Managing Supply Chain Networks: A Framework for Achieving Superior Performance through Leadership Capabilities Development in Supply Chain Node

Sharp Cooper, Senior Lecturer Operations Management
Human Resource and Leadership, Sunderland Business School, The University of Sunderland, UK

Derek Watson, Senior Lecturer Innovation and Organisational Performance
Human Resource and Leadership, Sunderland Business School, The University of Sunderland, UK

Rob Worrall, Principal Lecturer – External Engagement
Human Resource and Leadership, Sunderland Business School, The University of Sunderland, UK

Abstract
Leadership capability is acknowledged as a major challenge for organizations and a pre-requisite for sustaining high levels of organizational performance and supply chain competitiveness. Recent research highlights how globalisation has led to the extension of domestic supply chains, particularly SME ones, to include both suppliers and customers globally. This paper examines the role capabilities development in managers and leaders as nexus of their supply chain networks have to play in achieving better performance through case studies. Once banished to the backburners of business management thinking, leveraging core leadership competencies is now critical to company’s superior performance in supply chain networks.

Keywords
Leadership Capabilities, Supply Chain Performance, Supply Chain Node, Small-to-Medium-Enterprises (SMEs)

Introduction

Current research has highlighted how globalisation has led the extension of domestic supply chains to include both suppliers and customers worldwide. Whilst initial gains from organisations going global were realised, these gains were not sustainable. There is no doubt that the impact of the recent economic crisis has been considerable, however another challenge for most organisations is the effectiveness of the managerial decisions within organisations as the nexus of their supply chain networks. Cooper, et al, 2005, asserts that many companies struggle to effectively optimize their supply chain and attain superior performance.

Supply chains are a network of different companies producing, handling and/or distributing a specific product and/or service. Thus, supply chain involves multiple companies, and it encompasses the steps different companies take to source goods and/or service from suppliers and sell them to their customers (Ross, 1997, Fawcett, 1997, Fisher, 1997). Both industry and academic research communities have a growing interest in the intersection between globalisation and supply chain. This reflects the need for businesses to compete as supply chains rather than solely autonomous entities (Lambert and Cooper 2000;
Christopher 2005; Defee and Stank 2005; Stank et al. 2005). As such supply chain members must be capable of rapidly aligning their collective capabilities to respond to changes in demand and supply of goods and/or services (Gligor & Holcomb 2012). Furthermore, it has been recognized that to achieve a competitive advantage in the rapidly changing business environment, firms must align with suppliers and customers to coordinate operations and collectively achieve a level of agility beyond that of competitors (Lin et al. 2006).

Some industry observers assert that, the key challenge is how we make a success of globalisation and transparent supply chain operations (Ross, 1997; Cameron, 2014, Higgins, 2014). In their view organisations particularly small-to-medium enterprises (SMEs) need to leverage their management and leadership capabilities, and be more responsive by ‘bleeding out’ inefficiencies and injecting continuous improvements into their supply chain offerings. Achieving this superior performance in mirrored labyrinthine organic and often generic supply chain relationships proves a considerable and complex challenge to most organisations in general, and SMEs in particular (Cooper et al., 2005). This increased complexity has raised uncertainties and security issues in terms of demand and supply within supply chains. SMEs have encountered serious challenges as they sort to develop innovative processes to identify, articulate, and address such issues in order to sustain high performance within their supply chains. Such complex innovations often rely on management’s leadership capabilities to set and meet challenging organisational objectives through the effective deployment of resources across the different supply chains for multiple product and service portfolios.

Over the last three decades, the notion of supply chain management (SCM) as a philosophy for integrating supply chain activities (Blackburn, 1991, Fisher, 1997 cited in Cooper et al., 2005, Higgins, 2014) and organisations’ achieving better performance in competitive economies (Cooper et al., 2005, Karami, 2001) have been progressively developed. This along with considerable research focused on understanding how globalisation has increased adverse pressures on organisations and their supply chains (Cooper et al. 2005), has led to calls from governments, academia, industry and commerce for business managers to rethink the way they conduct their businesses. However, there has been limited empirical research on how managers’ decision-making and leadership capabilities should be developed to improve supply chain performances and effectiveness.

