy and Ram Charan argue that "strategies most often fail because they aren't executed well. Things that are supposed to happen don't happen" (Slater *et al.*, 2010). To many organization leaders, in today's rapidly changing environment although discretion to adopt the right strategy is the key to an organization's survival, strategy implementation and implementation is yet far more a vital issue. Strategy implementation is important because failure to carry out strategy can render opportunities lost. Moreover, lack of implementation creates problems in maintaining priorities and reaching organizational goals. Given these, the strategy implementation task is commonly the most complicated and time-consuming part of strategic, management (Bell *et al.*, 2010). A key cause for missing strategy goals is that leaders do not invest the same amount of time, energy and resources in managing the implementation of the strategy as they do in setting the strategy. They also do not realize that managing strategy implementation requires well-orchestrated management processes and that they need to go beyond the routine course of business processes to make it happen. Therefore, in order for companies and business entities to reach the audacious ambitions set out for their strategies, they need to thoughtfully manage the way the strategy is to be implemented (Getz and Lee, 2011).

Evidence strongly suggests that strategy implementation has been increasingly turning to a central challenge to managers and organizations in recent decades. There is a vast spectrum of interacting factors involved in a strategic success or failure ranging from human agent down to systems and mechanisms applied in strategy implementation process (Li *et al.*, 2008). For example, Alamsjah (2011) listed the following factors as important dimensions in strategy implementation: degree of uncertainty, clarity of strategy, organizational structure, corporate culture, CEO and top management involvement, people's competencies and commitment, knowledge management, managing change, performance management, communication, implementation plan. Jiang and Carpenter (2013) also identified resource allocation, communication, operational process, cooperation and coordination, organizational culture, resistance to change as critical issues on strategy implementation in internationalization of higher education.

Regarding the abovementioned facts, to enhance the probability of a successful strategy implementation it seems absolutely necessary to identify and analyze the most important of the factors effective in strategy implementation in terms of the relations and interactions among them. The current research is meant to identify intra-organizational factors effective in a successful strategy implementation, measure the interaction intensity, study relation pattern among those factors and prioritize the factors according to the level of importance and effect in the success of a strategy implementation. When we talk about successful strategy implementation we refer to a situation where there is suitable connection between strategic priorities and operational activities, the managers and employees understand the essence and importance of the strategy, there is good alignment between strategy and organizational structure, culture and systems, key resources are appropriately allocated to strategic priorities, there is good consensus on strategic issues among the managers and employees, the organization people have commitment to the executing of strategies, and lastly, the organization can enhance its capabilities and competencies in order to obtain competitive advantages as well as a considerable status among its competitors and in the market.

Methodologically, a number of intra-organizational factors effective in successful strategy implementation were identified and categorized into 13 groups, each group labelled with a key intra-organizational factor. The factors and the interaction among them were then prioritized and identified using Interpretive Structural Modelling (ISM). DEMATEL method was applied to calculate the level of importance and interaction intensity on a quantitative basis. At the end, integrating the results obtained through both ISM and DEMATEL, an ISM-DEMATEL modelling was created whereby factors effective in successful strategy implementation were prioritized, the interaction form and relation pattern among them were established and the level of importance of each factor as well as the interaction intensity among them were determined.

Strategy implementation

"A brilliant strategy, blockbuster product, or breakthrough technology can put you on the competitive map, but only solid implementation can keep you there" (Neilson *et al.*, 2008). A review of the literature reveals that strategy implementation is an important component of the strategic management process. Research indicates that the ability to implement a strategy is viewed considerably more important than strategy formulation, and that strategy implementation, rather than strategy formulation, is the key to superior organizational performance. However, a well-documented high failure rate of strategy implementation efforts clearly shows that many barriers to effective strategy implementation are on the way (Jooste and Fourie, 2009).

Definitions

Entities whether big or small, for-profit or non-profit, are not very different as far as strategy principles, concepts and compilation tools are concerned. However, the strategy implementation greatly varies when it comes to a company's type and size. The strategy implementation task is commonly the most complicated and time-consuming part of strategic management. In contrast, strategy formulation is primarily an intellectual and creative act involving analysis and synthesis. Implementation is hands-on operation and action-oriented human behavioral activity that calls for executive leadership and key managerial skills. In addition, implementing a new strategy often requires a change in organizational direction and frequently entails a focus on effecting strategic change. Therefore, strategic change often needs a sense of urgency and effective communication. Given all this, it would be no more surprising why more than half of the strategies devised by organizations are never actually implemented (Atkinson, 2006).

In the following we will review some definitions of strategy implementation presented by experts:

- During the implementation phase, strategic decisions need to be executed by dividing them into operational details beside dedication of resources to plans (Laffan, 1983).
- Implementation is a series of interventions concerning organizational structures, key personnel actions, and control systems, designed to control performance with respect to desired ends (Hrebiniak and Joyce, 1984).
- Implementation is the process that turns plans into action assignments and ensures that such assignments are executed in a manner that accomplishes the plan's stated objectives (Kotler, 1984).

- Strategy implementation involves converting strategic options to operational plans (Aaker, 1989).
- Implementation refers to the "how-to-do-it" aspects of marketing. Implementation deals with organizational issues, with the development of specific marketing programs, and with the implementation of programs in the field (Cespedes, 1991).
- Implementation is the managerial interventions that align organizational action with strategic intention. (Floyd and Woolridge, 1992).
- Strategy implementation is an stepwise implementation of diverse activities which in reality form a compiled strategy (Singh, 1998).
- Strategy implementation is an integral component of the strategic management process and is viewed as the process that turns the formulated strategy into a series of actions and then results to ensure that the vision, mission, strategy and strategic objectives of the organization are successfully achieved as planned (Thompson and Strickland, 2003).
- Strategy implementation is a replicable process of the implementation of policies, plans and objectives which allows a company to utilize its resources to obtain advantage from existing opportunities in a competitive environment (Harrington, 2006).
- Implementation is operationally defined as those senior-level leadership behaviors and activities that will transform a working plan into a concrete reality (Schaap, 2006).

Factors effective in strategy implementation

In this study in order to identify the effective factors on strategy implementation, 30 studies and papers were reviewed. These studies comprise both empirical (Olson *et al.*, 2005; Hrebiniak, 2006; Brenes *et al.*, 2008) and theoretical (Noble, 1999) cases. To choose papers for inclusion in our analysis, first we selected those containing the keywords "strategy implementation" or "strategy execution". We have also included articles which treat strategy implementation as one of the major subjects even if their title or keywords did not include the terms "strategy implementation" or "strategy execution." And the end, to finalize our selection, we checked whether the articles explicitly discuss factors impeding or enabling strategy implementation success.

Strategy implementation as a key challenge to the leaders of modern organizations has various factors affecting it. These factors may be categorized from different perspectives, one being in terms of barrier/driver role in strategy implementation process. That is, does a factor contribute to the success or the failure of a strategy implementation? Another basis for categorization would be whether or not a factor is under the control of the organization. In other words, is a factor intra or extra-organizational? Table I shows some of the factors effective in strategy implementation from a number of scholar views. As is seen, these factors have been studied from controllability by the organization and type of effect in strategy implementation process.

