

THE INFLUENCE OF BUYERS' SOCIALIZATION MECHANISMS ON THE CULTURE OF THEIR KEY SUPPLY CHAIN PARTNER AND ITS IMPACT ON SUPPLIER OPERATIONAL PERFORMANCE

Structured Abstract

Purpose

This paper investigates if inter-organizational socialization mechanisms initiated by a buyer organization towards a strategic supplier can influence the culture within that supplier organization to ultimately improve supplier performance to the buyer.

Design/methodology/ approach

Using a quantitative sample of 279 UK companies from across a variety of industry sectors, statistical techniques were utilised to examine the effect of informal and formal socialisation mechanisms on the culture of a strategic supplier as measured by their organizational practices and the subsequent supplier performance outcomes.

Findings

It was found that both informal and formal socialization efforts by a buyer organization have a significant influence on the culture of the supplier organization as measured by their organizational practices. Socialization efforts by the buyer organization influence the organizational practices of the supplier to be more result-oriented, employee-centred, open, pragmatic to customer needs and market focused. These organizational practices were found to positively influence supplier operational performance in the eyes of the buyer organisation as measured by on time delivery, conformance to product specifications, flexibility to respond to changing customer needs and cost reduction initiatives.

Research implications

Modelling the influence of informal and formal socialisation efforts by a buyer on the organisational culture of a key supply chain partner provides new insights to academics.

Firstly, this work makes a significant contribution to the extant research on socialization in the supply chain literature. Secondly, it raises the importance of understanding the influence of culture on supplier operational performance.

Limitations

Although the study used a dyadic method to validate the cultural insights, our study only took a snapshot of culture at one point in time. Organization culture as displayed through organizational practices is a complex construct that changes over time. Therefore, to further understand the intricacies of organization culture, a longitudinal study would be useful in the future. Secondly, future studies could develop into themes such as the green supply chain and sustainability issues. Finally, our study was undertaken in the UK. It would be useful to replicate this study in a different setting, including Eastern countries.

Practical implications

Organisations should engage early with their key supply base from a socialisation perspective. The importance of joint away days, cross function teams alongside effective communication and on site visits have been found to have a significant influence on shaping a high performance culture along the supply chain. Therefore, a buyers' early understanding of their key supplier's culture via these mechanisms appear critical for long-term supply chain success. Measuring supplier culture at the visible level of organizational practices removes the ethereal qualities often attributed to culture as a concept; buyers can influence supplier culture.

Originality/value

This paper presents an empirically tested model which includes informal socialisation, formal socialisation, deconstructed organisational culture and supplier operational performance in a supply chain setting.

Key words: Supply chain, culture, organizational practices, socialization, performance, inter-organizational supply chain relationships

Paper type: Research

1. INTRODUCTION

Significant literature over the years has stated the importance of socialisation within an organisation, often referred to as ‘learning the ropes’ (Schein, 1996). This inductive process has a significant influence on shaping the organisational culture. Whilst much of the seminal work on socialisation and organisational culture was done in the area of organisational behaviour (Feldman, 1976; Van Maanen and Schein, 1979), there is an increasing awareness of the role of socialisation and organisational culture in achieving positive performance outcomes in a supply chain setting, particularly at the supplier development stage (Cadden et al., 2015; 2013; Cousins et al., 2006). However, both socialisation and organisational culture are still relatively new constructs in the supply chain literature, with most authors preferring to make passing or inferential remarks about the terms rather than treating each as an independent construct and investigating the relevant interrelationships (Cousins et al., 2008; Xu et al., 2017; Winklhofer et al., 2006). This is largely believed to be due to the complex and multidimensional nature of both socialisation and organisational culture. However, authors are increasingly calling for research on the impact of socialisation and organisational culture in supply chain theory (Cadden, 2015; Cousins and Menguc, 2006; Xu et al., 2017). Whilst acknowledging the importance of organizational culture, Chatman and O’Reilly (2016) argue that there continues to be academic debate about the concept of culture such that its definition and measurement are neither unified nor precise. Organizational culture has been conceptualized as very different things: (1) as language (Srivastava et al., 2017; Barley et al., 1988); (2) as emotion (Barsade and O’Neill, 2014); (3) as ways of thinking (Harris, 1994); (4) as organizational practices (Cadden et al., 2013; Verbeke, 2000; Christensen and Gordon, 1999; Hofstede et al., 1990). These differing concepts are often amalgamated as with Tellis et al. (2009) who define culture as shared attitudes and practices. However, Hofstede et al. (1990) discovered that the most distinguishable elements of an organizational culture were

located at the level of organizational practices rather than in core values which were relatively stable. This paper takes this position as a starting point. We use the measures of organizational practices model initially put forward by Hofstede et al. (1990) and then updated and validated by Verbeke (2000).

