# IMPLEMENTING MARKETING STRATEGIES THROUGH BUSINESS-TO-BUSINESS SALES FORCES: A SOCIAL NETWORK PERSPECTIVE

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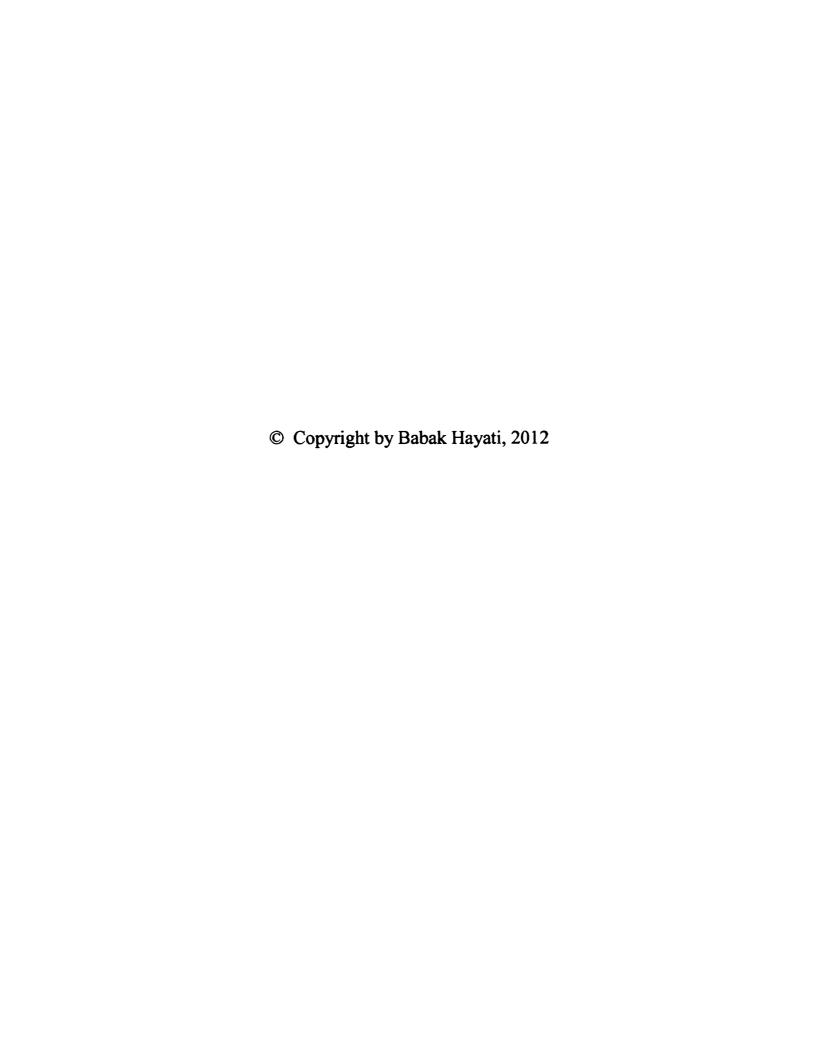
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**Abstract** 

Strategy implementation has long been a topic of interest in marketing and sales literature. However, despite the theoretical and managerial importance of this topic, limited research has been conducted to understand the mechanisms through which behavioral and interpersonal factors influence the strategy implementation process. In this research, we are particularly interested in studying marketing strategy implementation through B2B sales forces. During the implementation process, it is critical for higher-level sales managers to motivate their subordinates and obtain their commitment to the implementation tasks. Drawing on social network literature, we use datasets from two large US-based B2B companies to study how the interplay between formal and informal organizational structures in B2B sales forces may affect the commitment of sales managers and salespeople to their roles during a specific marketing strategy implementation. Moreover, we explore how sales managers should leverage formal relationships and informal social networks inside their sales business units in order to facilitate the implementation process. This study has important implications both to the theory and practice of sales management. Our results demonstrate that weak network ties between B2B sales managers and their sociometrically central subordinates can have detrimental effects during the implementation of marketing strategies. Thus, managers should either build strong network ties with their influential subordinates or manipulate the social network structures around them in order to harmonize the strategy implementation efforts in their sales groups.

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#### INTRODUCTION

The concept of "internal marketing" (IM) has been a topic of interest in sales and marketing literature for more than three decades. Most recent definitions of IM emphasize its role in selling the company's objectives to frontline employees (e.g., Ahmad and Rafiq 2003; Lings and Greenley 2005). For example, Lings and Greenley (2005) hold that IM "is an effort to improve the internal climate of the organization that motivates frontline employees to perform their tasks well". Overall, extant marketing literature characterizes IM as a managerial effort to align frontline employees with the goals of marketing strategy in a firm (Malshe and Sohi 2009). Despite a lack of comprehensive empirical research, results from case studies and anecdotal accounts provide evidence that IM efforts lead to higher levels of employees' commitment to organizational goals, customer satisfaction, and organizational identity (e.g., Rafiq and Ahmed 1993; Wieseke et al. 2009).

Focused on creating alignment between the employees and strategic organizational goals, IM is conceptually and practically related to the topic of strategy implementation. In the field of marketing, strategy implementation is generally defined as the communication, adoption, and enactment of strategic market initiatives (Noble and Mokwa 1999). As Rafiq and Ahmed (1993) have stated, the goal of IM during the strategy implementation process is to overcome resistance to change and motivate employees to effectively implement organizational strategies.

Existing literature in marketing and other related fields generally categorizes the variables that influence strategy implementation in two groups: *structural/formal* variables such as formal organizational structure, policies and control systems; and *behavioral/interpersonal* variables such as strategic consensus, role commitment and effective development of informal organizational structures (e.g., Bonoma 1984; Piercy and Morgan 1994). Our review of literature

reveals that although a considerable amount of research has been conducted on the role of structural/formal variables during strategy implementation, the field still suffers from a lack of empirical and theoretical knowledge about the mechanisms through which behavioral/interpersonal factors facilitate or impede the effective implementation of marketing strategies. For example, there has not been much research on how individuals at different organizational levels influence each other during strategy implementation, and whether informal organizational structures, as well as formal work relationship, determine these interpersonal lines of influence. Scarcity of research in this managerially relevant area is surprising because scholars have long emphasized that marketing strategies only contribute to a firm's superior performance when implemented successfully (Bonoma 1984; Noble and Mokwa 1999).

In order to partially address this important gap in literature, we look through the lens of IM to study the construct of "strategy role commitment" (SRC) and its diffusion across organizational levels during a strategy implementation process. We draw from previous literature to define strategy role commitment as the extent to which an employee is determined to effectively perform his/her individual implementation responsibilities (Noble and Mokwa 1999). Previous research has consistently recognized SRC as a key determinant of strategy implementation success (Dess and Origer 1987; Woodridge and Floyd 1989). For example, Noble and Mokwa (1999) have empirically shown that SRC is the most important predictor of managerial-level role performance during strategy implementation. However, most of the previous studies on SRC have viewed it as an individual-level construct which is influenced by various individual-,organizational-, and strategy-related factors. In fact, there has not been much attention toward the social and interpersonal aspects of SRC.

In this paper, we plan to develop the existing knowledge about SRC by interpreting it as an organizational social phenomenon that is contagious and can be transferred from an employee to others inside the firm. We are particularly interested in exploring how the interplay between formal and informal organizational structures may affect the diffusion of SRC inside and across different organizational levels. To accomplish this goal, we build on previous works in the fields of social contagion, social network analysis, and dual leadership in teams to develop a multilevel framework in which (1) SRC has a cascading pattern and flows from higher-level managers to their subordinates, and from employees at different organizational levels to their peers, (2) the flow and contagious pattern of SRC inside the organization depends on the social network structure among colleagues inside business units and the arrangement and strength of social network ties between managers and their subordinates.

This study is conducted in the context of business-to-business (B2B) firms. Our objective is to explore the role of formal and informal organizational relations and interactions in creating support and commitment to strategic marketing initiatives at different levels of an organization's sales forces. We selected the sales function for studying marketing strategy implementation because *sales* is thought to be the most critical organizational channel in B2B firms through which marketing strategies are implemented (Cespedes 1993, 1996; Rouziès et al. 2005). Moreover, convincing the sales forces to buy into and implement the firm's marketing strategies has constantly been a managerial challenge in business practice (Malshe and Sohi 2009). In the light of the above discussion, this paper aims to address the following research questions:

 How do informal organizational structures facilitate or impede the diffusion of SRC in B2B sales forces during the implementation of marketing strategies? 2. How should sales managers leverage formal relationships and informal social networks inside their business units to facilitate the implementation of marketing strategies?

We collected our data from the sales divisions of two large US companies. The first dataset from a media company included 65 district managers who supervised 433 salespeople. The second dataset from a *Fortune 500* industrial supplier firm included 31 regional managers, 228 district managers, and 1437 salespeople. During the data collection period, both of these companies were involved with the implementation of new product strategies through their B2B sales forces. We found that SRC has a strong contagious effect and transfers from sales managers to their employees. This effect is even stronger when the manager has a high level of centrality and social capital among subordinates. Moreover, in addition to sales managers, employees who possess sociometrically central positions among their peers seem to strongly influence them with regard to SRC. Strength of the social network tie between managers and central subordinates also plays a critical role in this process.