As Table I suggests, out of researches carried out, 23 deals with intra-organizational factors effective in a successful strategy implementation, compared to five which have focussed on those effective in its failure. Interestingly enough, no study is seen to have exclusively dealt with extra-organizational factors effective in successful or unsuccessful strategy implementation. Only two studies have considered a combination of intra- and extra-organizational factors. It is no difficult to see that intra-organizational

No.	Researcher	Factors effective in strategy implementation	Driver/barrier
1	Laffan (1983)	Proper executive methods and tactics; the key role of resources in strategy implementation	Driver factors
2	Wernham (1985)	Top management's support; understanding individual and organizational values; availability of resources	Driver factors
3	Badovick and Beatty (1989)	Commitment to compiled strategy; generality and comprehensiveness of common organizational values	Driver factors
4	Govindarajan (1988)	Characteristic traits of managers; organizational structure aligned with strategy; proper control systems	Driver factors
5	Johnson and Frohman (1989)	Making available the data needed by individuals and divisions; commitment to the compiled strategy	Driver factors
6	Wooldridge and Floyd (1990)	Involving individuals in strategy compilation process; consensus on and commitment to the strategies	Driver factors
7	Cespedes (1991)	Proper tactics and methods for strategy implementation; role of resources in strategy implementation	Driver factors
8	Connors and Romberg (1991)	The feeling that info is not supplied by top management to intermediate managers; the influence of organizational relations on strategy implementation; manager's tendency to not delegate power, authority and decision-making; managers feeling their vested interests are jeopardized	Barrier factors
9	Simkin (1996)	Commitment to the compiled strategy; proper organizational structure; training and motivation of employees	Driver factors
10	Lorange (1998)	Poor culture of growth in the organization; high organizational complexity; lack of the sense of necessity and urgency among members and inadequate rivalry	Barrier factors
11	Noble (1999)	Strong organizational relations; goals aligned with strategies; organizational structure harmonious with the strategy; effective leadership; motivational factors in implementation phase	Driver factors
12	Kaplan and Norton (2000)	Unavailability of required resources; poor commitment of management; inconformity of employees hindering strategy promotion	Barrier factors
13	Beer and Eisenstat (2000)	Top-to-down management system or the policy of non-interference by top management in implementation phase; ambiguous strategy and conflicting priorities; ineffective top management; poor vertical relations; poor coordination among businesses; inadequate leadership skills	Barrier factors
14	Heracleous (2000)	No commitment to the complied strategy; resistance by intermediate managers against strategy implementation	Barrier factors
15	Okumus (2001)	Strategy compilation; environmental trust; harmonious organizational structure; strong relations; allocation of required resources; people involved in implementation process; right control and monitoring of strategy implementation	Driver factors

(*continued*)

Table I.
Factors effective in strategy implementation process

No.	Researcher	Factors effective in strategy implementation	Driver/barrier
16	Aaltonen and Ikavalko (2002)	Strong organizational relations; identifying and supporting strategic players; structures and systems aligned with strategy	Driver factors
17	Heide *et al.* (2002)	Proper information and communication systems; resource allocation; organizational learning; formal organizational structure including control systems, effective management of employees; pro-strategy organizational culture	Driver factors
18	Dobni (2003)	Strong relations; alignment and coordination of strategy with plans; supportive cultural context; agreement among individuals	Driver factors
19	Chatman and Cha (2003)	Proportion between organization's structure and the strategy; shared values; attitudes and behaviors suitable for strategy	Driver factors
20	Homburg *et al.* (2004)	Suitable style of leadership; proper organizational culture; adequate skills of employees	Driver factors
21	Mankins and Steele (2005)	Simplicity and objectivity of the compiled strategy; adopting a shared language; discussion about the array of resources at the introductory stages; transparent prioritization; ongoing monitoring of performance and developing operational capacities	Driver factors
22	Higgins (2005)	Structure of strategy and objectives; resources required for implementation	Driver factors
23	Dietrich and Lehtonen (2005)	Coordination among goals of projects and strategies of the organization; proportion between resource allocation to projects and organizational strategies	Driver factors
24	Hrebiniak (2006)	Ineffective change management or not overcoming the internal resistance against change; endeavor to execute strategies which are opposed to power structure; uneven and inadequate distribution of information amongst individuals and divisions responsible for strategy implementation; vague strategies; lack of sense of commitment and belonging to strategy among key employees; lack of a model to direct operational activities; not understanding the role of organizational structure and plan in implementation; inability to create agreement on implementation states and proceedings; inadequate financial resources for strategy implementation; lack of or improper incentives and lack of top management's support to strategy implementation.	Barrier factors
25	Schaap (2006)	Proportion of different strategies with proper structures; proportion between culture and organizational strategy	Driver factors
26	Hitt *et al.* (2007)	Determining strategic direction; Establishing balanced organizational controls; Effectively managing the organization's resource portfolio; Sustaining an effective organizational culture; Emphasizing ethical practices	Driver factors

Table I. (*continued*)

No.	Researcher	Factors effective in strategy implementation	Driver/barrier
27	Brenes *et al.* (2008)	Systematic implementation; controlling and following up strategy implementation; effective leadership and management; motivated and proper managing director and employees; managing change process	Driver factors
28	Crittenden and Crittenden (2008)	Effective interaction and communication; executive actions aligned with strategy; proper executive plans; optimized resource allocation; organizational systems aligned with strategy; monitoring and implementation control	Driver factors
29	Ogbeide and Harrington (2011)	Top management involvement and direct interaction among intermediate managers, lower-rank managers and employees; proper leadership style	Driver factors
30	Alamsjah (2011)	Clarity of strategy, organizational structure, corporate culture, CEO and top management involvement, People's competencies and commitment, Knowledge management, Managing change, Performance management, Communication, Implementation plan	Driver factors

Table I.

factors hold paramount importance in successful strategy implementation to researchers which is why the current research follows the example in dealing with interaction among intra-organizational factors.

Identifying intra-organizational factors effective in a successful strategy implementation
To identify the most important intra-organizational factors effective in a successful strategy implementation around 30 research works were reviewed whereby a large number of factors effective in success and failure of strategy implementations were identified. As the current research is meant to study and analyze intra-organizational factors effective in a successful strategy implementation, there was initially produced a mother list of 76 intra-organizational factors effective in successful strategy implementations out of which 48 were selected through a series of omissions and consolidations. The criteria for omitting and consolidating factors were that, the duplications of the factors were omitted, while those factors having same meaning and concept but in different words, were consolidated.

Consequently, 48 factors are tabulated in Table II as "secondary factors." The factors were then divided into 13 groups having been subjected to seven expert views, each group representing a key intra-organizational factor effective in a successful strategy implementation. These factors are titled as "key factors effective in successful strategy implementation." Group of experts that were consulted at this stage included scholars that had more than seven years of academic and empirical experience in strategic management especially in strategy implementation and execution.