Without clarity over the construct of culture that convincingly demonstrate validity, Chatman and O'Reilly (2016) argue this will result in further proliferation of studies labelled as culture but representing a potpourri of constructs.

Much research has been conducted on national culture (Hofstede, 1990; House et al., 2004) and whilst previous work acknowledges that cultural values are best measured at the national level and practices at the organisational level (Naor et al., 2010; Tangpong et al., 2010), culture has been reported "*as a complex, multidimensional structure rather than as a simple categorical variable*" (Clark, 1987:461; cited by Schwartz, 1994) and thus requires more nuanced investigation. This study focuses on organisational culture in a supply chain setting, (This appears to be happening in the supply chain literature. The culture and supply chain literature has thus far been largely focused on supply chain integration and collaboration between supply chain partners and has attempted to create a new definition of culture as something shared between the partner organisations. Zhang and Cao (2018) discuss a collaborative culture existing between buyer and supplier based on four dimensions: collectivism; a long-term orientation; power symmetry; and uncertainty avoidance. These dimensions are certainly attitudes or values rather than practices. Salimian et al. (2017) examined culture as an inter-organizational construct made up of trust, commitment, cooperation, compatibility alongside top management support and its impact on supplier development. Lehoux et al. (2014) also outlined the importance of establishing a collaborative culture as an inter-organizational concept in the context of inter-firm collaboration and supply chain coordination. This research attempted to apply the theoretical

concept of collaborative culture defined by Barratt (2004) as one defined by trust, mutual benefits, risk sharing and information exchange. These papers focus on culture as reflective of attitudes held by the partnering firms. Liu et al. (2010) examined the moderating effect of culture on the adoption of internet-enabled supply chain management systems. Similarly, they defined organizational culture in terms of values.

Further, work completed by Naor et al. (2014) investigated the linkage between culture and effectiveness in a manufacturing context underpinned by resource based theory. Interesting insights on the divergence between East and West were presented. *“In the West, a combination of rational and developmental types is preferred for cost and quality, and a combination of developmental and group types is preferred for flexibility”* (Naor et al., 2014 p9). Whilst, both Liu (2010) and Naor et al. (2014) adopted the competing values model as the cultural lens, and Naor et al., didn't include the UK in its western set of respondents, the study provides a useful set of useful insights and considerations for organisational culture studies. The CVM identifies four possible culture “types”: group, developmental, hierarchical and rational (Quinn and Rohrbaugh, 1983). We, like Verveke (2000), would argue that it is how values are reflected in practices that provide the means to measure the culture credibly. Therefore, this paper makes a significant contribution to the current supply chain literature which has largely focused on culture at the level of values. The measurement of organisational practices as a visible manifestation of culture has been reported as a valid and practical means to identify organisational culture (Cadden et al., 2015). It is through the organisational practices lens that the authors attempt to provide insights during this study. Further, it is argued that if both formal and informal socialisation between the buyer and supplier occurs early in the relationship, this will shape the supplier's organisational practices in support of enhanced supplier operational performance. For example, Marks and Spencer have created a dedicated website for suppliers to interact, collaborate and change ideas,

alongside regular conferences and workshops (Ethical Corporation, 2010). Such formal socialisation methods have been reported to create a compatible organisational culture across the supply chain and result in enhanced supplier operational performance (Cousins, 2008). Close working practices that may evolve within the network of supply chain relationships appear have a significant impact on developing the deeper cultural values of mutual trust, cooperation and effective communication (Cadden et al., 2015; Fawcett et al., 2008; McAfee et al., 2002; Shub and Stonebraker, 2009).

This paper adds to the conversation in social exchange theory by suggesting that initial socialisation processes will embed reciprocity in the relationship signalling that dependence in the relationship will not be abused (Xu et al., 2017; Cousins et al., 2006; Cadden et al., 2013). Additionally, our research adds to understanding the relational view of the firm by explaining how initial socialisation mechanisms helped to initiate high-performing and compatible supply chain cultures that are difficult to imitate or procure, providing unique value for the supply chain (Barney, 1991; Cousins et al., 2006; Dierickx and Cool, 1989; Dyer and Singh, 1998; Peteraf, 1993).

Our paper is organized as follows: We provide a review of the literature in respect of socialisation, organisational culture and supply chain performance; we then provide a detailed research methodology section. Thereafter, the results and analysis section is introduced. Further, a discussion of the findings is summarized and finally further research directions, research implications and limitations are presented.