Or study contributes both to the theory and practice of sales management and marketing strategy implementation. On the theoretical side, to the best of our knowledge, this is among the first studies that bring together perspectives from social network analysis and internal marketing literature to examine the role of informal organizational networks in marketing strategy implementation process. We also contribute to the small but growing amount of research on distributed leadership in organizations (Gronn 2002; Mehra el at. 2006). Furthermore, this study expands the existing knowledge about the consequences of organizational social networks (see Brass 2011 for a review) by studying the impact of social networks on the implementation of a functional (i.e., marketing) strategy.

In terms of managerial implications, findings of this study can help sales managers to more efficiently and effectively leverage their social network ties to facilitate the implementation of marketing strategies. We intend to inform sales managers that having a clear understanding of the social network structure inside their sales units is critical during strategy implementation and can help them influence the SRC of their subordinates.

Finally, combining the multilevel modeling and social network analysis methods is consistent with the recent shift in the social network literature "from single levels of analysis to analysis showing effects crossing levels, inspired by the realization that networks are affected both from below and from above" (Brass et al. 2004, p. 809). This mixed method is particularly appropriate for the context of strategy implementation because marketing strategies are mostly outlined at the top organizational levels and, in the next step, leaders attempt to use their formal and informal power and influence to align middle managers and frontline employees with these strategic initiatives (Beer and Eisenstat 2000).

This paper is organized as follows: we first provide a brief literature review of prior research on strategy implementation and explain why social network analysis is appropriate for examining such a process. Next, we set up a theoretical foundation and introduce our conceptual framework and hypotheses. This is followed by two empirical studies with datasets from two different companies. We conclude the paper with a discussion of theoretical and managerial implications as well as directions for further research.

#### REASERACH BACKGROUND

## Research on Internal Marketing and Strategy Implementation

The concept of "internal marketing" has evolved over time from the notion of "employee as customer" and satisfying the needs and wants of this internal customer (e.g., Berry and Parasuraman 1991) to a philosophy involving the systematic use of managerial techniques for building employee commitment to marketing strategies and customer orientation (Ahmed and Rafiq 2003). Yet, while this line of research emphasizes that managers should strive to obtain their employees' commitment to marketing strategies, previous studies have provided only narrow insights on the mechanisms and tools that may help managers in this process.

A conceptually related but separate field of research in marketing has attempted to identify the organizational, functional, and managerial level factors that mobilize the marketing strategy implementation process (e.g., Bonoma 1984; Noble and Mokwa 1999). Despite these efforts, this area of research still suffers from some limitations. First, existing knowledge about the role of interactions and interconnections between top and middle managers and frontline employees during the implementation process is limited. This gap is partly caused by a lack of empirical studies on strategy implementation which includes agents from different managerial and frontline levels of the firm. Second, although scholars have accentuated the effect of informal organizational structures on marketing strategy implementation (Frankwick et al. 1994), theoretical and empirical research on this topic has remained sparse.

## Research on Social Network Analysis

Social network structures, or patterns of informal ties among individuals, have been known to influence individual, team, and organizational outcomes by facilitating and/or limiting the flow of resources inside and outside a social unit (Kilduff and Brass 2010; Brass 1984).

Social network theory expounds that network structure provides opportunities and constraints that affect network outcomes (Kilduff and Tsai 2003). Moreover, it has been shown that the *content* and *intensity* of connections among actors in a social network have important implications for network consequences (Brass 2011). Content of a social network tie may refer to concepts such as friendship, trust, and advice-seeking. In this study, we focus on instrumental social network ties, defined as pathways of work-related advice among organizational members (Ibarra 1993). It has been shown that the range and strength of individual instrumental ties are significant indicators of a person's level of expert and referent power among colleagues (Friedkin 1991).

In management literature, social network analysis has been applied to predict outcomes such as individual and team job performance (Sparrowe, Liden and Kraimer 2001), turnover (Kilduff and Krackhardt 1994) and promotion (Burt 1992). Despite these efforts, we believe that a number of limitations in existing literature warrant further empirical research on specific methodologies and applications of social networks. First, researchers have rarely studied organizational networks as a multi-level phenomenon by including network-related variables from various managerial and front-line levels of the firm. Second, unlike other organizational outcomes, there has been limited effort to tap into the role of internal social networks during strategy implementation processes.

In this study, we examine social networks across multiple levels of a firm's sales function. A typical sales department within a firm consists of regional managers who are responsible for a number of sales districts. These sales districts are independently managed by district sales managers and are comprised of a number of salespeople. Therefore, although the sales function may only be a single entity within a larger organization, one should note that

multiple social networks exist within its hierarchy.

In the next section, we introduce our conceptual framework and specific hypotheses regarding the implementation of marketing strategies through B2B sales forces in order to address some of the mentioned voids in literature.

#### CONCEPTUAL FRAMEWORK AND HYPOTHESES

We propose that SRC displays a cascading pattern across organizational levels, in which regional sales managers' commitment to a specific marketing strategy transfers to district sales managers, and district managers, in turn, influence salespeople's level of commitment to the strategy. We suggest that this cascading flow is significantly influenced by the social network ties between regional/district sales managers and their subordinates, and also the sociometric position of the most central subordinates inside sales business units. At a higher organizational level, a sales business unit consists of a regional sales manager and his/her district managers. At the lower level, a district sales manager and his/her salespeople form a sales business unit.

Prior research indicates that certain network positions confer more advantages to actors in the network than do others (e.g., Coleman 1990). One of the most important network positions to occupy is a central position. Although various types of network centrality have been introduced by social network scholars (Borgatti 2005), in this study, we focus on the in-degree centrality and betweenness centrality of organizational actors.

In the instrumental social network, in-degree centrality refers to extent to which an individual is sought after for advice by peers or subordinates (Ibarra 1993). In-degree centrality plays a critical role in organizational interactions. Previous studies have suggested that

individuals with high in-degree centrality possess two key advantages (1) information access and high potential of communication activity (e.g., Freeman 1978), and (2) high visibility, a positive reputation, or prestige in the group (Freeman 1978; Knoke and Yang 2008). By providing advice to others, actors who are frequently sought after for advice send out signals about their level of competence, creating the reputation of being an expert (Burt 1992; Mehra et al. 2006). In this study, we define in-degree centrality for both managers and subordinates (i.e., district manager or salesperson) inside sales business units. In fact, a manager with higher in-degree centrality is more frequently sought for advice by subordinates on work-related matters. A highly in-degree central subordinate is also more frequently sought for advice by a larger number of peers inside the sales business unit. We refer to the subordinate with the highest level of in-degree centrality among peers in a business unit as the "Influential Subordinate" (i.e., influential district manager or influential salesperson).

The other network property of our interest in this paper is betweenness centrality. Social network literature holds that the power of an actor in a social network not only stems from the individual's direct ties with others (measured by in-degree centrality), but also the extent to which the person "stands between others on the paths of communication" (Freeman, Borgatti and White 1991, page 142). It has been argued that such a strategic network position provides an actor with the power to control and influence the lines of communication among peers and distort information on its transmission (Friedkin 1991). Thus, an actor with a high level of betweenness centrality is able to mediate the access of peers to resources such as information and power (Freeman, Borgatti and White 1991). We have provided visual examples of in-degree centrality and betweenness centrality in Appendix I to further clarify the meaning of these social network properties.

The conceptual framework of this study is depicted in figure 1. Our framework represents the top-down flow of SRC from sales managers to their subordinates. This flow is moderated by the social network properties of various actors inside B2B sales forces. We introduce two different "routes" to strategy implementation. In the "direct" route, SRC transfers directly from managers to subordinates, and the transfer is stronger if the manager has stronger social network ties with subordinates (i.e., higher in-degree centrality among subordinates). In the "indirect" route, a manager's SRC transfers to the influential subordinate especially if there is a strong social network tie between these agents. The influential subordinate will then affect peers with regard to SRC. In addition, we propose that those influential subordinates who possess a high level of betweenness centrality among peers play critical roles during strategy implementation because their SRC has a stronger impact on peers.

## Effect of Managers' SRC on Subordinates' SRC

As we explained earlier, obtaining employees' SRC is among the top priority objectives of managers during a strategy implementation process. Here, we essentially denote that SRC is a contagious phenomenon and can transfer from managers to their subordinates. A number of previous studies in marketing and management have built upon the premises of the "social contagion" concept and supported a direct influence of leaders' perceptions, attitudes and behaviors on followers' organizational attitudes and behaviors such as market orientation (Lam, Kraus and Ahearne 2010) and organizational identification (Wieseke et al. 2009). Organizational network researchers have also historically used the contagion concept to examine organizational phenomena such as similarities in perceptions of job satisfaction (Krackhard and Porter 1985), organizational commitment (Hartman and Johnson 1989), work conditions (Ibarra and Andrews

1993) and organizational justice (Degeoy 2000). In this study, we draw from social contagion and social learning theories to interpret the spillover of SRC from leaders to followers.