Methodology

This section discusses the methodology of data collection and data analysis tools namely ISM, DEMATEL, and lastly an integrated synthesis of both i.e. ISM-DEMATEL.

Data
In this research non-random expert sampling was used to select the group of experts. Therefore, in the first place, 20 academic and industry experts (12 male and eight

No	Key factors	Researchers	Secondary factors
1	Well-defined strategy	Wooldridge and Floyd, (1990), Okumus (2001), Mankins and Steele (2005), Hrebiniak (2006), Alamsjah (2011)	1. Simple, transparent and understandable strategies 2. Strategies aligned with organizational capabilities and merits 3. Strategies consistent with internal and external facts 4. Incorporating opinions and interests of organization's members in strategy compilation 5. Getting members involved in strategy compilation
2	Creating communications and interactions in organization	Johnson and Frohman (1989), Connors and Romberg (1991), Noble (1999), Beer and Eisenstat (2000), Okumus (2001), Heide *et al.* (2002), Critenden and Critenden (2008), Alamsjah (2011)	1. Strong relation among various organizational levels; 2. Strong communication channels 3. Proper dissemination of strategy to various levels of organization 4. Sharing information 5. Shared perception of strategy through info exchange
3	Breaking down strategies to plans and projects	Laffan (1983), Dietrich and Lehtonen (2005), Critenden and Critenden (2008), Alamsjah (2011)	1. Setting quantitative and qualitative goals consistent with strategies 2. Defining executive plans and projects consistent with strategies 3. Defining and assigning duties and activities precisely 4. Prioritization of goals, plans and projects
4	Individuals' commitment to strategy implementation	Johnson and Frohman (1989), Wooldridge and Floyd (1990), Simkin (1996), Kaplan and Norton (2000), Alamsjah (2011)	1. Creating sense of necessity and emergency about strategy among individuals 2. Creating sense of commitment and belonging to strategy 3. Individuals' commitment to defined duties and responsibilities 4. Being loyal to principles and rules of strategy implementation
5	Consensus on strategy	Wooldridge and Floyd, (1990), Hrebiniak (2006)	1. The agreement of maximum number of persons on the strategies 2. Shared perception of strategic decisions and goals 3. Consensus on the importance and necessity of strategy
6	Management capabilities and support at the implementation phase	Hrebiniak and Snow (1982), Wernham (1985), Beer and Eisenstat (2000), Ogbeide and Harrington (2011)	1. Management's overall support to strategy 2. Managerial skills such as planning and organization 3. Preferring organizational interest to personal interest by management 4. Right management of human, financial and information assets

Table II.
Intra-organizational factors effective in successful strategy implementation

(*continued*)

No	Key factors	Researchers	Secondary factors
7	Strategic change leadership in organization	Noble (1999), Brenes *et al.* (2008), Ogbeide and Harrington (2011), Alamsjah (2011)	1. Steering and making consistency at strategy implementation phase 2. Supporting change and evolution in organization 3. Overcoming employees' resistance and convincing them 4. Tackling conflict among individuals and groups 5. Providing requirements and resources necessary for change and evolution 6. Fostering sense of purposefulness and motivation among individuals
8	Organizational structure consistent with strategy	Simkin (1996), Noble (1999), Okumus (2001), Heide *et al.* (2002), Chatman and Cha (2003), Hrebiniak (2006), Alamsjah (2011)	1. Adjusting organizational structure to strategies 2. Proximity between jobs and job description of divisions and individuals, and strategies
9	Operational and logistic systems required for strategy implementation	Aaltonen and Ikavalko (2002), Higgins (2005), Critenden and Critenden (2008)	1. Financial, data, R&D, marketing and sales, production and operational systems required for strategy implementation
10	Organizational culture and values consistent with strategy	Wernham (1985), Lorange (1998), Okumus (2001), Heide *et al.* (2002), Schaap (2006), Hitt *et al.* (2007), Alamsjah (2011)	1. Proximity of organizational sphere with strategy 2. Trust among people in the organization 3. Organizational values aligned with strategy 4. Attitudes and behaviors proportionate to strategy
11	Precise control and monitoring of strategy	Govindarajan (1988), Okumus (2001), Heide *et al.* (2002), Mankins and Steele (2005), Hitt *et al.* (2007), Critenden and Critenden (2008)	1. A mechanism to control and monitor strategy 2. Receiving feedback and learning from experience 3. Ability to spot gap between the status quo and the ideal state 4. Ability to define corrective actions
12	Effective management of employees at implementation phase	Johnson and Frohman (1989), Simkin (1996), Dobni (2003), Higgins (2005), Hrebiniak (2006)	1. Educating and developing employees' abilities 2. Connecting employees' payment system to their performance 3. Involving employees' in decision-making process 4. Motivating employees 5. Raising employees' awareness about importance and necessity of strategy
13	Accessibility of required resources for strategy implementation	Laffan (1983), Wernham (1985), Kaplan and Norton (2000), Hitt *et al.* (2007), Critenden and Critenden (2008)	1. Accessibility of required financial, human, information and technology resources for strategy implementation

Table II.

female) in line with strategy implementation were identified. These experts were all engaged in such strategic management areas as strategy planning, execution and control. They had over than ten years experience in teaching or consulting in the field of strategic management at universities and industries. Coming from rich academic and practical background in strategy implementation was the paramount criteria for selecting the panel of experts. The entire panel held PhD degrees in strategic management and were over 40 years old. Then questionnaires were designed and sent to them whereby 12 completed questionnaires were returned. Therefore the opinions of 12 experts (nine male and three female) were applied to construct the ISM-DEMATEL model. Content validity was used to measure and establish the research's validity. To do so, five experts were consulted in line with the structure of the questionnaire, semantic transparency of definitions and questions and their views were incorporated in the making of the questionnaire. Equivalence tests were applied to study the reliability of the questionnaire. By equivalence test the same set of questions were distributed among two groups and reliability is calculated on the basis of the correlation established among the answers. The correlation of the answers which were computed using SPSS software were 81 and 87 percent for ISM and DEMATEL methods, respectively, both indicating the reliability. There are some studies that have followed approaches similar to the one applied in the current research for data gathering such as Agarwal *et al.* (2008), Lee *et al.* (2010) and Safdary Ranjbar *et al.* (2012) in application of ISM method and Tseng (2009), Hsu (2012) and Cheng *et al.* (2012) in application of DEMATEL method.

Tools

The tools employed in data analysis involve two methods as the following.

ISM

ISM was first introduced by Warfield (1974). The method is applied to identify factors which constitute a subject, problem or system (Warfield, 2005; Sage, 1977). ISM systematizes the complexity among the factors constituting a subject or system. That is to say, it enables to work a plan of relations out of a complexity of massive number of factors (Charan *et al.*, 2008). ISM makes it possible to turn vague, ill-structured and abstract models to transparent, well-structured and useful ones to serve various purposes (Ahuja *et al.*, 2009). Kannan and Haq (2007) used the ISM methodology to find the interaction between attributes and sub-attributes of the vendor selection problem. Diabat and Govindan (2011) with the help of ISM, analyze the drivers affecting the implementation of green supply chain management. Safdary Ranjbar *et al.* (2012) also applied the ISM to analyze the interaction among factors effective on corporate entrepreneurship.