2. LITERATURE REVIEW

2.1 Socialization

The concept of socialization originated in the organizational behaviour literature where it is regarded as the mechanism by which new recruits to an organization are integrated into it (Feldman, 1981; Van Maanen and Schein, 1979). In social exchange theory, socialisation mechanisms are a signal to another party that there is interdependence in the relationship. This leads to increasing mutual trust and the reassurance that the other party can be relied on for support or needed resources (Ahuja and Lampert, 2001; Cousins et al., 2006). The theory considers socialization from the perspectives of the new employee and the organization. In the former, socialization is the means by which a person obtains the social skills and knowledge to assume a role in the organization. In the latter, socialization concerns the possible actions taken by the organization to make new employees more productive. Ouchi (1981) argued that socialization is an important means of organizational control and a method of creating organizational commitment.

Of particular interest to this study is the extension of socialization theory to inter-organizational contexts. The precedent for this was the work of Gupta and Govindarajan (1991) who investigated vertical socialization mechanisms between parent and subsidiary organizations in the context of multi-national corporations. More recently, and building on the research of Van Maanen and Schein (1979), Cousins and Menguc (2006) broadened the idea of socialization into the realm of buyer-supplier relationships and there have been a number of recent studies in this area. Petersen et al. (2008) investigated the role of socialization mechanisms by buyer organizations with strategic suppliers to generate closer

integration between each other. In addition, Cousins et al. (2008) revealed a positive association of socialization methods and business performance. Cao et al. (2015) highlighted the importance of such relationship-specific investments from supply chain partners particularly in terms of supply chain integration. Chavez et al. (2015) have highlighted that integrated supply chain structures and socialization structures are closely connected and suggested that socialization could be a significant method by which actors in a supply chain relationship interact with each other. However, Xu et al. (2017) emphasize that the extant literature has produced mixed results for the role of socialization in the inter-organizational context. For example, some studies (e.g. Lawson et al., 2009; Cousins et al. (2006) did not find any significant effects of formal socialization on performance. Xu et al. (2017) argue that prior research on the effect of socialization between organizations only confirms the role of informal socialization. Cousins et al. (2006, p. 853) defined socialization as “the process by which individuals in a buyer-supplier engagement acquire knowledge of the other enterprise’s social values and norms.” In effect, this definition makes a connection between socialization and organizational culture. It could be that organizational culture may play a mediating role on the impact of socialization. If socialization mechanisms can impact culture, it is important to be specific about how culture would be measured.

2.2 Organizational Culture

Organizational culture has been shown to positively affect perceived relationship performance (Luvison and de Man, 2015; Cao et al., 2015; Beugelsdijk et al., 2009). Whilst organizational culture has been conceptualized as language (Srivastava et al., 2017; Barley et al., 1988), emotion (Barsade and O’Neill, 2014), ways of thinking (Harris, 1994) and as organizational practices (Cadden et al., 2013; Verbeke, 2000; Christensen and Gordon, 1999),

Hofstede et al. (1990) argued the most discernible elements of an organizational culture were located at the level of organizational practices. By contrast, Verbeke (2000) argued that organizational practices are more flexible and variable because they are affected by control systems and external pressures. He stressed that Hofstede et al. (1990) concluded that organizational practices were loosely coupled with core values. Verbeke (2000) highlighted that organizational behaviour scholars usually use the term organizational practices to refer to “systematized and customary activities deemed important by the organization or its members”. Hofstede et al. (1990) argued that the discernible elements of an organizational culture reside in organizational practices instilled through socialization in the organization. Organizational practices are socially shared as they are learned by performing tasks in alliance (Verbeke, 2000). We support the view that socialization and culture are linked. Wiengarten and Ambrose (2017) highlighted that culture could be conceptualized through the dimensions of results vs process; employee vs job; open vs closed; loose vs tight; normative vs pragmatic; and market vs internal. This scale of organizational practices was first put forward by Hofstede et al. (1990) and later updated and validated by Verbeke (2000). This scale has recently been used in studies by Cadden et al. (2015; 2013). The dimensions of organizational practices are dichotomous in that each is divided into two poles. If an organization is results-oriented, problems are shared across boundaries, functions and departments cooperate well with each other and employees contribute to business improvements. By contrast, a process-oriented organization is one in which employees adhere strictly to their own responsibilities within their own process and department with limited cooperation between departments. An employee-oriented organization is committed to personal development and education of its personnel as well as creating a good working environment for them. On the other hand, job-oriented organizations do not recognise employee achievements or contributions and highlight organizational profitability as the sole

priority. An open organizational culture will encourage employees to criticize decisions and outcomes whereas a closed organization is typified by a blame culture and an aversion to public criticism. The loose-tight dichotomy resembles behaviour control versus outcome control from the organization behaviour literature. It concerns how management controls its employees. A tight organization will actively check and control employee behaviours whereas employees in a loose organization will have much more autonomy and levels of freedom. Organizations with pragmatic organizational practices are focused on meeting customer needs. They prioritise meeting results as being more important than procedures. By contrast, organizations with normative organizational practices comprehend their role in the market to be the implementation of unbreakable rules. The market-internal dichotomy reflects strategic orientation. An organization whose organizational practices are market-oriented uses information from suppliers in formulating operational strategies whereas an organisation with internal organizational practices prioritises organisational efficiencies. We suggest that if the buyer invests in formal and informal socialisation efforts with a strategic supplier this will influence the organizational practices within the supplier organization toward a culture that is more conducive to cooperation. It is further proposed that these modified organizational practices will contribute to improved operational performance.