Managers influence their subordinates' cognitions and behaviors by signaling what attitudes and behaviors are expected from them (Shamir, House and Arthur 1993). They can explicitly express and enforce their expectations by creating performance measures, rewards, and punishments to direct followers toward certain normative objectives. In this regard, social learning theory (Bandura 1977) introduces "reinforcement" as one of the main routes for learning and behavior change. That is, individuals tend to learn from the ramifications of their behaviors and, consequently, are more likely to repeat the behaviors with more favorable outcomes. It can be argued that a leader with higher SRC is more likely to evaluate, reward and penalize his/her followers based on their strategy implementation efforts. As a result, subordinates will gradually go through a reinforcement learning process to adjust their behaviors with the expectations and performance criteria of their manager. This may finally result in a similarity between manager's and subordinates' SRC.

We also believe that managers exert influence over their subordinates' SRC through both cognitive and affective contagion mechanisms. Salancik and Pfeffer's (1978) social information processing theory suggests that people prefer to construct their judgments about a phenomenon based on objective, non-social measures. However, when such standards are nonexistent or ambiguous, they are more likely to search for social information from others in order to develop more accurate interpretations of the situation. Implementing a new strategy is usually associated with some ambiguities and uncertainties about the process and outcomes of the strategy (Gupta and Govindarajan 1984). In this situation, employees may seek out information from important sources to form their attitudes about the new strategy and understand their roles in the

implementation process. Since managers are usually among the main reference points and information sources for subordinates when they try to make sense of and interpret workplace situations, we expect managers with high levels of SRC to direct their subordinates toward a positive cognitive evaluation of, and commitment to the new strategy.

Managers may also influence their followers' SRC through affective contagion mechanisms. There is considerable amount of evidence in literature that emotions are contagious at both the conscious and unconscious levels (Barsade 2000) and can influence a person's attitudes and behaviors toward a subject (Isen and Baron 1991). It has been proposed that people "tune to" the emotions of others because following the affective states of others may provide them with heuristic inferences about the underlying causes of the emotions (Degeoy 2000). We argue that although a strategy does not explicitly contain an emotional dimension, managers are likely to socially express their emotions (e.g., excitement, joy, fear) toward specific organizational strategies. Such emotions may spill over to subordinates to influence their attitudes and behaviors toward certain strategies. Thus, we propose that manager's SRC affects followers' SRC through emotional contagion processes. This contagious effect may exist between regional sales managers and their district sales managers, as well as between district sales managers and their salespeople. Based on the above discussion, we formally hypothesize:

H1a: A regional sales manager's SRC has a positive effect on the SRC of those district sales managers who work under the supervision of the focal regional manager.

H1b: A district sales manager's SRC has a positive effect on the SRC of those salespeople who work under the supervision of the focal district manager.

#### Effect of Influential Subordinates' SRC on Peers' SRC

Managers are not the exclusive sources of influence over subordinates within a firm.

There is considerable amount of evidence in literature that highlights the indispensable impact of work-group peers on colleagues' role perceptions, attitudes, and performance, even when the effects originating from managers are taken into account (Chaiburu and Harrison 2008).

Empirical work following social information processing theory (Salancik and Pfeffer 1978) has demonstrated that social cues such as opinions of work-group peers may influence an employee's job attitudes (Zalesny and Ford 1990). A number of studies in the social network literature have also illustrated that informal intra-group ties may result in the convergence of work-related attitudes and behaviors (Brass 2011).

While the influence of a manager over subordinates is mainly governed by positional power and authority (Yukl and Falbe 1991), work-group peers impact their colleagues primarily through informal reciprocation (Gouldner 1960). Due to more frequent interactions and status-based similarities, the exchange of emotional and behavioral resources is usually more salient among peers than between employees and managers (Chaiburu and Harrison 2008). Some evidence from SNA research even suggests that actors have a stronger tendency to shift their attitudes and behaviors toward those of people in similar roles, rather than being influenced by others in dissimilar roles (Burt 1987).

We argue that not all employees exert the same degree of influence over others in the work unit. Consistent with SNA literature on power and influence (Brass 1984; Sparrowe and Liden 2005), we posit that, in each sales business unit, a subordinate with the highest level of indegree centrality in the social network among peers has the largest impact on colleagues with regard to SRC. We previously referred to these in-degree central individuals as "Influential"

Subordinates". Influential subordinates hold suitable network positions to "spread" their influence through the entire network (Borgatti 2005). We argue that, similar to the case of manager-subordinate relationship, influential subordinates' SRC transfers to their peers through social contagion mechanisms.

First, in-degree centrality represents an actor's referent and expert power among colleagues (Balkhundi and Harrison 2006). It can be argued that such central actors are among the main sources of advice when employees are searching for information to develop their interpretations of a new strategy. Thus, an influential subordinate may be more effective at leveraging his/her network position to influence peers with regard to their understanding of, and commitment to marketing strategies.

Second, because of their prominent social positions, influential subordinates' attitudes and behaviors are more easily observable by peers. Thus, peers are more likely to engage in a vicarious learning process (Bandura 1977) to learn from the positive/negative outcomes of influential subordinates' SRC and regulate their own SRC accordingly. Moreover, central subordinates' emotions toward organizational strategies are evident among peers and are more likely to spill over to colleagues through affective contagion mechanisms (Barsade 2002). Hence, we hypothesize:

H2a: An influential district manager's SRC has a positive effect on peer district managers' SRC.

H2b: An influential salesperson's SRC has a positive effect on peer salespeople's SRC.

Effect of Managers' SRC on Influential Subordinates' SRC

It should be noted that similar to other district managers and salespeople, an influential district manager or salesperson can also be affected by his/her corresponding manager's SRC.

Thus, following a line of reasoning similar to H1a and H2a we propose that:

H3a: A regional manager's SRC has a positive effect on the SRC of the influential district manager who works under the supervision of the focal regional manager.

H3b: A district manager's SRC has a positive effect on the SRC of the influential salesperson who works under the supervision of the focal district manager.

## Moderating Effect of "Manager's In-Degree Centrality"

In-degree centrality is a fundamental concept in social network research and has been used to examine organizational power and influence (Brass 1984). In-degree centrality is defined as the extent of in-coming connectivity that an individual has with other members in a social network (Freeman 1978). Higher in-degree centrality of a manager implies that he/she has more extensive ties with subordinates in a business unit, can better regulate the flow of resources such as information and trust in the group and, consequently, direct group members toward specified goals (Friedkin and Slater 1994; Krackhardt 1996). Thus, in-degree centrality is often a measure of the *immediate impact* of a manager on subordinates (Borgatti 2005). We propose that in-degree centrality has a positive moderating impact on the transfer of SRC from managers to subordinates.

Based on its definition, a higher in-degree centrality implies that a larger number of subordinates more frequently refer to their manager to seek advice on work-related matters. During a marketing strategy implementation process, more frequent interactions provide managers with better opportunities to monitor their subordinates' attitudes and behaviors

regarding the marketing strategy. In addition, more in-degree central managers have not only formal power, but also informal power (e.g., expert power, referent power, information power; French and Raven 1959) over their subordinates. Thus, in-degree central managers can more effectively readjust managerial rewards and punishments to enforce their expectations and ideals about the strategy implementation process. Moreover, in-degree central managers may attain a deeper knowledge of their group members' preferences regarding the strategy (e.g., strategy-related attitudes, concerns, and needs) and can not only make better decisions about the implementation process but also implement those decisions more effectively by directing resources and information to the right subordinates (Balkundi and Harrison 2006).

Having stronger social network ties with a manager may also help subordinates receive more frequent and relevant feedback from the manager on their strategy implementation efforts. Based on this feedback, subordinates can reinforce behaviors and efforts with more favorable results and avoid those with negative outcomes for the implementation process. The preceding theorizing suggests:

**H4a:** A regional manager's in-degree centrality among her district managers positively moderates the impact of regional manager's SRC on district managers' SRC.

**H4b:** A district manager's in-degree centrality among her salespeople positively moderates the impact of district manager's SRC on salespeople's SRC.

Moderating Effect of "Strength of Network Tie between Manager and Influential Subordinate"

A similar line of reasoning applies to the dyadic relationship between a manager and an influential subordinate. A stronger tie exists when an influential subordinate more frequently refers to his/her manager to seek advice on work-related matters. As we discussed before, more frequent advice-seeking interactions (i.e., stronger social network ties) are likely to amplify the impact of manager's SRC on subordinate's SRC. Thus:

H5a: Strength of network tie between a regional manager and her influential district manager positively moderates the impact of regional manager's SRC on the influential district manager's SRC.

H5b: Strength of network tie between a district manager and her influential salesperson positively moderates the impact of district manager's SRC on the influential salesperson's SRC.

