CROSS-FUNCTIONAL INTEGRATION AT THE FRONTLINE OF THE RETAIL CHANNEL

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INTRODUCTION

Cross-functional integration has become critical in the retail industry in part because marketing events have become more complex and increasingly more dependent on frontline employees for implementation. In recent years, research has highlighted the importance of marketing and logistics managers working together for marketing execution (Esper *et al.*, 2010; Ellinger *et al.*, 2006), but little is known about cross-functional integration at the frontline (Arndt *et al.*, 2012). This research explores cross-functional integration across the frontline networks of two different distribution structures within a consumer package goods (CPG) firm. Thus, the integration literature will be extended beyond the corporate or team level, to the frontline of the firm. Further, this research expands knowledge of the contexts in which cross-functional integration takes place by investigating multiple ways frontline employees interact.

BACKGROUND

Cross-functional integration seems progressively more feasible due to increased communication and information sharing capabilities. Companies have embraced electronic data interchanges (EDI), point-of-sale systems (POS) that track shopper buying patterns, and inter/intrafirm intranet systems. The complexity of information and knowledge has increased with accessibility, which may partially explain why the ability to execute marketing strategies throughout firm operations (production, logistics, and purchasing) has not been equally reflected in increased supply chain performance (Bozarth, *et al.,* 2009; Fisher 1997).

The importance of crossing the "great divide" or integrating marketing and operations functions in order to achieve both operational efficiency and marketing effectiveness is widely accepted in the supply chain and management literature (Drucker 1973; Lambert *et al.*, 2005; Mentzer *et al.,* 2001; Sabath and Whipple 2004; Walters 2006). In light of the augmented complexity of current marketing strategies, the integration of demand and supply functions is increasingly recognized as a path to successfully managing the supply chain to create customer value (Esper *et al.*, 2010). One way of achieving demand and supply integration is through managing the processes of knowledge generation, dissemination, shared interpretation, and application (Esper *et al.*, 2010; Nonaka 1994; Nonaka and Takeuchi 1995). Another stream of research has further focused on the use of social networks to improve knowledge creation and sharing through exploration of the knowledge network (Cross *et al.*, 2001). Thus, the interpersonal transfer of knowledge through the informal structure of social links between employees across functional areas provides the focal area of interest in the current research.

RESEARCH METHODS

A sponsoring CPG firm provided access to frontline employees and their managers within two different distribution centers, one of which is a traditional distribution center in which inventory is stored on site. The other distribution center is a cross-dock location supported from a local plant. In the traditional location, both marketing and operations managers are on- site and interact with the front-line employees. At the cross-dock location, only marketing managers are on site; operations personnel are located at the plant. The front line employees' jobs revolve around selecting stock for retail stores, as well as creating and managing display space in retail stores, according to a general planogram representing the corporate marketing strategy. Frontline employees experience a high level of autonomy in performing their jobs, and are held responsible for achieving target sales and service objectives.

Social network analysis was employed to understand the nature of the participants' relationships that exist across functional boundaries. After spending time in the field observing and listening to the frontline employees and managers discuss the nature of their interactions in the retail channel, the research team developed a network survey to evaluate three specific relational interactions, including problem solving, promotional information sharing, and trust. The sponsoring CPG firm provided a roster of every employee's name at each location. Every employee was surveyed about his individual relationships with all of the other employees in his distribution center. Each respondent answered three different sets of network questions related to problem solving, promotional information sharing, and trust about each of their coworkers and each of the sales,

operations, and account managers by name. This approach is in line with social network methods highlighted by Scott & Carrington (2012).

The subsequent network data were analyzed through social network analysis methods including matrix algebra and combinatorics (graphing). First, three separate valued[i] matrices were built from the roster survey data for each district involved. Three matrices were built for each geographic location because the two networks were not connected. The matrices were two-way, 1-mode, meaning that the matrices captured the flow of information (1-mode) reciprocally (both a participant's value of others as well as the others' value of the participant (two-way)). Each resulting asymmetric matrix reflected outgoing and incoming ties between all participants. 'Asymmetric' refers to the fact that participant A may value others at a higher/lower level than they value participant A. The valued matrices were then converted to sociograms (Wasserman and Faust, 1994), representing the connections between every actor in the network.[ii] Attribute data (attributes of individual: job title, years on job, sales performance) were also collected for each participant, which created a visual depiction or sociogram that delineates the cross-functional and integrated nature of the social networks of trust, promotional information sharing, and problem solving. UCINET social network analysis software was used to analyze the matrices and build the sociograms (Borgatti, *et al.*, 2002).