DEMATEL

DEMATEL was invented by Battelle Memorial Association (BMA) in 1971 in Geneva (Gabus and Fontela, 1973). At that time, the tool was used for research and analysis of complex problems (Fontela and Gabus, 1976). DEMATEL is a proper method to design and analysis of the structural model of cause and effect relations among factors of a complex system (Wu and Lee, 2007). DEMATEL applies the graph theory providing for system planning and problem solving on a visual basis. The method assumes factors in a cause and effect dichotomy which facilitates understanding relations among them (Li and Tzeng, 2009). Tsai and Chou (2009) applied DEMATEL to select management system for sustainable development in SMEs. Lee *et al.* (2011) used

DEMATEL to analyze decision-making factors for equity investment. Also, Wu (2012) applied DEMATEL to construct a strategy map for banking institutions.

Introducing the integrated model ISM-DEMATEL

The ISM is applied in order to establish the manner of relation and interaction as well as prioritization of the factors in question, compared with DEMATEL which is meant to prioritize factors and measure their mutual effects on a quantitative basis. However, a weakness of ISM is that it does not provide first a prioritization for the factors of the same level, and second, the intensity and severity of interactions among the factors. Therefore, in the current research it has been tried, integrating both the methods, to introduce a graphical method which lacks the abovementioned shortcomings. Hou and Zhou (2012) used ISM and DEMATEL to study the influence factors of distributed energy system. Yin *et al.* (2012) also applied DEMATEL, ISM and Analytical Network Process (ANP) to analyze key success factors in R&D alliance.

Data analysis and results

This section will deal with data analysis through ISM and DEMATEL models and their integration to create the main model.

Application of ISM

Various steps involved in the ISM technique are illustrated as follows (Safdary Ranjbar *et al.*, 2012).

Structural self-interaction matrix (SSIM)

To create SSIM it is necessary to identify the factors and then study them pair-wise in order to establish the type of relation between them. Here, to make SSIM, having determined the type or relation between each pair, there are used V, A, X, O to show the types of relation among the factors as the following (Table III):

- V: factor i affects factor j but the reverse is not true;
- A: factor i does not affect factor j but the reverse is true;
- X: both the factors mutually affect one another; and
- O: none of the factors affect one another.

Developing reachability matrix

At this stage, the representing letters turn to 0 and 1 based on a series of rules. The rules to convert SSIM to reachability matrix are as the following:

- if (i, j) in SSIM equals V, then (i, j) in reachability matrix equals 1 and (j, i) equals 0;
- if (i, j) in SSIM equals A, then (i, j) in reachability matrix equals 0 and (j, i) equals 1;
- if (i, j) in SSIM equals X, then, (i, j) in reachability matrix equals 1 and (j, i) equals 1; and
- if entry (i, j) in SSIM equals 0, then, (i, j) in reachability matrix equals 0 and (j, i) equals 0.

Based on the abovementioned rules, SSI Matrix is converted to reachability matrix. Once the initial reachability matrix was set up, "transitivity" must be taken into account; and

Factors	13	12	11	10	9	8	7	6	5	4	3	2	1
1. Well-defined strategy	O	O	V	V	O	V	O	V	X	V	V	X	
2. Creating communications and interactions in organization	O	X	X	A	A	A	A	A	V	V	V		
3. Breaking down strategies to plans and projects	O	V	V	O	O	O	A	V	A	O			
4. Individuals' commitment to strategy implementation	O	X	V	A	A	A	A	X	X				
5. Consensus on strategy	O	V	V	A	O	O	A	V					
6. Management capabilities and support at the implementation phase	V	X	V	A	O	A	X						
7. Strategic change leadership in organization	V	V	V	X	V	X							
8. Organizational structure consistent with strategy	V	V	V	A	V								
9. Operational and logistic systems required for strategy implementation	O	X	V	A									
10. Organizational culture and values consistent with strategy	V	V	V										
11. Precise control and monitoring of strategy implementation	A	A											
12. Effective management of employees at implementation phase	A												
13. Accessibility of required resources for strategy implementation													

Table III.
The SSIM of intra-organizational factors effective in successful strategy implementation

in case this feature was missing, it has to be added to the matrix. Having completely established the feature of "transitivity" in the initial reachability matrix, the final reachability matrix is created as shown in Table IV.

Level partitioning of factors

In ISM, the more affecting a factor, the lower its level. In ISM, the effect direction is down-up. In order to level partition the factors, the following concepts need to be defined:

- reachability set for each factor of *i*: factors which "*i*" affects including factor "*i*" itself;
- antecedent set for each factor of *i*: factors-including factor "*i*" itself – which affect factor "*i*;" and
- intersection set for each factor of *i*: the intersection between the reachability and Antecedent sets for each factor of "*i*."

As for level partitioning, every factor whose reachability and intersection sets are the same are placed on level 1. Then the factor itself is eliminated from the set of factors. The process is also replicated for the other factors until their levels are established. In the first replication, factor 11, whose reachability and intersection sets are the same, is placed on the first level and subsequently eliminated from the set of factors. Here, reachability, antecedent and intersection sets for each factor have been calculated and tabulated as in Table V.

ISM model for intra-organizational factors effective in successful strategy

Figure 1 illustrates ISM for intra-organizational factors effective in successful strategy implementation. The model has six levels with factors prioritized in a down-to-up order as shown in the diagraph.

The result obtained from ISM has been illustrated in Figure 1. In this model, 13 intra-organizational factors effective in successful strategy implementation have been prioritized according to their importance and effectiveness in successful strategy implementation. The lower the level, the higher the priority and effectiveness. The relations demonstrated among the factors indicate effectiveness in increasing the possibility of a successful strategy implementation. For example, proper strategy compilation can provide for a consensus on strategies.

Application of DEMATEL

In this section we will deal with steps in DEMATEL method to draw a cause and effect figure of intra-organizational factors effective in successful strategy implementation.

Determining intensity of relations among the factors

Assuming that "*n*" number of factors affect a given concept, there is needed to devise a measurement system whereby to determine the severity and effectiveness of relations (Wu and Lee, 2007). In this research, the measurement system comprises numbers 0 up to 4 which respectively represent "l no relation and effect," "low effect," "medium effect," "high effect" and "very high effect."