## Moderating Effect of "Influential Subordinate's Betweenness Centrality"

As we explained before, the power of an actor in a social network not only stems from the actor's direct ties with others (measured by in-degree centrality), but also the degree to which the actor "stands between others on the paths of communication" (Freeman, Borgatti and White 1991, page 142) and is capable of influencing and distorting information on its flow inside the network (Friedkin 1991). In social network literature, this network property is measured by an actor's "betweenness centrality" (Freeman, Borgatti and White 1991). It has been argued that a person with a high level of betweenness centrality is able to mediate the access of others in the social network to resources such as information and power (Freeman and Borgatti 1991).

We posit that the betweenness centrality of an influential subordinate amplifies the impact of the influential subordinate's SRC on his/her peers' SRC. In fact, it can be argued that

an influential subordinate a with high level of betweenness centrality can better observe and regulate the flow of perceptions, attitudes, and influence regarding a specific marketing strategy among peers and is able to shift them toward his/her own understanding of the strategy. Also, a higher degree of betweenness centrality on part of an influential actor implies that other actors do not closely interact and exchange information with regard to workplace phenomena such as a new strategy. In this case, the degree of interpersonal influence between other actors with regard to SRC is low and, consequently, we expect an influential subordinate with a higher level of betweenness centrality to have a larger impact on peers' SRC. Therefore, we formally hypothesize:

H6a: An influential district manager's betweenness centrality moderates the impact of the influential district manager's SRC on peer district managers' SRC.

H6b: An influential salesperson's betweenness centrality moderates the impact of the influential salesperson's SRC on peer salespeople's SRC.

### **Performance Impacts of SRC**

If we compare strategy implementation to a specific goal that an employee is striving to achieve, goal setting literature refers to commitment as the determination and extension of effort and attention to accomplish the original goal (Locke et al. 1981). Previous studies have shown that when everyone is dealing with the same difficult goal, those with higher commitment usually outperform others (Klein et al. 1999).

Marketing strategy implementation literature has also confirmed a link between strategy role commitment and performance (Noble and Mokwa 1999; Woodridge and Floyd 1989). In fact, Noble and Mokwa (1999) have found role commitment as a major predictor of success in

strategy implementation. Thus, we propose that the commitment of salespeople in a sales business unit (sales district) to vigorously perform their implementation responsibilities will result in the successful implementation of marketing strategies:

H7: Sales units (sales districts) in which salespeople have higher average levels of SRC will be more successful in the strategy implementation process.

#### **METHODOLOGY**

#### **Research Context and Data Collection**

Data was collected from the sales divisions of two large companies in US: One was a leading media company and the other was a Fortune 500 firm in the cleaning and sanitization industry. In both companies, the marketing department was in charge of analyzing the market situation and identifying the most promising market segments and customers. Such strategic initiatives were then announced to higher-level managers in the sales division so that they could align their subordinates' sales efforts with the firm's marketing strategies. More specifically, both of these companies were involved with the implementation of new product strategies. The media company had designed a new marketing strategy to shift its focus from selling print advertisement products to offering digital ads to its customers. Thus, the sales department was tasked with pushing the newly-developed digital products to the targeted market segments. The cleaning and sanitization firm had a similar situation. The company had developed a set of new products and its goal was to shift the sales efforts toward selling these new products to its market segments. Again, the sales division was the main channel through which marketing strategies were being implemented. These companies provided us with appropriate contexts for a research on top-down marketing strategy implementation through B2B sales departments.

Both companies had typical sales organizational structure in which salespeople were working under the supervision of district sales managers (middle managers) and several district sales managers were in turn managed by a regional sales manager (top managers). This type of organizational structure is common among other industries such as pharmaceutical, insurance, and retailing companies. This context was particularly suitable for a multi-level social network study because specific social networks existed among employees and managers at different levels of the sales function. Before launching the main data collection, we conducted interviews with top managers, district managers, and a number of salespeople in each company in order to ensure that we would gather appropriate data for the research context.

#### Measures

Strategy Role Commitment: We measured "Strategy Role Commitment" by customizing the scale developed by Noble and Mokwa (1999) for the context of our research. Our measure was designed to capture the degree of commitment to a specific marketing strategy that had been implemented in the sales division for a reasonable amount of time (see Appendix II). We provided a brief description of the strategy before asking respondents to rate their level of commitment to the strategy.

Strategy Implementation Success: "Strategy Implementation Success" was measured using objective company data on the performance of each sales unit, consisting of a district manager and corresponding salespeople, in the implementation of a focal marketing strategy. In this paper, we used sales quota achievement of the new products as a measure of implementation success in each sales unit. Since our questionnaire was distributed and collected in the beginning stages of the strategy implementation process in each company, we collected objective

performance data for a period of three months after the questionnaire data collection in order to consider a time lag between the antecedent (i.e., strategy role commitment) and consequence (i.e., strategy implementation success) variables.

Identifying Influential Subordinates: Using the nomination method, we asked each salesperson to identify an exhaustive list of salespeople in his/her sales district that he/she refers to for advice about work-related matters. The nomination method has long been known to be a reliable means of measuring social networks (Marsden 1990). We also measured the strength of the advice-seeking ties by asking respondents to indicate how often they interact with the nominated peers to seek advice on work-related matters (1 = "seldom", 7 = "very often"). Next, we calculated the weighted in-degree centrality of a given salesperson in her sales district based on Freeman's (1978) approach by summing the total strength of ties a salesperson receives from colleague salespeople in the same sales district and dividing the result by the number of salespeople in the sales district (i.e., the maximum possible number of incoming ties). In each sales district, the salesperson with the highest score among peers on the measure of centrality was selected as the "influential salesperson". We used a similar procedure to identify the "influential district manager" in the social network among district sales managers.

Strength of Network Ties between Managers and Subordinates: We measure the strength of network ties between subordinates (i.e., salespeople or district managers) and their corresponding manager (i.e., district managers or regional managers) by asking subordinates to indicate how often they interact with their manager to seek advice on work-related matters (1 = "seldom", 7 = "very often").

Regional and District Manager's In-degree Centrality: As mentioned before, we measured the strength of advice-seeking ties between subordinates and their corresponding manager. Before calculating a manager's in-degree centrality, we excluded the influential subordinate in order to separate out a manager's network tie with the influential subordinate from his/her ties with the rest of the subordinates in the unit. Next, we used Freeman's (1978) approach to calculate the weighted in-degree centrality of each district manager in his/her sales unit by summing the strength of incoming ties that each district manager received from his/her salespeople and dividing the result by the number of salespeople working with the district manager (i.e., the maximum possible number of incoming ties). A similar method was used to calculate a regional manager's in-degree centrality among his/her district managers.

Influential Subordinate's Betweenness Centrality: In this study, we used Freeman, Borgatti and White's (1991) measure of flow betweenness centrality. This measure of betweenness centrality takes into account the strengths of social network ties linking various pairs of individuals.

Moreover, it determines flows on the basis of all the independent paths in the network because people do not necessarily restrict their communication to the shortest paths in their networks<sup>1</sup>.

Control Variables: We controlled for several factors that could potentially influence a sales unit's strategy implementation success. We controlled for the average sales experience of salespeople in each business unit (number of years working in the sales job), and the work experience of a business unit's district manager (number of years working as the district sales manager), using objective data provided by the companies. Moreover, since the strategy implementation scenarios in this study were mainly related to new product launch, we controlled

<sup>&</sup>lt;sup>1</sup> To study the algorithm for calculating betweenness centrality please refer to Borgatti and White (1991)

for salespeople's "New Product Knowledge" by adapting a four-item measure from Behrman and Perreault (1982).

## **Analytical Approach**

In our datasets, salespeople were nested within district managers who in turn were nested in a sales region led by a regional manager. Moreover, in our model, influential district managers/salespeople' SRC mediates the relationship between regional/district managers' SRC and other district managers/salespeople's SRC. In order to take this data/model structure into account, we employed hierarchical linear modeling (HLM) (Raudenbush and Bryk 2002) and an HLM path model to test our hypotheses. Mplus software (Muthén and Muthén 2004) was used for analysis because, in multilevel datasets, this program permits the analysis of top-down linkages that include mediators. Since Mplus does not allow the simultaneous estimation of three-level models, we broke the model into two separate parts: "part A" included the constructs of level 3 and level 2, and "part B" was comprised of the constructs in level 2 and level 1. Each part was separately estimated in Mplus using the following regression paths:

Part A: Level 3/Level 2 – Regional Manager's SRC → District Manager's SRC

Influential district manager's SRC as the dependent variable (within-level regression)

Level 3: 
$$IDM_{SRCj} = \beta_{0j} + \beta_{1j}(RM_{SRCj}) + \beta_{2j}(TieS_j) + \beta_{3j}(RM_{SRCj} \times TieS_j) + r_j$$

District manager's SRC as the dependent variable (between-level regression)

Level 2: 
$$DM_{SRCij} = \beta_{0j} + r_{ij}$$

Level 3: 
$$\beta_{0j} = \gamma_{00} + \gamma_{01}(RM_{SRCj}) + \gamma_{02}(RM_{IDCj}) + \gamma_{03}(RM_{SRCj} \times RM_{IDCj}) + \gamma_{04}(IDM_{SRCj}) + \gamma_{05}(IDM_{BCj}) + \gamma_{06}(IDM_{SRCj} \times IDM_{BCj}) + u_{0j}$$