2.3 Supplier Operational Performance

Supplier's operational performance plays a key role in a buyer company's long-term performance and indicates the overall efficiency and effectiveness of the whole supply chain due to the co-operative nature of long-term relationships (Braunscheidel et al., 2010; Paulraj et al., 2007; Kim and Nguyen, 2018). On the one hand, supplier operational performance is vital to the success of the buyer-supplier relationship when measuring individual participants' input into the supply chain (Cousins et al., 2008). On

the other hand, supplier operational performance act as a kind of productivity control, and it is therefore necessary to show how improvement and competitive advantages can be maintained for the whole chain (Gunasekaran et al., 2004; Kim and Nguyen, 2018). In order to develop strategic supply chain relationships, supplier's operational performance should be taken into account, and an effectively measured to monitor their relationship (Braunscheidel et al., 2010; Kim and Nguyen, 2018; Chan and Qi, 2003). Key supplier operational areas that are typically measured include cost, service, and quality metrics to include product cost, cost reduction, lead time and conformance to specification (Cadden et al., 2015; Paulraj et al., 2007).

2.4 Proposed Model and Hypotheses

Our work seeks to investigate if inter-organizational socialization mechanisms by a buyer organization towards a strategic supplier can influence the organizational culture within the supplier organization and ultimately improve the supplier's performance. The following model and hypotheses development section outline our approach and study rationale in further detail.

2.4.1 Research Model:

Figure 1 displays the proposed model based on the detailed literature analysis above.

****INSERT FIGURE 1 NEAR HERE****

2.4.2 The Influence of Formal Socialization on Culture

Cousins and Menguc (2006, p. 607) defined socialization as “the level of interaction between, and communication of, various actors within and between organizations, which leads to the building of personal familiarity, improved communication and problem solving”. As a method for establishing and enhancing the relationship between the buyer and supplier, schemes such as supplier conferences, regular meetings (formal and informal), telephone conferences, and site visits, have been explored. By meeting regularly information exchange takes place and firms are able to establish clear communication channels. The implication for managers is that they should see supplier conferences, steering group meetings and so on as an investment in the relationship. However, some firms view these sorts of activities as costs with no definable benefit. Despite this, research shows that relationship socialisation mechanisms create business improvements and help firms reap the benefits of the integration approach (Cousins and Menguc, 2006). Firms that develop a competence in managing inter-organisational relationships will gain competitive advantage through improved rents from collaboration (Dyer and Singh, 1998). Socialisation is a process where individuals in a buyer-supplier engagement acquire knowledge of the other enterprise’s organisational values (Van Maanen and Schein, 1979). It involves formal and informal interactions that create value congruence or alignment (Kraimer, 1997; Cousins et al., 2006). By working together buyer and supplier personnel begin to understand the compatibility of their organisational practices (Cadden et al., 2013). If practices are compatible then each side makes the effort to sustain

these practices, if practices are incompatible a decision is made whether to customize current practices for the success of the relationship or terminate the relationship before incompatibility issues become too great (Cousins et al., 2006). Therefore socialisation mechanisms can be formal or informal. Van de Vijver et al. (2011) have argued that Cousins et al. (2006) were the first to make a distinction between formal and informal methods of socialization. They suggest that formal socialization is concerned with structures and processes required to facilitate socialization efforts in the workplace whilst informal socialization is related to those in out-of-work contexts. Formal socialization refers to the methods and procedures e.g. training, programmes etc. that enable actors to adapt to their job roles whilst informal socialization is a “laissez-faire” process in which actors develop personal ties to better understand their jobs (Xu et al., 2017; Lawson et al., 2009). Formal socialisation mechanisms are those mechanisms specifically designed to transfer information from one organisation to another. Studies indicate that formal socialisation processes may not directly lead to enhancing relationship characteristics or outcomes (Cousins et al., 2006), although there is discussion about the nature of the formal socialisation processes role in relationship quality and development. It is suggested that formal processes may form a foundation on which informal processes emerge. Although formal mechanisms may not directly impact relational or social capital (Cousins et al., 2006) we hypothesize that formal mechanisms will have a direct impact on the organizational practices of the supplier organization. We suggest that if the buyer increases the level of formal and informal socialisation mechanisms it utilizes in its relationships with its supply partners, the polarity of organizational practices in the supplier organisation will be altered. This leads to following hypotheses with regard to formal socialization mechanisms:

Hypotheses H1a-H1f: Formal socialisation mechanisms will positively influence organizational practices to be more results-oriented rather than process-oriented (H1a); to be more employee-focused rather than job-focused (H1b); toward a more open communication climate rather than a closed one (H1c); towards more loose management control rather than tight management control (H1d); to be more pragmatic rather than normative (H1e); to be more market-focused rather than internally-focused (H1f).