Supply chain integration through inter and intra organisational collaboration and in particular, by increasing the use of information technologies and the coordination of activities has been widely discussed and advocated by academics, industrialists and practitioners as a means of overcoming the challenge of complexity. However, this is complicated by organisations varied products and services which are simultaneously active in a number of supply chains. Although supply chain integration can resolve most poor performance factors, the need for superior managerial and leadership capabilities remain a prerequisite for the efficacy of supply chain performance.

The difference between superior performance and failure to perform can be related organisations leadership and decision making capabilities at senior management levels. Thus, managerial and leadership capabilities is key to effectively resolving different supply chains competing for resources within one organisation and across organisations in the supply chain network, with resources having to be shared or pooled between supply chains in others. However, being part of several supply chains, means that the management of the organisation is the nexus or meeting point of these several supply chains, which we refer to in this paper as the supply chain node. As such this requires the development of higher levels of innovative capabilities in order to respond to the increasing levels of dynamism, volatility and complexity within and across organisations.
This paper’s unique contribution is in its recognition that an organisation’s multiple supply chain membership, means that management and leadership capabilities need to be identified, developed and deployed at the nodes to effectively achieve superior (integrated and enhanced) organisational performance. This is to say, that as well as the technological capabilities in providing visibility, and unravelling complexities, the real challenge is in making sure that development of leadership capabilities at organisational managerial levels result in the effective deployment of financial and other resources to achieve the required impact.

**Challenges in Managing Supply Chain Networks**

The call for researchers, industrialists and practitioners to focus their interests in exploring competitive advantage gains by leveraging core competencies and innovative capabilities as a consequence of the increased challenges in managing supply chain networks has grown considerably since the late 80s and the early 90s (Ross, 1997, Oliveira and Gimeno 2014). Efforts in attempts to answer these calls were focused on understanding the importance of network partnerships and alliances, particularly in the relationships that existed between themselves and their suppliers and customers and most recently in creating and nurturing channel alliances as critical to strategic advantage gains. This was at the expense of considerations for the interconnectedness of the different companies or enterprises that make up the viable chain from the product and /or service conception to its manufacture and retail links from supplier to customer, and as such the impact of the dependence on each channel partnership lies squarely on the fabric/the managerial/leadership capability of the individual company in that environment.

With globalisation providing an unprecedented complexity and volatility in demand and with customers becoming more selective and less brand loyal in an attempt to acquire high quality goods at low cost, (Cooper et al., 2005) individual organisations within supply chains are now finding it difficult to manage several volatile demand environments (Garengo et al.,2005). As this paper asserts, the new efforts for supply chains to gain superior performance must be paid to individual organisations as the business at the intersection that manages all the information necessary to make better business decisions within their supply chain networks.

In doing so, the authors of this paper acknowledges past researches that had examined the leveraging of organisational capabilities and performance in the management of supply chain networks including through

(i) capital investments and information technologies (IT) that enable end to end visibility of their supply chain (Cooper, et al.2006; Gunasekaran and Ngai, 2004)

(ii) organisational behaviours in the way members of the supply chain are expected to behave as a result of the contractual fulfilment of the alliances and/or partnership agreement (Hooijberg and Quinn1992)

(iii) complex and extended global supply networks with suppliers and customers continually chasing low cost and organisations (Cooper, et al, 2005; Garengo et al.,2005)

(iv) supply chain traceability to provide visibility of processes in operations within the supply chain networks as a result of both legislation and damaging product recalls, (Christopher, 2000, Oliveira and Gimeno, 2004)