Part B: Level 2/Level 1 – District Manager's SRC → Salesperson's SRC

Influential salesperson's SRC as the dependent variable (within-level regression)

Level 2: 
$$ISP_{SRCj} = \beta_{0j} + \beta_{1j}(DM_{SRCj}) + \beta_{2j}(TieS_j) + \beta_{3j}(DM_{SRCj} \times TieS_j) + r_j$$

Salesperson's SRC as the dependent variable (between-level regression)

Level 1: 
$$SP_{SRCij} = \beta_{0j} + r_{ij}$$

Level 2: 
$$\beta_{0j} = \gamma_{00} + \gamma_{01}(DM_{SRCj}) + \gamma_{02}(DM_{IDCj}) + \gamma_{03}(DM_{SRCj} \times DM_{IDCj}) + \gamma_{04}(ISP_{SRCj}) + \gamma_{05}(ISP_{BCj}) + \gamma_{06}(ISP_{SRCj} \times ISP_{BCj}) + u_{0j}$$

We applied OLS regression to test the impact of salespeople's SRC on each business unit's strategy implementation success:

$$SIPS_i = \alpha_{0i} + \alpha_{1i}(\overline{SP_{SRCti}}) + \alpha_{2i}(\overline{SP_{SEXPti}}) + \alpha_{3i}(DM_{WEXPi}) + \alpha_{4i}(\overline{SP_{PKNOWti}}) + \epsilon_i$$

where (1) at the salesperson level:  $SP_{SRC}$  = Salesperson's Strategy Role Commitment,  $SP_{SEXP}$  = Salesperson's Sales Experience,  $SP_{PKNOW}$  = Salesperson's Product Knowledge,  $ISP_{SRC}$  = Influential Salesperson's Strategy Role Commitment,  $ISP_{BC}$  = Influential Salesperson's Betweenness Centrality, (2) at the district manager level:  $DM_{SRC}$  = District Manager's Strategy Role Commitment,  $DM_{WEXP}$  = District Manager's Work Experience,  $DM_{IDC}$  = District Manager's In-degree Centrality,  $IDM_{SRC}$  = Influential District Manager's Betweenness Centrality, (3) at the regional manager level:  $RM_{SRC}$  = Regional Manager's Strategy Role Commitment,  $RM_{IDC}$  = Regional Manager's In-degree Centrality, TieS = Strength of Network Tie, BUSIS = Strategy Implementation Success of a Sales Business Unit.

### **RESEARCH PROCEDURE AND RESULTS – STUDY 1**

## **Sample Description**

As we mentioned before, the media company had recently designed a new marketing strategy to shift its focus from selling print advertisement products to offering digital ads to its customers. The sales department was mainly involved with selling the new products to the target markets.

During the beginning stages of the new product strategy implementation, we sent the survey to all the salespeople and sales managers who were involved with the implementation of this new product strategy. The final dataset included 65 district managers (88% response rate), who worked under 12 regional managers (90%) and supervised 433 salespeople (65% response rate). We tested for systematic differences between the responses of early and late respondents on both demographic variables and major constructs; unanimously, the results yielded insignificant effects. A brief description of the sample is provided in table 1.

Although our comprehensive theoretical model consisted of three levels (regional managers, district managers and salespeople), we had a limited number of respondents from level three (12 regional managers) in this dataset. Thus, we decided to test a two-level model between district managers and salespeople in study 1 and test the full three-level model with the dataset from study 2.

#### Measurement Model

Although all the scales in this study were either adapted from or developed based on previously tested measures in literature, we conducted an exploratory factor analysis to validate the scales. The results showed that all items loaded on their corresponding factors. An additional

confirmatory factor analysis on the focal constructs also resulted in acceptable fit indexes ( $\chi 2$  = 17.31, d.f. = 7, comparative fit index = .96, Tucker-Lewis index = .91). Table 2 reports the descriptive statistics, reliability indexes, average variance extracted, and correlation matrix of the focal constructs that were included in the factor analysis. As represented in this table, all the constructs have Cronbach alphas larger than .70 and average variances extracted exceed .50. These results indicate that our measures are highly reliable. Moreover, since the average variance extracted values for all constructs exceeded the squared correlations between each respective pair, the constructs also exhibited discriminant validity (Fornell and Larcker 1981). In order to justify the aggregation of "strategy role commitment" data to the business unit level, we calculated r<sub>wg</sub>, ICC1 and ICC2. Our analysis of the intra-class correlations justified aggregation to higher levels (ICC1 = 0.16, ICC2 = 0.66, median  $r_{wg}$  = 0.75). More specifically, the ICC1 value, which represents between-group variance, is similar to those reported by previous researchers who justified data aggregation on this basis (Bliese 2000; Grizzle et al. 2009). The ICC2 value, which represents group mean reliability, is above .70, which exceeds the conventional threshold (Ehrhart, Bliese, and Thomas 2006). Finally, the median r<sub>wg</sub> is also above those reported in the literature (Schneider, White, and Paul 1998).

## **Hypotheses Testing**

Main Effects. Table 4 summarizes the results for our HLM path model. In support of H1b hypothesis, we found that district manager's SRC has a significant positive impact on salesperson's SRC (H1b:  $\gamma = .32$ , p < .05). Moreover, the influential salesperson's SRC leads to a higher level of salespeople's SRC (H2b:  $\gamma = .12$ , p < .05). However, we found that a district manager's SRC does not have a significant main effect on the influential salesperson's SRC (H3b:  $\gamma = .09$ , p > .05). Overall, our findings demonstrate that strategy role commitment has a

cascading effect and transfers from district managers to their salespeople, and from influential salespeople to their peers. However, in contrast with other salespeople, the *influential* salesperson does not seem to be strongly influenced by a district manager's SRC.

H7 predicts that sales business units in which salespeople are, on average, more committed to a strategy achieve higher levels of success in the strategy implementation process. In order to test this hypothesis, we applied an ordinary least squares regression of the average (per person) sales quota achievement of the new products (i.e. strategy implementation success) on the average SRC of salespeople in a business unit. We found strong support for the hypothesized positive relationship ( $\beta = .41$ , p<.05, R<sup>2</sup> = .06).

Moderation Effects. Consistent with our prediction, we found that a district manager's in-degree centrality positively moderates the relationship between the manager's SRC and salespeople's SRC (H4b:  $\gamma = .15$ , p < .05). Thus, the transfer of SRC from a manager to salespeople will be stronger if the manager possesses a more central position in the social network among his/her subordinates. Moreover, strength of the network tie between a district manager and the influential salesperson positively moderates the impact of manager's SRC on the influential salesperson's SRC (H5b:  $\gamma = .23$ , p < .05). This means that the existence of a strong social network tie between a district manager and the influential salesperson will greatly help the manager create alignment between his/her SRC and the influential salesperson's SRC. We also found that an influential salesperson's betweenness centrality positively moderates the effect of influential salesperson's SRC on peer salespeople's SRC (H6b:  $\gamma = .16$ , p < .05). This finding provides support for our hypothesis that an influential salesperson's degree of impact on peers during strategy implementation is not only a function of the individual's in-degree centrality, but

also the extent to which the central salesperson can manipulate and regulate the flow of information and attitudes inside the business unit's social network.

#### **RESEARCH PROCEDURE AND RESULTS – STUDY 2**

### **Sample Description**

The second company was a *Fortune 500* firm in the cleaning and sanitization industry which had developed a set of new products and its goal was to shift the sales efforts toward selling these new products to its market segments. The dataset from this company includes 228 district managers (95% response rate), who work under 31 regional managers (100% response rate) and manage 1,437 salespeople (71% response rate). Again, we did not find systematic differences between the responses of early and late respondents on both demographic variables and major constructs. A brief description of the sample is provided in table 1.

#### **Measurement Model**

We conducted an exploratory factor analysis and the results showed that all items loaded on their corresponding factors. An additional confirmatory factor analysis also resulted in acceptable fit indexes ( $\chi 2 = 33.5$ , d.f. = 16, comparative fit index = .95, Tucker–Lewis index = .92). We have reported the descriptive statistics, reliability indexes, average variance extracted, and correlation matrix of the focal constructs in table 3. Again, all the constructs had Cronbach alphas larger than .70, average variances extracted exceeded .50, and the constructs exhibited discriminant validity. We also conducted tests to justify the aggregation of SRC to higher levels. All of our tests justified aggregation to level 2 and level 3 (ICC1 = 0.16, ICC2 = 0.72, median Rwg = 0.81).