RESULTS

The network analysis produced by the data from the roster surveys depicts frontline employees creating unique knowledge through different network structures. In an integrated network, frontline employees rely on their relationships with sales managers for formulating sales plans, operations managers for problem-solving in the retail store, and other frontline employees for interpretation (reflected in information trust). However, in the more centralized structure of the cross-dock distribution center, frontline employees did not report integration with operations managers, instead relying more on each other and sales management for promotional ideation and problem solving. Figure 1 reflects the structure of the networks of promotional information sharing, problem solving, and trust (information trust). Because frontline employees are connected differently in different types of networks the context in which integration takes place is reflected in these networks in different ways. Integration is built through frontline employees' access to cross-functional resources that add to their functional knowledge.

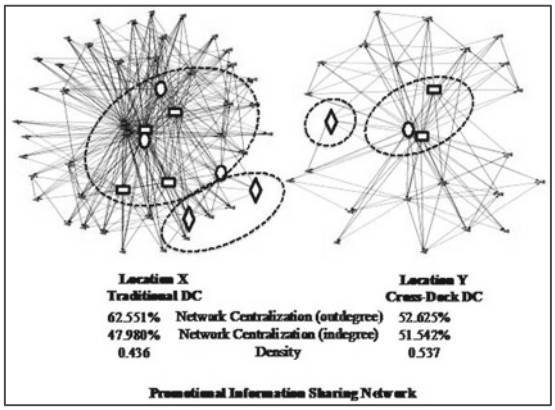
In the promotional information-sharing networks, the important links are to the direct sales managers (rectangles) who hold a great deal of the information and knowledge necessary for frontline employees to perform their jobs. The promotional information networks in both distribution centers reflect similar centrality (central location) of the sales managers in the diffusion of promotional information to frontline employees. However, operations managers (diamonds) are on the periphery of both promotional information networks, indicating that operations managers are not perceived to hold the important knowledge necessary for frontline employee implementation.

In contrast, in the traditional distribution center, the operations managers become much more central to the frontline employee network when it comes to solving problems that arise in the retail store. Thus, operations managers are much more central to the problem-solving network. Operations managers are central almost to the same degree as the frontline employees' direct sales managers when frontline employees are able to interact face to face with operations management.

This distinction between the two networks, integration taking place in the traditional but not the cross-dock, seems to indicate that integration becomes more feasible when employees have daily interactions with management. Frontline employees benefit when they have direct links to sales and operations managers who can give them access to help and information regarding inventory issues or delivery problems. This is reflected in the centrality (centrally-located position) of operations managers in Location X's problem-solving network. Although operations managers are not central at Location Y, frontline employees there described the lack of access to operations managers as a problem.

Finally, trust is fundamental to the commitment frontline employees feel towards their supervisors and the perceived support that they attribute to supervisors. This does not necessarily mean that frontline employees rely solely on supervisors for support and information. Trust is fundamental to measures of commitment and perceptions of supervisors (Mulki, *et al.*, 2008); however, the network connections that frontline employees have with each other seem to engender as much trust as those they have with supervisors. In both Location X and Y, frontline employees become more central in the trust network. This reflects that frontline employees trust knowledge and information more when they perceive that the person is out in the field, or the real world, as opposed to the managers they perceive to be sitting behind a desk.

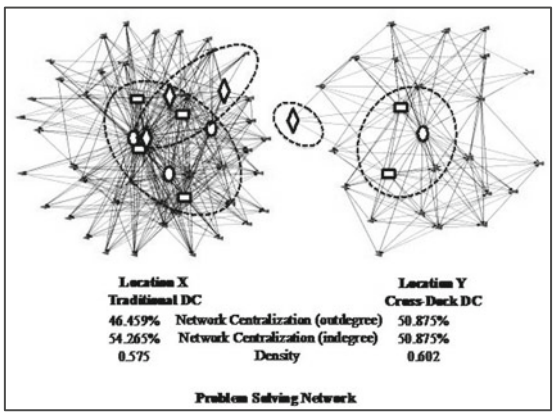
Figure 1. The Three Networks

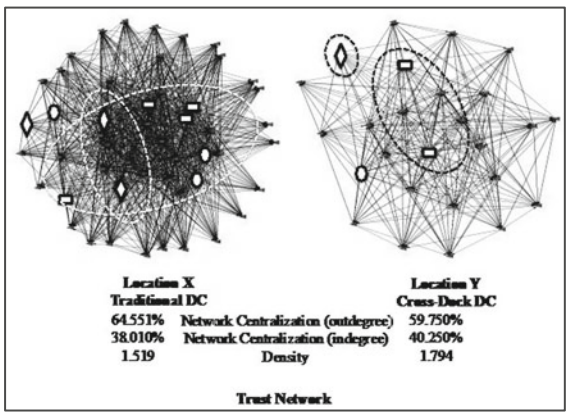


Key:

- Frontline Employees
- Frontline Managers
- Regional Managers
- Operations Employees & Managers

Most of the connections are between frontline employees. The Managers and Operations Employee's symbols have been exaggerated in size for clarity in a black-and-white figure.





DISCUSSION

Cross-functional connections enable frontline employees to gain access to information that empowers them to make more effective and efficient decisions in the retail store. Where a frontline employee is positioned in the network can impact the amount of information they have available to them. A network of promotional information sharing or problem solving alone does not provide the full picture of how frontline employees are truly embedded in the organizational network, but examining all three networks simultaneously shows the importance of relationships in multiple types of networks—sharing information, solve problems, and trust—in order to have the right mix of ties to truly empower a frontline employee to execute marketing promotions and displays in the store. Several implications for theory and practice emerge from resulting network structures across the two distinct facility structures. In this discussion, research propositions are introduced to guide future exploration of these findings.

First, previous research in cross-functional integration has explored corporate or team level integration (Kahn & Mentzer, 1996; Ellinger, 2000) in which employees are typically co-located. However, in many corporations, operations personnel are often disbursed across a wide distribution network encompassing a large geographical territory. This research illustrates the importance of physical proximity in creating an integrated environment. In the traditional facility employees took advantage of their access to multiple managers across functions. However, in the cross-dock facility, where access to operations management for assistance was only available by phone, the operations mangers remain on the periphery throughout all three networks. Managerially, this serves as a challenge for companies that are trying to optimize their networks by shifting from capital-intensive traditional warehouses to the more flexible cross-dock distribution structure. Theoretically, this may indicate that integration is facilitated by co-location and face-to-face interaction.

P1: Cross-functional integration is enhanced when frontline employees have frequent face-to-face interaction with management across functional boundaries.

Second, cross-functional integration, and more specifically, demand and supply integration has been conceptually developed and examined as a firm level strategy. However, results suggest that integration takes place at multiple levels within the organization. Integration at the corporate firm level doesn't necessarily indicate integration at the frontline. This research indicates that integration isn't just important for the development of marketing strategies, it is also important at the frontline of the organization for the execution of marketing strategies. Drawing on network theories in management literature (Jones *et al.*, 1998), this seems to indicate that more cohesion (connectedness) within an organization at multiple levels will be more impactful in facilitating marketing execution in the retail store.

P2: A cohesive organizational network enhances cross-functional integration throughout an organization.

Finally, this research expands our understanding of cross-functional integration by exploring multiple interactions (contexts) through which integration may be fostered (info sharing, problem solving, and through relational trust). This has not been explored previously (Esper *et al.*, 2010). Integration has been assumed to take place in the planning stage of marketing campaigns (through integrated demand planning/forecasting and operations planning). This research demonstrates that integration occurs predominantly when problems arise in execution as opposed to planning.

P3: Purposeful integration in the planning phase enhances marketing execution.

P4: Organizational integration taking place predominantly after a problem has occurred will have less impact on marketing execution than integration in the planning phase.

In conclusion, in order for companies to capitalize on cross-functional integration they must purposefully overcome barriers of physical distance, diffuse strategies and marketing information across functions and throughout the levels of the organization, and bring operations personnel in on planning early on in order to execute marketing strategies effectively.

REFERENCES

References are available upon request.

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[i] A valued matrix is a specific term to describe a matrix that is not binary; each tie has a value, thereby denoting strength. In this case, ties between actors were valued on a scale of 0-4. For the Problem Solving Network and Promotional Information Gathering Network, 0 was equal to never and 4 was equal to frequently. Similarly, the Trust Network was on a scale of 0 to 4: Not at all–Completely.

[ii] Standard to many network theory approaches (Hanneman and Riddle, 2011), each graph represents the sets of nodes (v) and directed arcs (E) that connect pairs of nodes utilizing graph theory notation: $(u,v) \in E$ (u sends arc to v but not the transverse).