Creating direct-relation matrix

Using expert views, the relations and their severity among the factors are determined. The output is a square matrix which shows direct relations among the factors, hence,

Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Well-defined strategy	1	1	1	1	1	1	1*	1	1*	1	1	1*	1*
2. Creating communications and interactions in organization	1	1	1	1	1	1*	0	1*	1*	1*	1	1	0
3. Breaking down strategies to plans and projects	0	1*	1	1*	0	1	1*	0	1*	0	1	1	1*
4. Individuals' commitment to strategy implementation	1*	1*	1*	1	1	1	1*	0	0	0	1	1	1*
5. Consensus on strategy	1	1*	1	1	1	1	1*	1*	1*	1*	1	1	1*
6. Management capabilities and support at the implementation phase	1*	1	1*	1	1*	1	1	1*	1*	1*	1	1	1
7. Strategic change leadership in organization	1*	1	1	1	1	1	1	1	1	1	1	1	1
8. Organizational structure consistent with strategy	1*	1	1*	1	1*	1	1	1	1	1*	1	1	1
9. Operational and logistic systems required for strategy implementation	1*	1	1*	1	1*	1*	0	0	1	0	1	1	0
10. Organizational culture and values consistent with strategy	1*	1	1*	1	1	1	1	1	1	1	1	1	1
11. precise Control and monitoring of strategy implementation	0	0	0	0	0	0	0	0	0	0	1	0	0
12. Effective management of employees at implementation phase	1*	1	1*	1	1*	1	1*	0	1	0	1	1	1*
13. Accessibility of required resources for strategy implementation	0	1*	0	1*	0	1*	0	0	1*	0	1	1	1

Note: *Transformation of the initial reachability matrix to a final reachability matrix

Table IV.
Final reachability matrix of intra-organizational factors effective in successful strategy implementation

Factors	Reachability set	Antecedent set	Intersection set	Level
1	1,2,3,4,5,6,7,8,9,10,11,12,13	1,2,4,5,6,7,8,9,10,12	1,2,4,5,6,7,8,9,10,12	6
2	1,2,3,4,5,6,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,12,13	1,2,3,4,5,6,8,9,10,12	2
3	2,3,4,6,7,9,11,12,13	1,2,3,4,5,6,7,8,9,10,12	2,3,4,6,7,9,12	5
4	1,2,3,4,5,6,7,11,12,13	1,2,3,4,5,6,7,8,9,10,12,13	1,2,3,4,5,6,7,12,13	2
5	1,2,3,4,5,6,7,8,9,10,11,12,13	1,2,4,5,6,7,8,9,10,12	1,2,4,6,5,7,8,9,10,12	6
6	1,2,3,4,5,6,7,8,9,10,11,12,13	1,2,3,4,5,6,7,8,9,10,12,13	1,2,3,4,5,6,7,8,9,10,12,13	2
7	1,2,3,4,5,6,7,8,9,10,11,12,13	1,3,4,5,6,7,8,10,12	1,3,4,5,6,7,8,10,12	5
8	1,2,3,4,5,6,7,8,9,10,11,12,13	1,2,5,6,7,8,10	1,2,5,6,7,8,10	6
9	1,2,3,4,5,6,9,11,12	1,2,3,5,6,7,8,9,10,12,13	1,2,3,5,6,9,12	3
10	1,2,3,4,5,6,7,8,9,10,11,12,13	1,2,5,6,7,8,10	1,2,5,6,7,8,10	6
11	11	1,2,3,4,5,6,7,8,9,10,11,12,13	11	1
12	1,2,3,4,5,6,7,9,11,12,13	1,2,3,4,5,6,7,8,9,10,12,13	1,2,3,4,5,6,7,9,12,13	2
13	2,4,6,9,11,12,13	1,3,4,5,6,7,8,10,12,13	4,6,12,13	4

Table V.
ISM for intra-organizational factors effective in successful strategy implementation

direct-relation matrix. Each *xij* shows the severity of effect that *i* has on *j* (Wang *et al.*, 2012). In total, 12 experts were consulted in this research to create direct-relation matrix. They were asked to evaluate the intensity of relations among the factors by marking them from 0 up to 4. Table VI shows direct-relation matrix.

Normalization of direct-relation matrix

To Kim (2006), normalization of the direct-relation matrix coefficient is made through the maximum of the biggest total of rows and the maximum of the biggest total of columns in a direct-relation matrix which is calculated through the formula (1):

$$N = \max\left(\max_{1\leqslant i\leqslant p}\sum_{j=1}^{p} xij, \max_{1\leqslant j\leqslant p}\sum_{i=1}^{p} xij\right) \tag{1}$$

direct-relation matrix, when multiplied by the reversed normalization coefficient gives normalized direct relation matrix (Z). In this research, the totals of rows and columns of the direct-relation matrix were calculated which revealed 39 to be the biggest Figure therein and which was hence considered as the normalization coefficient. Then the entries of the direct-relation matrix were divided by it which produced normalized direct-relation matrix (Table VII).

Direct and indirect relation matrix

Then direct and indirect relation matrix (T) is calculated through the following formula (2) (Wang *et al.*, 2012). Also, direct and indirect relation matrix is shown in Table VIII:

$$T = \lim_{k\to\infty}(Z + Z^2 + \cdots + Z^k) = Z(1 - Z)^{-1} \tag{2}$$

Calculating row and column totals

Using quantities of Tij, it is possible to calculate the totals for each row (Di) and column (Rj) through formulas (3) and (4):

$$\mathrm{Di} = \sum_{j=1}^{P} tij\,(i = 1, 2, \ldots, p) \tag{3}$$

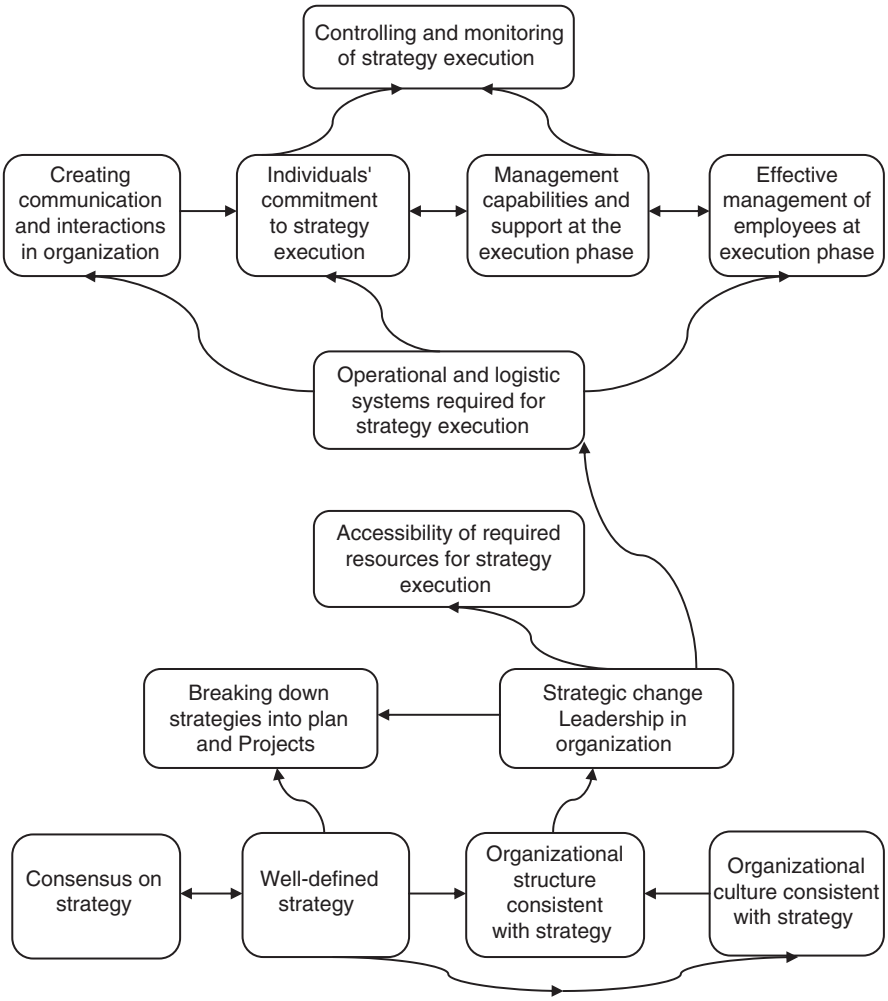

Figure 1.
ISM model for intra-organizational factors effective in successful strategy