### **Hypotheses Testing**

Main Effects. Results for study 2 are reported in table 5. The patterns of findings at the higher level (level  $3 \rightarrow$  level 2) were consistent with those at the lower level (level  $2 \rightarrow$  level 1). We found that regional manager's SRC has a significant positive effect on district manager's SRC (H1a:  $\gamma = .27$ , p < .05). At the same time, an influential district manager's SRC also leads to a higher level of peer district managers' SRC (H2a:  $\gamma = .17$ , p < .05). However, our results show that a regional manager's SRC does not directly enhance the influential district manager's SRC (H3a:  $\gamma = .10$ , p > .05). At a lower organizational level, we again found that a district manager's SRC has a positive direct effect on salespeople's SRC (H1b:  $\gamma = .19$ , p < .05) and an influential salesperson's SRC enhances peer salespeople's SRC (H2b:  $\gamma = .12$ , p < .05). Again, our results demonstrate that a district manager's SRC does not have a direct main impact on the influential salesperson's SRC (H3b:  $\gamma = .07$ , p > .05). The overall pattern of results demonstrates the flow of strategy role commitment from higher level sales managers to their subordinates and from influential subordinates to their peers. Similar to the results from study 1, we observed that, in contrast with peers, an influential subordinate is not directly affected by his/her corresponding manager's level of SRC when the social network tie between the manager and the influential subordinate is weak.

Moderation Effects. At both levels, we found that the transfer of SRC from a manager to subordinates will be stronger if the manager possesses a more central position in the social network among his/her subordinates(H4a:  $\gamma = .16$ , p < .05) (H4b:  $\gamma = .13$ , p < .05). In addition, strength of the social network tie between a manager and the influential subordinate at both levels positively moderates the impact of manager's SRC on the influential subordinate's SRC (H5a:  $\gamma = .19$ , p < .05) (H5b:  $\gamma = .15$ , p < .05). These findings reveal the fact that managers are

not very successful in transferring their SRC to the influential subordinates unless they build strong network ties with these important actors.

We did not find a significant result for the moderation effect of the influential district manager's betweenness centrality (H6a:  $\gamma = .08$ , p > .05). However, an influential salesperson's betweenness centrality positively moderates the effect of the influential salesperson's SRC on peer salespeople's SRC (H6b:  $\gamma = .14$ , p < .05). Again, we observed that an influential salesperson's degree of SRC impact on peers depends on the extent to which the influential salesperson stands on the lines of communication between salespeople inside a business unit's social network (i.e., high betweenness centrality).

### **DISCUSSION**

Hartline, Maxham, and McKee (2000) argue that work group socialization plays a critical role in the dissemination of a firm's strategy from the top management to the frontline. Our study is an attempt to identify the underlying social network structures through which marketing strategies actually flow inside a firm. Our results indicate that during marketing strategy implementation through B2B sales forces, formal managers are not the only source of influence on subordinates with regard to strategy commitment. We found that, in addition to formal managers, subordinates with a high level of in-degree and betweenness centrality in the social network among peers have a significant degree of impact on peers' strategy commitment. These findings confirm the existence of "distributed-leadership" in sales units (Mehra et al. 2006) and have important theoretical and managerial implications.

### **Theoretical Implications**

Previous literature has traditionally provided a leader-centered perspective in which leadership is mainly seen as a top-down process between leaders and subordinates (Yukl 2002). More contemporary research, however, has challenged this perspective by providing evidence that, in addition to formally assigned leaders, informal leaders usually emerge in organizational units (Gronn 2002) and influence their peers' workplace emotions, attitudes, and behaviors (Mehra et al. 2006). In this study, we showed through empirical studies in B2B sales units that informal leaders (i.e., influential subordinates) play key roles during marketing strategy implementation and strongly influence their peers' level of commitment to marketing strategies. These findings contribute to the small amount of empirical research on the "distributed leadership" theory in teams (Gronn 2002) and highlight the existence of dual leadership processes in sales units.

In addition, very limited research has been conducted on the interplay between social actors' position in the organizational hierarchy and their social network centrality. We enrich this understanding by showing that managers who are more central among their subordinates are more effective than less central counterparts at aligning their subordinates with their own cognitions about a strategy implementation situation. This finding contributes to the theoretical discussion about the benefits of combining formal power with informal power over subordinates when a manager is seeking to enhance the performance of his/her group (e.g., Balkundi and Harrison 2006).

Our results also indicate that, during strategy implementation, the impact of a subordinate on peers in a sales unit does not only stem from her direct ties with peers, but also the extent to

which she stands on the lines of communication between peers and is capable of regulating the flow of information and influence inside the social network. This finding supports the theoretical perspective which views in-degree and betweenness centrality as "complementary" rather than "alternative" measures of influence (Friedkin 1991; Knoke and Burt 1993). In fact, we empirically show that before a group has reached equilibrium regarding a new opinion (e.g., a new strategy in the case of this study), the impact of actors with the largest immediate influence (i.e., influential subordinates) on the formation of opinions in the group is strengthened by the "mediating" social position of these actors.

Our research contributes to application of "social contagion" theory in organizations (Degeoy 2000) by showing that although strong ties result in similarities between the attitudes and behaviors of leaders and subordinates, having a weak tie between the manager and the influential subordinate in a sales group may create discrepancies and potential tensions between the formal and the informal leader. We believe that such a weak tie signals a low level of interaction between formal and informal leaders regarding important workplace phenomena such as new strategies and work processes. Thus, a fragmented leadership structure may emerge in sales groups and strategy implementation efforts may become non-synchronized and uncoordinated (Mehra et al. 2006). As we can see in the results, a weak tie intensifies the discrepancies between formal managers and influential subordinates in terms of their strategy role commitment.

### **Managerial Implications**

During a marketing strategy implementation process, one of the major goals of managers is to motivate their subordinates and obtain their commitment to the firm's strategic initiatives.

To accomplish this goal, managers may rely on a variety of formal and informal influence

mechanisms and incentive systems. This study specifically investigates how managers should utilize social network structures inside their sales business units in order to maximize the transfer of SRC to subordinates. Our findings suggest three major routes through which manager can reach their objective:

First, developing a wide and strong social network with subordinates inside the sales unit will provide managers with a strong tool to transfer their SRC to subordinates. In addition, it is crucial for managers to build strong social network ties with the most in-degree central subordinates in their business units in order to align them with the goals of the marketing strategy. With this approach, managers can indirectly affect the SRC level their subordinates by going through the most influential actors. This strategy is especially effective when a manager has limited resources and developing a wide number of strong network ties with all the subordinates is costly and time-consuming. In cases where, for various reasons, a manager does not have a strong tie with the influential subordinate, he/she should rely on his/her own social network among subordinates in order to affect them with regard to SRC. However, the manager may not be very successful in this process if the influential subordinate has a low SRC level and is sending negative signals to peers about the strategy. This further highlights the importance of identifying the most central subordinates in sales units and building strong network ties with them for the purpose of effective dissemination of SRC.

Middle-level managers who do not possess strong network ties with the influential subordinates and believe that influential actors may send negative signals about a marketing strategy to their peers may be able to reduce the power and influence of these individuals by manipulating the social network structures inside their sales units. We found that a high "betweenness centrality" helps influential subordinates increase their SRC impact on peers.

Betweenness centrality basically occurs when an influential subordinate stands on the lines of communication between other employees who have not developed strong network ties among themselves. A district manager may encourage his/her salespeople to more frequently communicate and share their knowledge with each other regarding work-related matters.

Previous literature has suggested managerial practices such as building shared vision, nurturing interpersonal trust and empowering leadership as effective mechanism for developing informal knowledge-sharing networks in groups (Abrams et al. 2003; Srivastava, Batrol and Locke 2006).

Our findings also inform managers that resistance to change during strategy implementation does not only stem from strategy-, firm-, or manager-related factors but also from peer-influence during the process. In order to understand these peer-influence patterns, firms may follow the method of this study for mapping the social network structures in sales business units to identify the most critical organizational players in the implementation process. In the next step, managers can leverage or even manipulate the social networks in their units in order to successfully implement marketing strategies.

#### **Limitations and Future Research**

The empirical findings in this study are subject to a number of limitations. First, while strategy implementation is a longitudinal process, the dataset in this study is cross-sectional. The cross-sectional data does not allow us to examine how SRC of different organizational actors forms and evolves over time. Moreover, we assume that social networks among individuals remain unchanged during the course of marketing strategy implementation. While social networks usually form and establish over longer periods of time, future research should study whether social networks change during a strategy implementation process. Ideally, it would be

interesting to apply dynamic methods of network-behavior change (e.g., Snijders et al. 2010) to a longitudinal dataset in order to study how SRC and social networks evolve and influence one another over time.

Second, this study was focused on "advice-seeking" social networks. Advice-seeking networks have been known as major conduits of work-related knowledge among employees (Ibarra 1993). However, other types of networks such as friendship and trust networks may also play critical roles during strategy implementation and need to be studied in future research. Furthermore, sales business units are not isolated and social networks may exist across sales business units and also between sales business units and other organizational functions such as marketing, engineering and manufacturing. Studying the role of such networks during strategy implementation will undoubtedly provide useful managerial insights.