2.4.3 The Influence of Informal Socialization on Culture

When members of an organisation socialize outside of the workplace with members of another organisation, trust, opportunity, and motivation increase the level of social exchanges among the group (Cousins et al., 2006). This concept of relational or social capital is well recognized in group behaviour theory (Burt, 2000). Group social capital is the configuration of a group member's social relationships within the social structure of the group itself, as well as with the broader social structure of the organisation to which the group belongs, and through which the necessary resources for the group can be accessed (Cousins et al., 2006). In short, informal socialisation tactics produce relational capital, in the form of learning a cultural perspective that creates greater awareness of commonplace and unusual matters that occur over the life of a buyer-supplier relationship (Cousins et al., 2006). Research also supports the theory that group boundary-spanning informal socializing relationships must be maintained in order to improve effectiveness (Pilbeam et al., 2012). Activities such as acknowledging the importance of social interaction, buyers understanding how their suppliers work and vice versa, increasing communication levels and sharing of information have been found to be beneficial (Liker and Choi, 2004). Informal socialisation mechanisms are emergent and spontaneous processes that occur when organisations come together to do a task. These mechanisms are used to create cultural congruence and alignment in the

relationship (Cousins et al., 2006). These informal mechanisms lead to higher degrees of trust, establishment of supply chain cultural norms, and higher degrees of reciprocity (Coleman, 1988; Granovetter, 1985; Levine, 1991). The following hypotheses with regard to informal socialization mechanisms are also posited:

Hypotheses H2a- H2f: Informal socialisation mechanisms will positively influence organizational practices to be more results-oriented rather than process-oriented (H2a); to be more employee-focused rather than job-focused (H2b); toward a more open communication climate rather than a closed one (H2c); towards more loose management control rather than tight management control (H2d); to be more pragmatic rather than normative (H2e); to be more market-focused rather than internally-focused (H2f).

2.4.4 The Impact of Culture on Supplier Operational Performance

The principle reasons that organizations develop strategic supply chain relationships are to improve quality and reduce costs (Petersen et al., 2008). Cooperative relationships between buyers and strategic suppliers require high levels of information exchange to facilitate supplier performance especially in cost reduction initiatives (Lawson et al., 2009). Exchange of information can apply both formal and informal mechanisms of socialization which are vital to the relationship process (Handfield et al., 2015). This type of research that investigates the factors influencing the management of strategic buyer-supplier relationships is still under-developed (Jack and Powers, 2015). The concepts of collaboration, integration and information exchange are closely related in the supply chain literature (Fawcett et al., 2015). In recent years, there have been several studies which have examined the relationships between the aforementioned supply chain practices and supplier operational performance. For example, in relation to supply chain collaboration, Kumar et al. (2016) examine the impact of SC collaboration initiatives on supply chain performance. The study

finds that joint planning schedules, relationship strength (i.e. trust, loyalty commitment) and operational resource sharing initiatives (i.e. demand forecasts and inventory levels), enhance supply chain performance measures (i.e. reduced cost and lead-times, improved quality and ease of operation) for all supply chain participants. Additionally, Cao and Zhang (2011) study the dyadic relationship between manufacturers and suppliers and find that collaborative initiatives between manufacturers and suppliers enhance “collaborative advantage” i.e. process efficiency, offering flexibility, quality and innovation. Interestingly however, Wiengarten et al. (2011) find the relationships between collaborative supply chain practices and performance is contingent on the “*quality of information*” that is exchanged throughout the supply chain.

In a similar vein, research has also examined the relationship between information sharing and supplier operational performance. For example, Dwaikat et al. (2018) take a supplier performance perspective and examine the impact of information sharing on first-tier suppliers’ flexibility in the automotive industry in Sweden. Interestingly, the results confirm that sharing demand forecasts is a key enabler of supplier volume and delivery flexibility while sharing inventory data has no significant impact of supplier flexibility. ,

Studies have also taken a more holistic perspective of and examined the relationship between supply chain integration (SCI) and operating performance. Ataseven and Nair (2017) find that supplier integration has an impact on a wider array of performance dimensions (i.e. cost, delivery, flexibility and operational) when compared to customer or internal integration. Further, Cousins and Menguc (2006) find that SC integration (scheduling, forecasting and planning) positively impacts supplier's communication performance; however, it does not influence supplier's operational performance. On the other hand, supply chain socialisation

mechanisms such as joint workshops and on-site visits were shown to enhance both communication performance and operating performance.