(v) supply chain management (SCM) which provides the shift of emphasis to the opportunities for companies to seek innovative competencies and unique resources of their internal and external chains (vertical and horizontal integration
of supply chain) of customers and suppliers as sources with which to pursue competitive advantages in their supply chain, (Kaplan and Norton, 1992) and amongst others those to do with

(vi) exploring supply chain networks in terms of the relationships between supply chain competencies and given dimensions of performance within global supply chains (Closs and Mollenkopf, 2004)

Our view builds of organisations within supply chain networks as node, stems from the understanding of Dennis and Dennis, (1991) particularly from our understanding of his definition of nodes in networks “as arrangement of paths or routes, connected at various points, through which items move from point to point (source to destination) along the connecting links (branches”).

This implies that the flow through the branches and the amount of flow from node to node may be limited to the capacity allowed on any given branch and the capabilities at that node for that matter. See figure 1 below;

![Figure 1 – an illustration of nodes and flow lines capacity in a network](image)

Thus, the organisation, represented by Node A (figure1, for example, has the capability to allow different amount (given by the thickness of the lines from it) to flow to the other nodes (organisations) in this simple network.

And, we argue from results in our case study that the capability at the management and leadership level of an organisation (node) to provide superior decision-making capacity within that organisation, and between adjoining organisations in a network, determines the overall levels of performance in that supply chain network.

**Improving Leadership for Performance in Supply Chain Management**

A number of studies (Bassi and McMurrer, 2007; Mollick, 2013; Sheeman and Aycliff, 2014) asserts that leadership capability is a major challenge for organizations and a pre-requisite for sustaining high levels of organizational performance and competitiveness. There is a growing recognition that improving leadership needs to extend beyond organisations to collaboration across the wider system, network or value chain they are inextricably linked to (APICS/PWC, 2013). This has long been recognized across a range of sectors such as public services in general (Benington and Hartley, 2009, Worrall, 2009c; Wooldridge & Worrall, 2010), in health and social care (Welbourn et al., 2009) and education (Boylan, 2016, Watson and Hall, 2015). In attempts to provide a solution, organisations may have become less hierarchical, but there is also an increased recognition of mutual dependency
on interorganizational relationships across wider networks for optimising performance and enabling innovation (Eisingerich, et al., 2009). Whilst the call for improving leadership competencies across supply chains is not new (Novicevic, Buckley & Harvey, 2000), more recently, its increasing prominence suggests a renewed sense of urgency (Walden, 2009; Müller-Seitz, 2011; Marchese, 2014; Waronska, 2014).

Arguably, one of the challenges facing those wishing to respond to this call is the prevalence of an outmoded view of what constitutes leadership, where in the organization that leadership needs to come from and, consequently, who needs to be developed (Marichal, 2013). In an increasingly complex and information rich, but knowledge poor environment, there is a danger in over reliance on the ‘heroic leader’ at the hierarchical pinnacle of an organization exercising leadership as something that is done to others (Hays and Kim, 2012; Worrall, 2009b, Worrall, 2014). Moreover, over reliance on a charismatic leader can also lead to individuals seeing themselves as infallible and resistant to seeing other perspectives to the detriment of the long term performance of the organization (Lubit, 2002; Burke, 2006). In the extreme, this can result in leaders who may have an “Inability to develop effective interpersonal relationships (arrogant, stubborn, egocentric), inability to take risks and make errors (cautious, avoids responsibility) excitable individuals with difficult relationships (impatient, moody, negative, volatile, emotional instability and finally Lubit (2002 cited in Burke, 2006) stated that, “scepticism and distrust will reduce leaders effectiveness in motivating others”).