Third, among different types of strategies implemented through B2B sales forces, we only studied new product strategy implementation. Future research should investigate other popular types of strategies such as market development, customer service plans, and customer engagement programs that are usually implemented through B2B sales forces. The impact of social networks on the implementation process may vary based on the content and implementation method of each strategy. In addition, social network may not only influence the implementation but also the design and development phases of strategies. Scholar should look into the interaction of social networks with different phases of a strategy cycle in order to provide managerial insights of how social networks can be optimally utilized at each step.

Finally, we only examined the consequences of social networks during strategy implementation. Future research needs to be conducted to understand how informal social

networks develop or decay in sales forces (Burt 2002), and what sales managers can do to build effective network structures inside their units (Brass 2011). Furthermore, it would be useful to study how individual attributes of salespeople may interact with social network patterns to affect individual, group and organizational outcomes (Zhou et el. 2009).

TABLE 1
Description of Samples

	Experience in the	Work	Experience with	Age	
Level	current position	Experience	Company	(years)	
	(years)	(years)	(years)	(years)	
Study 1					
Level 3: Regional Managers					
(N= 12; 16% female)					
Mean	12.30	21.71	13.90	47.73	
S.D	5.21	8.17	6.45	6.06	
Level 2: District Managers					
( N = 65; 15.38% female)					
Mean	10.60	18.30	11.85	41.48	
S.D.	2.93	7.13	6.19	6.87	
Level 1: Salespeople					
(N = 433; 30.02%  female)					
Mean	8.50	12.20	10.37	33.29	
S.D.	2.78	6.77	4.30	7.15	
Study 2					
Level 3: Regional Managers					
(N= 31; 6.45% female)					
Mean	12.22	20.69	18.07	49.51	
S.D	4.45	9.01	8.65	6.06	
Level 2: District Managers					
(N = 228; 12.28%  female)					
Mean	7.11	15.90	12.13	44.23	
S.D.	3.73	7.55	8.03	7.42	
Level 1: Salespeople					
(N = 1437; 25.61%  female)					
Mean	5.51	13.31	8.49	34.18	
S.D.	3.83	7.87	6.21	8.20	

TABLE 2
Study 1 – Means, Standard Deviations, and Intercorrelation Matrix

Variables	1	2	3	4	5	6	7	8	9	10
SP										
1. SPSRC	(.72)									
2. SPSEXP	.035	-								
3. SPKNOW	.072	.107*	(.80)							
ISP										
4. ISPSRC	.104*	.003	.007	(.75)						
5. ISPBC	.055	.011	.021	.030	•					
DM										
6. DMSRC	.122**	.001	.011	.090*	.014	(.82)				
7. DMWEXP	.043	.023	.020	.066	.009	.035	-			
8. DMIDC	.101	.009	.008	.012	.005	.041	.097*	•		
9. TIS (DM →ISP)	.039	.104	.001	.050	002	.014	.008	.031	-	
BU										
10. BUSIS	.213**	.164**	.191**	.088	.099	.116*	.087*	.104*	.024	-
M	5.71	6.77	5.97	5.40	.32	5.88	10.60	.52	5.1	.87
SD	1.29	2.15	1.25	1.38	.10	1.49	2.93	.21	1.6	.19
AVE	.66	-	.70	.62	-	.73	-	-	-	-

<sup>\*</sup>p < .10, \*\*p < .05 (two-tailed). \*Constructs are measured by a single item.

Notes: AVE = average variance extracted, Correlations based on scores disaggregated per employee are below the diagonal (n = 433), and Cronbach's (1951) internal consistency reliability coefficients appear on the diagonal. (1) at the salesperson level: SPSRC= Salesperson's Strategy Role Commitment, SPSEXP = Salesperson's Sales Experience, SPKNOW = Salesperson's Product Knowledge, ISPSRC = Influential Salesperson's Strategy Role Commitment, ISPBC= Influential Salesperson's Betweenness Centrality, (2) at the district manager level: DMSRC = District Manager's Strategy Role Commitment, DMWEXP= District Manager's Work Experience, DMIDC = District Manager's In-degree Centrality, TIS = Network Tie Strength, SBUSIS = Strategy Implementation Success of a Sales Business Unit.

TABLE 3
Study 2 – Means, Standard Deviations, and Intercorrelation Matrix

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
SP															
1. SPSRC	(.70)														
2. SPSEXP	.013	-													
3. SPKNOW	.044	.089	(.77)												
ISP															
4. ISPSRC	.991*	003	.011	(.71)											
5. ISPBC	.045	.007	.049	.004	•										
DM															
6. DMSRC	.119**	005	.013	.055	.027	(.79)									
7. DMWEXP	.002	.036	.065	.005	.011	.080	•								
8. DMIDC	.070	.036	.004	.010	.003	.009	.087*	-							
9. TIS (DM→ISP)	002	.012	.041	.100	.057	.014	.019	019	-						
IDM															
10. IDMSRC	.074	.044	.004	.056	.003	.011	.007	009	.021	(.72)					
11. IDMBC	006	.081	.022	.047	.005	.021	.035	.007	.030	.003	-				
RM															
12. RMSRC	.071	002	.076	.021	.058	.152**	.039	.001	.040	.101*	.032	(.73)			
13. RMIDC	.005	011	.044	.009	.008	.091	.054	.009	016	.070	.033	.019	-		
14. TIS (RM→IDM)	.048	019	007	.021	.087	.036	008	.066	.003	004	.029	.016	.019	-	
BU															
15. BUSIS	.277**	.163**	.201**	.095*	.031	.119*	.107*	.081	.019	.105*	.060	.101*	.043	.039	-
M	5.88	5.54	5.97	6.03	.41	6.15	7.12	.41	4.67	5.87	.39	6.01	.57	5.50	.92
SD	1.70	3.84	1.25	1.89	.13	1.77	3.73	.13	1.62	1.29	.10	1.56	.11	1.45	.23
AVE	.66	-	.70	.62	_	.73		_	•	.64	-	.68		-	_

<sup>\*</sup>p < .10, \*\*p < .05 (two-tailed). \*Constructs are measured by a single item.

Notes: AVE = average variance extracted, Correlations based on scores disaggregated per employee are below the diagonal (n = 433), and Cronbach's (1951) internal consistency reliability coefficients appear on the diagonal. (1) at the salesperson level: SPSRC= Salesperson's Strategy Role Commitment, SPSEXP = Salesperson's Sales Experience, SPKNOW = Salesperson's Product Knowledge, ISPSRC = Influential Salesperson's Strategy Role Commitment, ISPBC= Influential Salesperson's Betweenness Centrality, (2) at the district manager level: DMSRC = District Manager's Strategy Role Commitment, DMWEXP= District Manager's Work Experience, DMIDC = District Manager's In-degree Centrality, TIS = Network Tie Strength, IDSRC = Influential District Manager's Strategy Role Commitment, IDMBC = Influential District Manager's Betweenness Centrality, (3) at the regional manager level: RMSRC = Regional Manager's Strategy Role Commitment, RMIDC = Regional Manager In-Degree Centrality, BUSIS = Strategy Implementation Success of a Sales Business Unit.

**TABLE 4** Study 1 - Estimated Path Coefficients of the Two-Level Model: District Managers, and Salespeople

	•						
	Dependent Variables (Quota Achievement of New Products)						
<u> </u>	Γ (standardized)	SE	t-Value				
Direct Effects							
H1b: DMSRC → SPSRC	.32**	.07	4.57				
H2b: ISPSRC → SPSRC	.14**	.06	2.33				
H3b: DMSRC → ISPSRC	.09	.10	.91				
Interaction Effects							
H4b: DMSRC × DMIDC	.15**	.05	3.06				
H5b: DMSRC × TIS	.23**	.03	7.67				
H6b: ISPSRC × ISPBC	.16**	.06	2.66				
D. C.							
Performance Outcome H7: (average) SPSRC → BUSIS	.41**	.07	5.85				
Controls		:					
(average) SPSEXP	.13**	.02	6.51				
(average) SPKNOW	.20**	.04	5.05				
DMWEXP	.15**	.07	2.14				

Notes: (1) at the salesperson level: SPSRC= Salesperson's Strategy Role Commitment, SPSEXP = Salesperson's Sales Experience, SPKNOW = Salesperson's Product Knowledge, ISPSRC = Influential Salesperson's Strategy Role Commitment, ISPBC= Influential Salesperson's Betweenness Centrality, (2) at the district manager level: DMSRC = District Manager's Strategy Role Commitment, DMWEXP= District Manager's Work Experience, DMIDC = District Manager's In-degree Centrality, TIS = Network Tie Strength.