Hypotheses H3a- H3f: Organizational practices that are results-oriented (H3a), employee-focused (H3b), display an open communication climate (H3c), emphasize loose management control (H3d), are pragmatic (H3e) and market-focused (H3f) will have a positive impact on supplier performance

3.0 METHOD

3.1 Research Instrument Development

We used a multi-step process to initially develop and subsequently validate our instrument (Churchill, 1979). Initially, we conducted an extensive review of the inter-organisational socialisation, organisational culture, and supply chain relationship development literature to identify relevant constructs, operational definitions, and survey measurement items.

Whenever possible, validated measures from previous research were incorporated into this study (All items are given in Appendix 1).

Informal Socialisation: We adopted the scales developed by Cousins and Menguc (2006) and Cousins et al. (2006) who developed the scales from earlier work by O'Donnell (2000; cited by Cousins et al., 2006, p857).

Formal Socialisation: We adapted existing questions to measure socialisation from Feldman (1976; 1981), Cousins et al. (2006) and Grojean et al. (2004).

Organisational Culture: We adopted the scales from Verbeke (2000), who extended and developed Hofstede et al's (1990) organizational practices tool to ensure additional reliability and validity which were previously reported as major issues with Hofstede's (1990) version (Singh et al., 1996; cited by Verbeke, 2000). Additional benefits of this revised organisational

practices tool include its empirical usage in previous culture studies (Cadden et al., 2013); therefore providing a robust validated measurement tool. As culture is a complex construct, this was deconstructed into 6 sub dimensions as per other inter-organisational cultural research studies (Cadden et al., 2013; Pothukuchi et al., 2002).

Supplier Operational Performance: This scale was developed from previous performance measures and encompassed a 4 item (Cousins et al., 2008; Da Silveira and Cagliano, 2006; Naor et al., 2010; Shin et al., 2000; and Tan et al., 2002; Wiengarten et al., 2011).

In order to take a more holistic perspective of and examined the relationship between culture and performance, industry sector, sales turnover and plant size, and length of relationship were used as control variables in order to make our results more conclusive and increase its generalizability. These variables were chosen because they have been reported by various researchers and may affect the results of the study. We also used R&D as a marker variable to minimise potential biasing related to this survey.

3.2 Pilot Study

In the subsequent stages of scale development, firstly we conducted interviews and pre-test with 30 manufacturing and service sector purchasing managers. The contact with them was either via telephone or video calls to add clarity and purpose to the study. The completion time was ranged from 45 to 60 minutes to go through the entire questionnaire. This process enabled rewording and replacing of scale items along with additional items added to increase content validity. Further, the questionnaire was pilot tested in a class of final stage students studying Masters in Business Administration specializing in Supply Chain Management and six supply chain academics. Some further minor adjustments to the scales were made.

3.3 Data Collection

This study was conducted in the UK. Similar to other UK studies investigating buyer supplier relationships (Cousins et al., 2006; Krause et al., 2000), a national database of key industry sectors, filtered by greater than 100 employees, such as Manufacturing and Service industries were researched (Table 1) as these sectors are believed to exhibit the phenomenon of interest. The initial trawl resulted in 4199 companies across the sectors (when anomalies were removed). A random sample of 1000 companies were selected and the survey forwarded based on job role (purchasing manager or equivalent). Buyers were asked to respond to the questionnaire with their most strategic long-term supplier in mind; in other words, a composite view of their perception of the organisational culture of a high performing supply chain (Rokkan et al., 2003). Self-reporting survey instruments enable respondents to record their perceptions of reality (Beugelsdijk et al., 2009). “Because behaviour and attitudes are determined not by objective reality but by actors’ perceptions of reality, it is appropriate to focus on the latter” (Ashkanasy et al., 2000, pp. 133). Dillman’s Total Design Method (1978) was utilized; i.e., the first survey booklet included a personalized cover letter outlining the purpose and importance of the study along with reassurance of anonymity, a specific instruction guide, and postage paid stamped addressed return envelope. Further, a management report summary of the study would be made available to the respondents. One week later a reminder postcard was forwarded, followed by reissuing of full survey packs 3 and 7 weeks after initial posting for non-respondents.

4. ANALYSIS AND FINDINGS

Data Screening

Before data analysis, data screening was performed using SPSS in two stages. Initially, observations where the missing data exceeded 10% were removed (Hair et al., 1995), thus reducing the 311 responses received to 289. The remaining data set still had missing values

but less than 5% on a single variable, which may be of little concern (Amabile, 1983) if the values are missing completely at random (MCAR) (Hair et al., 1995). To check if the remaining missing data were MCAR, Little's MCAR test was then conducted and was found to be significant (if not significant, then missing values are replaced by using the mean value replacement). As a result, all observations with missing data were completely removed, leaving a total of 279 responses to be used in the analysis.