As an alternative perspective, the need for a more distributed model of leadership within organizations and across networks has come to the fore (Bolden, 2011). In addition, the role of the traditional manager has also come under the spotlight (Mollick, 2013, Sheeman and Aycliff, 2014). An increasing pressure for middle managers to step up to the plate and take on more, both in terms of breadth of responsibility and in exercising much more of a collaborative leadership role within and across organizations (CIPD, 2012; CCL 2010, 2011 & 2012; Sheeman and Aycliff, 2014). This shift from being a monitor of other people’s performance (Gratton, 2011) to having a core role in organizational transformation (CCL, 2012) implies that middle managers need to develop a set of leadership competences which makes them fit for purpose in the more complex environment of the 21st Century (Floyd & Woodridge, 1994; Brooks & Grint, 2010; Marichal and Segers, 2012).

“As translators, they can facilitate two-way communications between leaders and the front line and, as transformers, they can bring change to life”. (CIPD, 2012)

Moreover, there is also practice-based research evidence which suggests that organizations are neglecting the development of their next generation of senior leaders from amongst their middle management ranks at their peril (Hoffman and Womack, 2011; Stern, 2011) Indeed, a recent survey by EY Consultancy (2014) suggests that “only 54% (of high performing companies) have a strong pipeline for future leaders”, and according to the same article research by Groysberg of Harvard Business School has also reported similar findings.

Given the complex nature of cross-organizational, professional and geographical environments in which managers in supply chains have to collaborate, understanding how we can develop appropriate competencies and capabilities is even more crucial if we are to meet the growing needs and expectations of service and product users (Bolden et al, 2011; Burgoyne et al., 2004; Worrall 2009a, 2009b & 2014). Thus, it has been argued that effective leadership in a supply chain network requires managers to demonstrate behavioural complexity, defined as the ability to “act out a cognitively complex strategy by playing multiple, even competing, roles in a highly integrated and complementary way” (Hooijberg and Quinn, 1992). Marchese and Lam, 2014 purports that, supply chain organizations needs a broader range of skills and experiences than hitherto, with an increasing demand for people with analytical, cross-functional and global experience in those companies deemed to
have more effective performance across their supply chains. From this perspective, it is as much, if not more about coordination, collaboration and integration as it is about management and control (Marchese, 2014) of supply activities whether it is within individual organisations (internal supply chains or a collection of adjoining supply chains – concept of external supply chains or supply chain networks.

Thus, whether one sees leadership as part of a set of managerial capabilities (at the individual, organization and interorganizational (network) levels) necessary for Sustainable Supply Chain Management (SSCM), or in addition to these, the need for the development of a shared mindset (Dweck, 2006) through communication of a shared vision, and the facilitating the building of social capital (trusting interpersonal relationships) is at the core of ensuring supply chain effectiveness (Marchese, 2014; V and Baral, 2014) and superior supply chain performance (Bittici, 1997). Moreover, Gosling et al. (2014) argue that supply chain learning and supply chain leadership are core components of SSCM and can help explain how focal Multinational Corporations assume a leadership role in disseminating best practice in sustainability.

There is also a growing literature on paradoxes, tensions and ambiguity, which is reflected in the management and leadership literature in general (for example: Mowles, 2015) and in relation to SSCM in particular (Thakkar, 2012). In this regard, one of the key managerial capabilities is the acceptance of, and the ability to work with uncertainty, ambiguity and paradox, or contradictory and opposing forces. One clear paradox for supply chains for example is reconciliation of the simultaneous demands for cooperation and competition between organizations (Mowles, 2015), which has become known as coopetition (Stadtler and Wassenhove, 2016) which can give rise to synergies as well as tensions.

In exploring how a holistic performance measurement system can be developed for a supply chain, Thakkar (2012) identifies five paradoxes: the paradox of roles, the paradox of group performance, the measurement of paradox, the paradox of integration and the paradox of reward. With the analysis of each paradox, and the collection of paradoxes, Thakkar asserts that it is in fact difficult to arrive at a performance system for measuring the whole of a supply chain network. This he argues is

(i) partly as a result of the multiplicity of the layers of companies in the network (complexity of supply chain network)

(ii) the temporal nature of the networks as a result of difficulty in identifying which of the supply chain members to take the responsibility of selecting, monitoring and managing the performance of the network,

(iii) the challenges of determining the level of efforts to utilise in each of the network interfaces (nodes) since all members within the network would not require the same level of efforts in their “integration and close coordination”.