$$\mathrm{Rj} = \sum_{i=1}^{p} tij \; (j = 1, 2, \ldots, p) \tag{4}$$

The total of each row (Di) shows the extent of influence and level of effect by factor i on the other factors. On the other hand, the total of each column (Rj) shows the extent of permeability and the level of permeability of factor j to other factors (Wang *et al.*, 2012). Quantities of row and column total for each factor is shown in Table IX.

Calculating the quantities of effect and interaction for each factor

Now, using quantities of Di and Rj, it is possible to calculate the key quantities of (Di + Rj) and (Di−Rj) for each factor. (Di + Rj) – the horizontal axis in the figure – is the total of effect intensity and permeability of a factor. In another word, it shows the intensity of the interaction a factor with the other factors. On the other hand, the

Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Well-compiled strategy	0	4	4	3	4	3	2	3	3	3	4	2	2
2. Creating communications and interactions in organization	2	0	2	2	2	2	2	1	1	2	3	3	2
3. Breaking down strategies to plans and projects	2	2	0	2	2	4	2	2	2	2	4	3	3
4. Individuals' commitment to strategy implementation	2	2	1	0	2	2	2	2	2	2	2	2	2
5. Consensus on strategy	4	2	3	4	0	3	2	2	2	2	4	4	2
6. Management capabilities and support at the implementation phase	1	2	1	2	1	0	2	2	2	2	2	3	2
7. Strategic change leadership in organization	2	3	2	3	3	2	0	2	2	2	3	3	2
8. Organizational structure consistent with strategy	2	3	2	3	2	3	2	0	4	2	4	3	3
9. Operational and logistic systems required for strategy implementation	2	3	2	2	2	1	2	1	0	1	4	3	2
10. Organizational culture and values consistent with strategy	2	2	2	4	3	2	3	3	3	0	3	4	2
11. Control and monitoring of strategy implementation	1	1	1	1	2	2	1	0	1	2	0	2	1
12. Effective management of employees at implementation phase	1	2	1	2	2	2	2	1	2	2	2	0	2
13. Accessibility of required resources for strategy implementation	2	2	2	2	2	2	2	1	2	2	4	3	0

Table VI.
Direct-relation matrix of intra-organizational factors effective in successful strategy implementation

Table VII.
Normalized direction-relation matrix of intra-organizational factors effective in successful strategy implementation

Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
1	0	0.1	0.1	0.08	0.1	0.08	0.05	0.08	0.08	0.08	0.1	0.05	0.05
2	0.05	0	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.05	0.08	0.08	0.05
3	0.05	0.05	0	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.1	0.08	0.08
4	0.05	0.05	0.03	0	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
5	0.1	0.05	0.08	0.1	0	0.08	0.05	0.05	0.05	0.05	0.1	0.1	0.05
6	0.03	0.05	0.03	0.05	0.03	0	0.05	0.05	0.05	0.05	0.05	0.08	0.05
7	0.05	0.08	0.05	0.08	0.08	0.05	0	0.05	0.05	0.05	0.08	0.08	0.05
8	0.05	0.08	0.05	0.08	0.05	0.08	0.05	0	0.1	0.05	0.1	0.08	0.08
9	0.05	0.08	0.05	0.05	0.05	0.03	0.05	0.03	0	0.03	0.1	0.08	0.05
10	0.05	0.05	0.05	0.1	0.08	0.05	0.08	0.08	0.08	0	0.08	0.1	0.05
11	0.03	0.03	0.03	0.03	0.05	0.05	0.03	0	0.03	0.05	0	0.05	0.03
12	0.03	0.05	0.03	0.05	0.05	0.05	0.05	0.03	0.05	0.05	0.05	0	0.05
13	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.05	0.05	0.1	0.08	0

Table VIII.
Direct and Indirect Relation Matrix of intra-organizational factors effective in successful strategy implementation

Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
1	0.13	0.25	0.23	0.24	0.25	0.23	0.19	0.19	0.22	0.21	0.31	0.25	0.19
2	0.13	0.1	0.13	0.16	0.15	0.15	0.14	0.1	0.12	0.14	0.21	0.2	0.14
3	0.15	0.17	0.1	0.18	0.17	0.22	0.16	0.14	0.16	0.16	0.27	0.23	0.19
4	0.13	0.15	0.11	0.11	0.15	0.15	0.14	0.12	0.14	0.14	0.19	0.18	0.14
5	0.21	0.19	0.19	0.25	0.14	0.22	0.17	0.15	0.18	0.18	0.29	0.27	0.18
6	0.1	0.14	0.1	0.15	0.12	0.09	0.13	0.12	0.14	0.13	0.18	0.19	0.13
7	0.15	0.2	0.15	0.21	0.19	0.18	0.11	0.14	0.16	0.16	0.24	0.23	0.16
8	0.16	0.21	0.16	0.22	0.18	0.21	0.17	0.1	0.22	0.17	0.28	0.24	0.2
9	0.14	0.18	0.14	0.16	0.15	0.13	0.14	0.1	0.1	0.12	0.24	0.2	0.14
10	0.17	0.19	0.16	0.25	0.21	0.19	0.2	0.17	0.2	0.12	0.26	0.27	0.18
11	0.08	0.09	0.08	0.1	0.11	0.12	0.08	0.05	0.09	0.11	0.09	0.13	0.08
12	0.1	0.14	0.1	0.15	0.14	0.14	0.13	0.09	0.13	0.13	0.17	0.12	0.13
13	0.14	0.16	0.14	0.17	0.16	0.16	0.14	0.1	0.15	0.15	0.25	0.21	0.1

Table IX.
Row and column total for each intra-organizational factor effective in successful strategy implementation

Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
Di	2.9	1.89	2.31	1.8	2.6	1.7	2.3	2.5	1.9	2.6	1.2	1.67	2
Rj	1.81	2.17	1.79	2.3	2.1	2.2	1.9	1.6	2	1.9	3	2.73	2

positive remainder for (Di−Rj) is an indication of the fact that the factor is effective and in case the remainder is negative, it means that the factor is permeable (Wang *et al.*, 2012). Quantities for (Di−Rj) and (Di + Rj) for each factor have been calculated and tabulated as in Table X.