Respondent Profile and Survey Biases

A response of 27.9% was returned which was deemed reasonable and exceeds the level of 20% reported by Malhotra and Grover, (1998) as an acceptable response rate in survey research. The characteristics of the sample data returned is listed in Table 1 below. A range of industries was represented in this study such as telecommunications, automotive, pharmaceutical and financial services. This variety of companies provided significant variation in the level of socialisation and culture.

****INSERT TABLE 1 NEAR HERE****

To evaluate the presence of non-response bias, two tests were conducted. First, a t-test was conducted to compare early (n=182) and late (n=97) respondents on all measures. All 54 indicators were evaluated by comparing the two groups through an independent t-test. The t-test results yielded eight statistically significant differences at $p < 0.05$ (two-tailed) for early respondents and late respondents: lean practice 1 and 2, process 1, open 1 and 3, loose 5, market 4, and operational performance 4. And then, for the rest of 46 indicators, the t-test result did not find significant difference between the two respondent groups. Consequently,

nonresponse bias does not appear to be a major problem for the whole research while caution should be exercised in applying the findings.

In addition, potential common method bias (CMB) was tested by following the Harman one-factor test (Podsakoff and Organ, 1986) and including all the measurement items in a single principle component factor analysis with unrotated solution. CMB exists when a single factor emerges or accounts for most of the shared variance among the variables. The analysis revealed 13 factors with eigenvalues > 1 . The first factor explains 22.6% of the total variance. In addition, following Lindell and Whitney (2001), we used the partial correlation procedure to further examine the potential CMB in this study. The partial correlation procedure uses a marker variable, which is theoretically unrelated to at least one of the key constructs in the model, to investigate if the zero-order and partial correlations are statistically consistent. In addition, we used R&D as a marker variable and the results showed that the two correlations were statistically similar. Therefore, common method bias does not seem to be an issue.

Reliability

Table 2 presents reliability results. All scales were deemed reliable as they exceeded the 0.7 α (Nunally, 1978) and exceed the reliability of Hofstede's initial study (1990) and are in common with Verbeke (2000) and Pothukuchi et al. (2002).

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4.1 Validity

A number of key steps were taken to ensure validity in this study. These scales are adapted and modified from previous studies focusing on inter-organisational relationships, therefore content validity was assured by firstly conducting an extensive review of the literature. Face validity was assured by using the method advised by Litwin (1995; cited by Verbeke, 2000, p592). A set of untrained eyes (a class of 40 MBA students) was given a definition of key constructs, formal and informal socialisation, along with a mixed up copy of the questionnaire. In total, 30/40 (74%) correctly apportioned the items to their respective scales. This concurs with Verbeke's (2000) results; and ensures face validity in this study. Construct validity is assessed by principle component analysis with Varimax rotation, which is a widely recognized method to assess for constructs validity (Spector, 1992). All items that loaded against their constructs above 0.5 were deemed suitable. Factor analysis revealed 4 items (employee item 4; employee item 8; loose item 5 and loose item 7 were below the threshold and were therefore removed. All other items had a loading above 0.5 against their respective constructs (.52-0.83) (Nunnally, 1978). (See table 3)

****INSERT TABLE 3 NEAR HERE****

Convergent validity and discriminant validity were satisfactory based on two tests. The first test was to analyse the Fornell-Larcker criterion (Fornell and Larcker, 1981) to evaluate if the square root of AVE value for each construct is greater than the correlation of the construct with any other construct, which is true based on the comparison summarised in Table 4. On

the other hand, discriminant validity was examined by using inter-factor correlations. The results were lower than the 0.7 standard and within an acceptable range (Anderson and Gerbing, 1988) which provide confidence that multicollinearity is not an issue in this study. The results, see Table 4, confirmed the convergent validity and discriminant validity of the measurement framework.

The control variables of industry sector, sales volume and number of employees were applied for supplier operational performance. The results, industry sector: 0.11, sales turnover: 0.19 and number of employees(plant size) : 0.06, and age (length of relationship): 0.050 showed no significant differences were found.