Most researchers and practitioners agree that, there is the need for management to determine the amount of attention required for a particular interface, whilst Thakkar, (2012), asserts that this depends on various factors, Neely et al (2000 cited in Thakkar, 2012), states that the process for deciding which measures to adopts forces business managers and leaders to be explicit about their performance priorities.

**Framework development: The case study**

Stev Ltd. is a dye house for major retail outlets in the UK textile and clothing manufacture. Our involvement with this case company was as a result of a European Regional Development Fund (ERDF) funded project as an extension of an earlier funded project in aligning the extended supply chain between 2005 and 2012. Figure 2 (below) and the outline list of the key supply chain processes (Cooper, et al., 2006) illustrates the complexity of the system in which the case study organization is involved.
Outline List of Key Supply Chain Processes

(i) production of yarn (represented as supplier in figure 2, above)
   a. spinning of yarn
   b. dyeing of some yarn

(ii) production of fabric
    a. weaving or knitting of yarn
    b. dyeing of some yarn
    c. printing
    d. finishing

(iii) production of Sewing thread and other trim used in making-up products
    a. spinning and twisting
    b. dyeing finishing (lubricating final winding and packaging)

(iv) manufacture of apparel products including garments and household textiles
    a. design
    b. dyeing of some garments or apparel products
    c. printing of some products
    d. making-up of garment and household textiles

A number of the difficulties stemming from operating within such a complex supply chain network were addressed by Cooper et al., (2006). Stev Ltd., as a major player in the textile and clothing supply chain, is an extended arm of the manufacturing part of the network. Their major operation is in the dyeing and finishing of the garments and apparel product before retail. They receive their raw materials as grienge – (made-up or sawn yarn garments and household textiles without any colouring - dyeing process). Established in the early 80s Stev. Ltd., turned over £8.5m in 2011) with an inventory value of a further £12m.

The impetus of the project was to identify areas of efficient with the process mapping results pointing to managerial incapability’s, lack of strategic focus and poor decision-making from the senior management of the company resulting in the poor performance results. Most of these challenges were particularly levied on the desks of the Chief Executive Officer (CEO).
who responsible for the poor capacity utilisation of the company's resources – human capital and machinery. Particular areas, of the CEO's management and leadership capability challenges were in the empowerment of middle management and key senior operational (shop-floor) employees in the key processes in the company. The CEO (and his business) would have benefited from increasing his awareness of technical aspects such as process and machine capacity and the need to follow formal procedure within operating systems. In addition, we considered that there was a failure to ensure alignment between operational and corporate strategy. In particular, agreed, planned and scheduled processes were bypassed as the CEO sought to exercise his authority based on uncalculated risks. Moreover, a need to feel in control encouraged a culture of fear, undermining motivation amongst operational staff. These issues had a direct negative impact on performance, for example, finished products were repeatedly delivered late to their (key) customers, which led to some orders being cancelled, a lack of repeat orders, the increased cost of sourcing new customers and overall cost of inventory management.

Methodology

In an earlier research carried by Cooper, et al., (2005) the principle investigator, in that research and this one, critically sampled 10 case study companies in the textile and clothing supply chain network. Using a multi-method research approach which included extensive review of the literature and semi-structured interviews. The data analysis was undertaken using SPSS. This resulted in 22 themes of performance criteria which indicated clear relationships between strategic direction of organisations, production capacity planning, staff empowerment, product facility layout, the level of skills and so forth. These were correlated to form 5 principle components including, management capability and strategy factor, resources utilisation factor, performance management factor and experience factor accounting for over 80% of the most important leadership and management components responsible for superior business performance (Cooper et al., 2005) The design and development of the conceptual framework below (Figure 3) draws from these findings in order to investigate the management dilemmas and the management capability requirements. To overcome these dilemmas, the impact of the lack of consistency between formal and informal systems within business operations was also considered. This was in addition to identifying requirements for the development of management and leadership capabilities that would enable sustainable change thereby achieving superior performance within and across supply chains.