DEMATEL causative model

The horizontal axis of this graph consists of (Di + Rj) quantities, with the vertical axis showing quantities for (Di−Rj). The point (Di + Rj, Di−Rj) determines the coordinate of each factor in the figure. DEMATEL causative model for the factors in question has been depicted in Figure 2.

In DEMATEL causative model, (Di + Rj) which shows the extent of interaction of factors with one another, produces high quantities for the entire factors. This indicates that all intra-organizational factors effective in successful strategy implementation which have been identified through this research have a high level of interaction with each other. That is, the total of effect and permeability among them is high. On the other hand, the quantity of effect intensity – (Di−Rj) – varies between −1.8842 and 1.0821. Factors whose remainders of (Di−Rj) are positive are affecting factors while those having negative remainders of (Di−Rj) are identified as permeable factors. Of important results obtained from DEMATEL method is that in this figure, factors have been prioritized according to the intensity of their effect on other factors on a quantitative basis and this prioritization confirms the one produced by ISM method.

Integrated model ISM-DEMATEL

The findings of both ISM and DEMATEL suggest that there is conformity between the two methods in terms of prioritization of the factors concerned. Integrating these two models the current research has aimed to produce a graphical model which, as well as the format of prioritization and interaction among the factors effective in strategy implementation, demonstrates the level of importance and priority of those factors on a quantitative basis. In the hybrid model, intra-organizational factors effective in successful strategy implementation are placed on six levels. The existing relations among the factors indicate improvement in ever better implementation of strategies as the presence and improvement of a given factor results in creation or improvement of another given factor. Generally speaking, making use of the results produced through DEMATEL and creating a hybrid model have been firstly to confirm the results

Table X.
Quantities of effect and interaction intensity for each of the intra-organizational factors effective in successful strategy implementation

Factors	1	2	3	4	5	6	7	8	9	10	11	12	13
Di + Rj	4.7	4.06	4.1	4.2	4.8	3.9	4.2	4.08	3.9	4.5	4.2	4.4	3.97
Di − −Rj	1.1	−0.3	0.5	−0.5	0.5	−0	0.4	0.97	−0.1	0.65	−1.8	−1.1	0.05

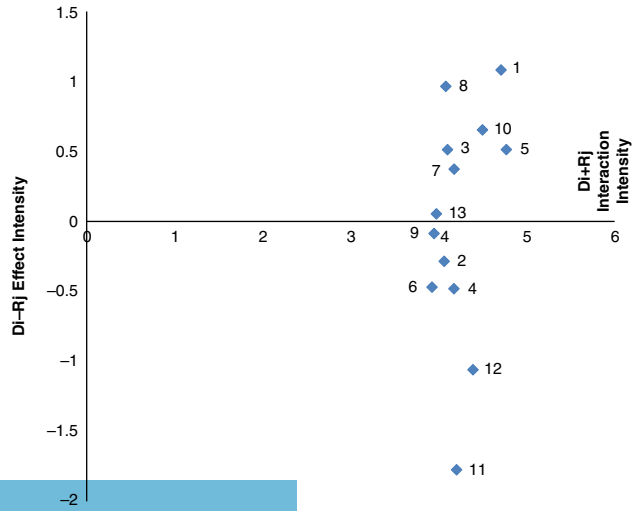

Figure 2.
DEMATEL Causative model for intra-organizational factors effective in successful strategy implementation

obtained through ISM method and second to improve those results. The integrated ISM-DEMATEL model is shown in Figure 3.

Discussion

There are many studies that have analyzed and examined factors effecting on success or failure in strategy implementation process. These studied focus on various factors

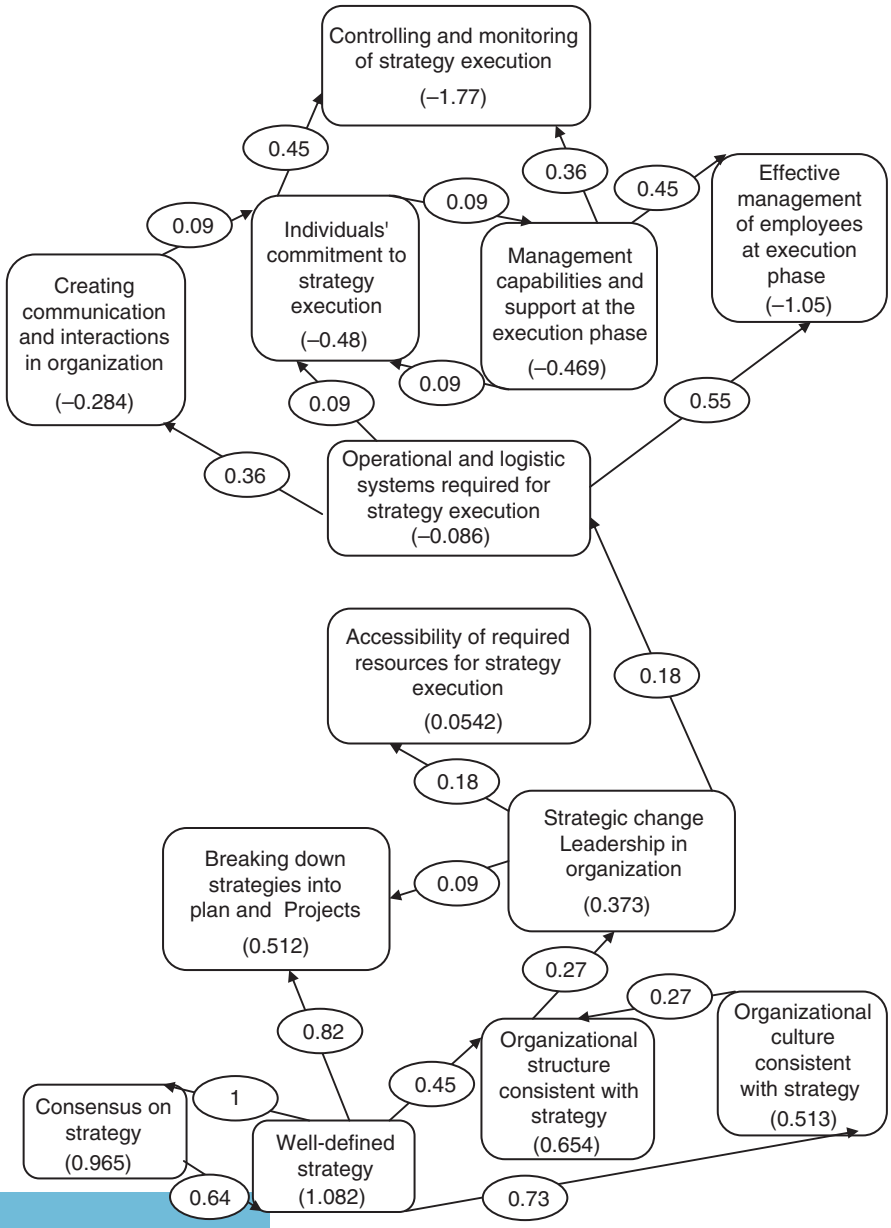

Figure 3.
Integrated ISM-DEMATEL model for intra-organizational factors effective in successful strategy implementation