<sup>\*</sup>p < 0.10 \*\*p < 0.05

TABLE 5 Study 2 – Estimated Path Coefficients of the Three-Level Model: Regional Managers,
District Managers, and Salespeople

	Dependent Variables	of New Products)	
	Γ (standardized)	SE	t-Value
Direct Effects			
H1a: RMSRC → DMSRC	.27**	.03	8.97
H2a: IDMSRC → DMSRC	.17**	.04	4.25
H3a: RMSRC → IDMSRC	.10	.08	1.25
H1b: DMSRC → SPSRC	.19**	.02	9.55
H2b: ISPSRC → SPSRC	.12**	.01	11.96
H3b: DMSRC → ISPSRC	.07	.07	1.02
Interaction Effects			
H4a: RMSRC × RMIDC	.16**	.07	2.28
H5a: RMSRC × TIS	.19**	.03	6.33
H6a: IDMSRC × IDMBC	.08	.06	1.33
H4b: DMSRC × DMIDC	.13**	.04	3.25
H5b: DMSRC × TIS	.15**	.05	3.07
H6b: ISPSRC × ISPBC	.14**	.06	2.33
Performance Outcome			
H7: (average) SPSRC → BUSIS	.37	.05	7.43
Controls			
(average) SPSEXP	.18**	.03	6.03
(average) SPKNOW	.14**	.04	3.51
DMWEXP	.11*	.06	1.83

<sup>\*</sup>p < 0.10 \*\*p <0.05

FIGURE 1: Conceptual Framework - Implementation of Marketing Strategies through B2B Sales Forces

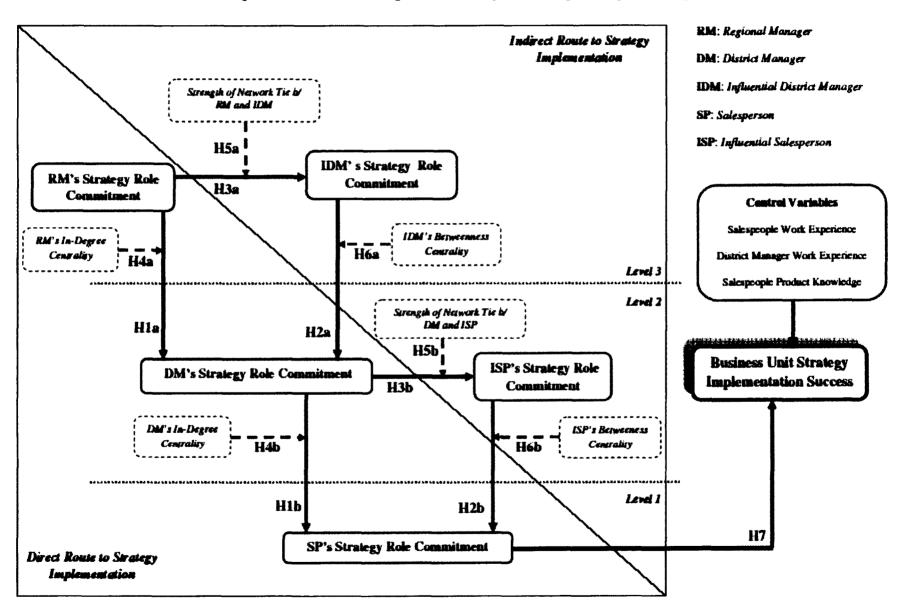
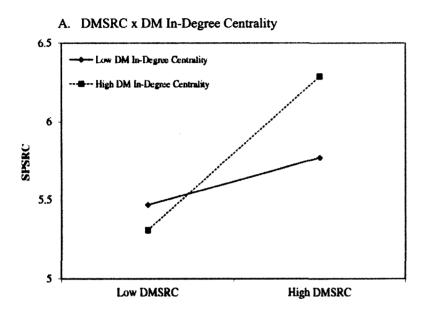
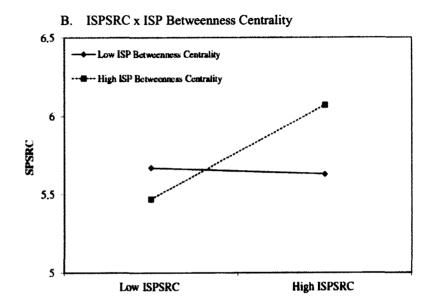


FIGURE 2: Study 1 - Moderation Effects





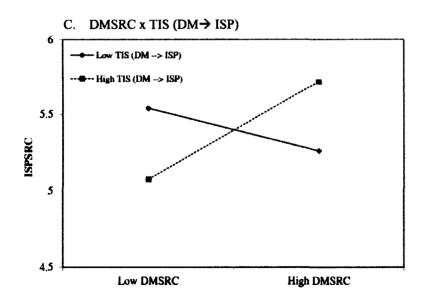
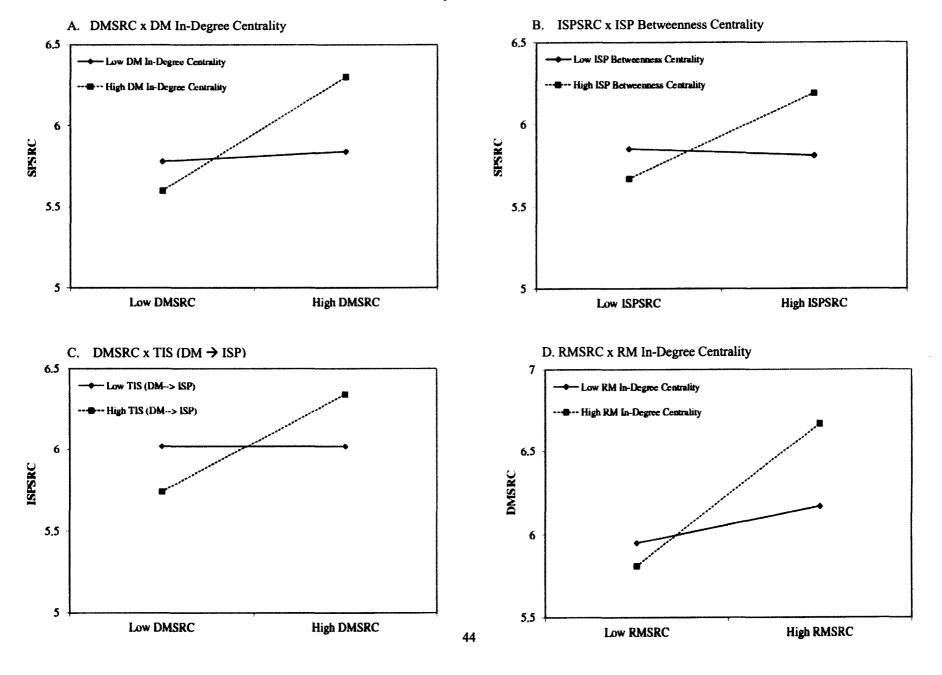
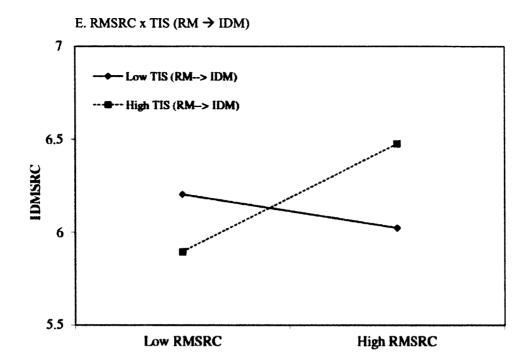


FIGURE 3: Study 2 – Moderation Effects





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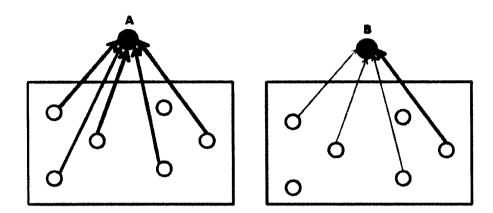
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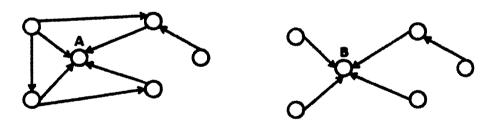
# Appendix I – Social Networks

## A- Social Networks between Managers and Subordinates



Note: Compared to manager B, manager A has a larger number of ties and stronger ties with subordinates. Thus, manager A has a higher "in-degree centrality" among subordinates in the sales business unit. A sales business unit may consist of a regional sales manager and her district sales managers, or a district sales manager and her salespeople.

## **B- Social Networks among Peers**



Note: In the network among peers, both "A" and "B" have the largest in-degree centrality among peers and are considered "Influential Subordinates". However, actor B is a gatekeeper in her network and stands on most of the possible lines of communication in the network. In fact, compared to actor A, actor B has a higher "betweenness centrality" in the network of peers.

# Appendix II - Study Measures

**Strategy Role Commitment** (1= Strongly Disagree, 7= Strongly Agree):

Adopted from Noble and Mokwa (1999)

(a brief description of the specific marketing strategy that the firm is currently striving to implement through its sales forces will be provided here)

- 1- I intend to execute this strategy to the fullest extent of my ability.
- 2- I am committed to my role in implementing this strategy.
- 3- I intend to expend a great deal of effort in carrying out my responsibilities in this strategy.
- 4- I am determined to meet my assigned objectives in this strategy.

## **Product Knowledge** (1= Strongly Disagree, 7= Strongly Agree):

Adapted from Behrman and Perreault (1982)

- 1. I know the design and specifications of company products very well.
- 2. I know the applications and functions of company products very well.
- 3. I am able to detect causes of operating failure of company products.
- 4. I keep abreast of our company's production and technological developments.