Figure 3 – Conceptual Framework for Leadership and Management Capability Development

The researchers carried a process map of the case study's operations from orders in to orders out consistent with the formal operations of the company. The researchers made notes during the process mapping exercise and in the project meetings, which were collated and codified into themes as represented in the squarish boxes in figure 3 above. The themes
were later used to design open ended questions (Kumar, 1999, Robson 1993), used in semi-structured interviews with the CEO, senior and middle management operations staff. (Denzin, 1984, Yin, 1994) . This allowed the research to gather uninhibited and valuable responses from interviewees. Results from the interviews were further correlated with the operations related documents gathered from the case study. These were then used to design the management and leadership development interventions (management of change) to enable effective realignment between the relevant processes and systems within the organisation.

Conceptual Framework Testing

In applying the conceptual framework (figure 3 above) the ‘management capability requirements’ factors were broken-down into learning outcomes. These learning outcomes were used to design a work-based management and leadership programmes for in-house delivery to middle and senior managers over a 12-month. In particular, the programme sought to improve participants' capabilities and skills in strategic thinking and being more future-focused (CIPD, 2015). This led to the realignment of the ‘management dilemmas factors’ to the management capabilities factors via the ‘management of change factors’ within the formal systems as depicted in the ‘forward and feedback loops’ in the conceptual diagram.

Results and Discussions

The sub-section below draws out some of the key outcomes from the management and leadership development programme.

Management capability Requirements

Stev Ltd., are wrestling with significant challenges in managing customer expectations. This was partly due to senior managers', and in particular the CEO’s ‘blinded vision’ (inability to articulate the visions, missions and values of the organisation to process owners at the shop-floor and extended members - customers in their supply chains). This led to the misconception that in order to by-pass formal systems, it was acceptable for customers to harangue the CEO during a game of golf, to get their order prioritised. This would often lead to the CEO returning to work, after a weekend’s game of golf, with a list of client demands for their products to be delivered earlier than the quoted delivery dates. Operationalising such instructions often meant that other orders already being processed were stopped in mid-operation. This practice often meant that some products at their sub-assembly stages (work-in-progress inventory) could be held delayed by up to 43 days. This compares unfavourably, to our analysis which suggested that most orders, with the correct deployment of resources, could be completed within 3 days. This is a clear example of operations strategy being ‘lost in translation’ and a major misalignment between corporate strategy and operational strategy (CIPD, 2015). This is also a classic misuse of strategic positioning performance measures for competitive advantage gain (Kerlinger, 1986).

Moreover, this 40-day delay has a number of implications on financial and operational performance measures such as; inventory holding costs – return on investment (ROI), opportunity costs – stock out, stock turns, depreciation, lead-times, space utilisation and to some extent, return on capital (ROC). These findings were presented to the senior management team and in a one-to-one discussion with the CEO. Like most organisational decision makers, they were all too familiar with the text book sermons in which training (staff development) supersedes training needs analysis. Many organisations adopt a variety of training methodologies that are primarily aimed at an operational level, with the unwritten rule that, as managers moved up the career ladder the level of regular and repeat training dissipates. For most CEO’s, training/capability development is for subordinates and their role
is to formulate viable and lucrative strategies. They manifest a self belief that CEO's do not have the time or the need for their own management and leadership development (Zheltoukhova and Suckley 2014). Such an approach, of being solely focused on working 'in the business' and not working 'on the business' and implicitly on their own development is common and costly error often amongst SME business leaders (Barnes et al., 2015, Zheltoukhova and Suckley 2014). This leads to an increasing reliance on tacit knowledge in decision making and acts as a barrier for self-development and enabling employee-led innovation (MacLeod and Clarke, 2011). In addition, failure to actively engage in organizational training or work-based learning initiatives are missed opportunities to network with employees. This may also act as a barrier to being sensitised to commercial challenges and the real cultural or sub-cultural norms (CIPD, 2015). The researchers believe that, had the CEO engaged in previous in-house training and development exercises, he may have come to realise that his lack of effective decision–making capabilities was the core catalyst in undermining the formal system and thereby eroding the company's production and service commitment to their customer base.