that influence on strategy implementation such as "strategy formulation" (Alexander, 1985; Kim and Mauborgne, 1991; Singh, 1998; Allio, 2005), "Relationships among different units and different strategy levels" (Walker and Ruekert, 1987; Gupta, 1987; Slater and Olson, 2001; Chimhanzi, 2004; Chimhanzi and Morgan, 2005), "strategy executors" (Govindarajan, 1989; Peng and Litteljohn, 2001; Harrington, 2006), "organizational communication" (Forman and Argenti, 2005; Alexander, 1985; Heide *et al.*, 2002; Rapert *et al.*, 2002; Schaap, 2006), "implementation tactics" (Nutt, 1989; Bourgeois and Brodwin, 1984; Lehner, 2004; Sashittal and Wilemon, 1996; Akan *et al.*, 2006), "consensus" (Floyd and Woolridge, 1992; Dess and Priem, 1995; Rapert *et al.*, 1996; Noble, 1999; Dooley *et al.*, 2000), "commitment" (Wooldridge and Floyd, 1990), "organizational structure" (Heide *et al.*, 2002; White, 1986; Olson *et al.*, 2005), "project management" (Hauc and Kovac, 2000; Morris and Jamieson, 2005; Dietrich and Lehtonen, 2005). Also, there are some studies that focus on multiple factors (Noble, 1999; Heide *et al.*, 2002; Hrebiniak, 2006; Critenden and Critenden, 2008; Alamsjah, 2011). Among these studies, there are a number of studies that merely deal with identification, explanation and categorization of the factors effective in strategy implementation such as Noble (1999), Olson *et al.* (2005), Li *et al.* (2008), Critenden and Critenden (2008) and Brenes *et al.* (2008). Furthermore, few studies have tried to prioritize these factors like (Alamsjah, 2011) and analyze the relations and interactions among them like (Hrebiniak, 2006).

The novelty of current research is that, it identifies 13 key intra-organizational factors effective in successful strategy implementation and prioritizes and analyzes of interaction among factors on a graphical and quantitative basis. The factors were prioritized and the interaction among them was revealed using ISM. DEMATEL was employed to quantitatively calculate the importance, intensity and effect in the interaction among the factors. Finally, combining both the aforementioned methods an integrated ISM-DEMATEL model was devised through which the factors were prioritized while the importance, intensity and effect of each factor were quantitatively calculated.

The advantage of this model over ISM is that first, the factors while being multi level-partitioned in order of priority, factors at each level have again been prioritized in terms of effect intensity (Di−Rj) which has been calculated through DEMATEL. Moreover, the model determines the intensity of relations among the factors quantitatively. This implies that relations existing in the model vary in intensity. Among the factors on level 6, for example, "a well-compiled strategy" has higher importance and priority, and its intensity of effect on factors "strategic consensus," "organizational structure" and "organizational culture" is respectively 0.45 and 0.73 numbers displayed on each relation are the entries of direct and indirect relation matrix. The initial quantities for intensity of relations among factors are located along the interval 0.14 and 0.25. These quantities, using interpolation method, have been converted to numbers that constitute an interval from 0 to 1 in order to facilitate the comparison of the intensity of relations among factors. The closer to 1 the intensity, the more does it affirm that an improvement in the first factor is associated with much improvement in the second factor. Conversely, the closer to 0 the intensity, the more does it affirm that an improvement in the first factor is associated with little improvement in the second factor. For example, the effect intensity of "a well-compiled strategy" on "creation of strategic consensus" is 1 and that of "strategic leadership of change" on "strategy breakdown to plans and projects" is 0.09.

Conclusion

Successful implementation of a well-formulated and appropriate strategy will enable a company to prosper over time, and therefore achieve its long-term vision of a good

mission, good planning and overall corporate success (Critenden and Critenden, 2008). Considering the highly important role of implementation in shaping the future of businesses and organizations, it is an indispensable necessity to know about factors effective in strategy implementation. This is because it is managers and decision makers who help organizations spot encouraging factors and barriers to strategic implementation and take action accordingly. In view of this, the current research aims at identification, categorization and analysis of interaction among key intra-organizational factors effective in strategy implementation. The innovations in this research are as the following:

- identification of 13 key intra-organizational factors effective in successful strategy implementation, by studying through the literature;
- prioritization and establishing relations and interactions among the identified factors by ISM;
- determining the priority of each factor and their intensity of effect and interaction on a quantitative basis through DEMATEL method; and
- developing the integrated model of ISM-DEMATEL for intra-organizational factors effective in successful strategy implementation.

Limitations

Every research has limitations and barriers, and the current one is no exception. A number of the limitations and barriers to this research were as follows:

- In current research, we only studied and analyzed intra-organizational factors effective in successful strategy implementation, while extra-organizational factors have severe influence on strategy implementation process.
- Due to time limitation, the hybrid model could not be practically applied to any organizations or businesses. The application of the model would enable us to measure its validity and soundness more accurately and consequently, the results hence produced would definitely yield useful points in line with better strategy implementation.
- In this research, only 12 experts were consulted to construct the model. If the experts involved were increased both quantitatively and qualitatively no doubt the final model would be upheld.

Managerial implication

According to the prioritization suggested by the hybrid model in this research, managers who are involved in strategy implementation or who intend to enter this phase are advised:

- to make sure about the properness of the compiled strategies;
- to obtain the consensus of the majority of the people in the organization concerning the selected strategies;
- to make necessary compromises between strategies on the one hand and organizational structure and the organizational culture on the other hand;
- to break down the strategies to proper plans and projects;
- to take the leadership of strategic change in the organization;

- to secure necessary resources for strategy implementation;
- to support the strategy implementation strongly and tap into managerial capabilities;
- to promote commitment to strategy implementation among organization's members;
- to manage organization's employees efficiently in the phase of strategy implementation; and
- to setup proper mechanisms for controlling and monitoring of strategy implementation.

Theoretical implications and future directions

There are also suggestions for researchers in strategic management whereby to reveal more about the key issue of strategy implementation and factors involved:

- The current research only identified 13 intra-organizational effective in successful strategy implementation. However, there are also decisive extra-organizational factors which have considerable effect on the success of strategy implementation. The identification of such factors is strongly recommended.
- The relations among the factors concerned in this research were not examined statistically. Therefore, a confirmation through structural equation modelling (SEM) and LISREL software is suggested for future study.
- Also, analyzing the cause and effect relationships among effective factors in strategy implementation by Cognitive Map or Fuzzy Cognitive Map (FCM) methods is advised as a topic for future research.

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Corresponding author

Dr Mohsen Akbarpour Shirazi can be contacted at: akbarpour@aut.ac.ir