**Conclusion and Recommendations**

The researchers' close collaboration with the Stev Ltd, as a business entity and knowledge of the management and leadership capabilities of the senior management team enabled essential an in-depth understanding of the organisational needs. This in turn, facilitated the effective transfer of learning which led to improved performance. Furthermore, the capability development was instrumental in the identification of the management capability requirements. In particular, it enabled the articulation of the current management dilemmas and provided focus on the areas and type of management and leadership development required. It also enabled us to adapt the development programme content and emphasis to respond to the variable learning needs of the different levels of management/leadership.

Reflecting on our experience and on the outcomes of our research, we believe that the key focus needs to on developing a more collaborative, open and enabling culture within the business. In other words, business leaders need to have due regard to the 'cultural thermostat' within their organization. Culture, the way we do things round here is fundamental to the harmony of the business. History also highlights that culture is created by the minority which affects the majority (Watson and Hall, 2015). In our view, the managers and leaders of Stev Ltd., had not realized or fully appreciate that they can turn up or down the cultural climate rather like a thermostat, through action or inaction. The cultural norm developed by Stev Ltd., can be equated to a patriarchal style of management in which the CEO rolled out flurries of random instructions which clearly disrupted and contradicted previously agreed production commitments. In such an atmosphere employees tended to 'stay in the trenches' rather than challenge management decisions for fear of the potential consequences.

Management needs to intuitively recognise that culture is an outcome and not a cause or final destination and organisations are multifaceted intricate social systems which require effective collaboration at all levels (Worrall, 2009a). Stev Ltd., needed to ‘rework’ its business policies and procedures to rekindle/realign or develop new values and behaviours of their employees, including, the CEO. It is imperative employees see tangible evidence that their suggestions are being embedded into a decision making process or that they are given a rationale as to why their suggestions have not been adopted. The empowerment and dissemination of decision making to operational staff will energise commitment and erode often suppressed frustrations against their ‘adversarial leaders’ (MacLeod and Clarke, 2011). From this perspective, the capability development programme provided a catalyst for a cultural change that was led from the top, with the CEO acknowledging that the cultural shift of his organisation required immediate evidence that management are committed, as evidenced in the realignment of the decision-making process. This along with the
implementation of an 'employee suggestion system' in which the organisation solicited and utilized feedback from their employees with the understanding that such feedback will manifests in efficiency savings, soft performance management systems such as 360° Communication and non-monetary motivational Incentives were other management of agents deployed in the management and leadership capability development programme.

This research has highlighted some of the difficulties in managing and leading supply chain networks. These challenges often result from the lack of management and leadership capabilities within organisations, which are the nerve centres in inter and intra business networks. The findings from this research have indicated that several factors may be responsible for the poor performance of supply chain networks. However, the ability to conceptualise/identify what these factors are in a given supply chain is required. In addition, the development of appropriate management and leadership capabilities is crucial for achieving superior inter and intra organizational performance in supply chain networks.

Whilst the research acknowledges the limitation of the one case study used in this paper, the rigor of the multi-method research approach facilitated a richness of data to emerge. This enabled the development of robust conceptual framework, which was immensely valuable in the management and leadership capabilities which needed to be developed and the required learning outcomes at the different levels of management. The framework was instrumental in assessing the relative performance level of the case study organization and in identifying which management and leadership capabilities were required to achieve superior performance. Given these outcomes, we consider that application of the framework to other case study organizations should be encouraged.
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