****INSERT TABLE 4 NEAR HERE****

In order to improve the validity of collecting responses from buyers regarding their supplier operational performance, we further contacted the buyers who left us their contact details for further study and asked 1 or 2 suppliers' contact details which they have worked with. We took a sample of 50 suppliers at random and send our survey to those suppliers to complete a dyadic study. Giving the fact that we are comparing the results from two independent groups, we applied independent t tests and found no significant difference. The t-test results in Table 5 show that the group means are not statistically significantly different because the value in the "Sig. (2-tailed)" row is more than 0.05. These results add validity to our results

****INSERT TABLE 5 NEAR HERE****

4.2 Confirmatory Factor Analysis

Lisrel 8.8 was used to estimate the model parameters using robust full information maximum likelihood based on a matrix of variances and covariances. Following the guidelines suggested by Hoyle and Panter (1995) the goodness of fit for each model was assessed using a range of fit indices including the Satorra–Bentler scaled chi-square ($S-B\chi^2$), the Tucker-Lewis index (TLI; Tucker and Lewis, 1973), and the Comparative Fit Index (CFI: Bentler, 1990). A non-significant chi-square, and values greater than .95 for the TLI and CFI are considered to reflect acceptable model fit. In addition, the Root Mean Square Error of Approximation (RMSEA: Steiger, 1998) with 90% confidence intervals (90% CI) were reported, where a value less than .05 indicates close fit and values up to .08 indicating reasonable errors of approximation in the population (Jöreskog and Sörbom, 1996). The standardized root-mean-square residual (SRMR: Jöreskog and Sörbom, 1996) has been shown to be sensitive to model mis-specification and its use recommended by Hu and Bentler (1998). Values less than .08 are considered to be indicative of acceptable model fit (Hu and Bentler, 1998).

4.3 Model Fit

The model used all variables from the data collection as shown in figure 2: formal and informal supply chain socialisation, six original culture measure sub-dimensions, and the supplier performance measure.

The model fit was acceptable ($\chi^2 = 3.36$, $df = 3$, $p = .34$; CFI = .99; TLI = .99; RMSEA = .03; SRMR = .02). The chi-square was non-significant. The CFI, TLI, RMSEA and SRMR all met the criteria for acceptable fit. These results also confirm that the constructs tested in our study meet the criteria for unidimensionality. The model estimates are presented in Table 6.

****INSERT TABLE 6 NEAR HERE****

5. DISCUSSION

This study investigates the interplay of formal and informal socialisation in developing a supply chain organisational culture to positively impact supplier performance. It was found that both informal and formal socialisation have a significant influence in creating a high performance organisational culture.

5.1 Formal Socialisation to Organisational Culture:

Our first set of hypotheses: *Formal socialisation mechanisms* have a positive impact on *supplier's organisational culture (H1a-Hf)* found that formal socialisation had a significant direct impact on all organisational culture sub dimensions, apart from the loose/tight sub dimension ($p < 0.10$). Particularly significant relationships were between formal socialisation and 3 cultural sub dimensions (hypotheses H1a, H1c, and H1f: Process (0.85**), open (.56**) and market supply-chain orientated (0.48**). This highlights that formal socialisation mechanisms, such as cross-functional teams and joint workshops, are instrumental governance mechanisms in creating a culture of high performance. In terms of the process dimension, formal socialisation mechanisms such as cross functional teams and matrix style reporting may allow the buyer firm to more precisely embed internal quality assurance processes and procedures within supplier organisations (Moncka and Trent, 1994; Gunasekaran et al., 2004; Dwaikat et al., 2018). As highlighted by Gunasekaran et al., 2004 (pg 334) "*The Development of cross-functional teams aligns organisations with a process oriented structure, which is much needed to realise a smooth flow of resources in a supply chain*". Moreover, recent research suggests that process integration with suppliers is also facilitated by open and market/supply chain oriented organisational cultures which permit

operational coordination across the supply chain (Eng, 2005; Liu, et al., 2013). The mean score for process/results sub dimension (15.73/25) further supports this type of balanced culture, and concurs with earlier work by Trent and Monczka, 2003; and Cousins, 2006 who reported that formal socialisation mechanisms only appear to enhance supplier performance if the correct 'management by objectives', processes and leadership are in place.

A second interesting finding from the results of H1a-H1f is that formal socialisation practices negatively influence employee focused cultures (-0.11). This may be an indication that formal socialisation practices are concerned primarily with the structural enablers of socialisation i.e. matrix reporting structures, joint workshops and cross functional teams (Kulangara et al., 2016). On the other hand, employee development is a soft factor and is primarily concerned with human capital development (Shub and Stonebraker 2009; Bortolotti et al., 2015). It may be the case that informal socialisation mechanisms may have a better fit with an employee oriented culture as it may facilitate the development of relational capital (trust etc.) through informal means i.e. dining out or sporting events (Cousins et al., 2006, Kulangara et al., 2016). It can be therefore be argued that formal socialisation practices may set the scene for the informal socialisation practices (Cousins et al., 2006) but do not always directly influence the "softer" dimensions of organisational culture.

The results of H1a-H1f extend and develop previous research by Cousins and Menguc (2006) by suggesting formal socialisation mechanisms can influence suppliers to be process oriented. This is supported through open and market orientated structures which facilitate information sharing and operational coordination (cross functional teams etc.) (Liu et al., 2013). These results also support research by Green et al. (2007) and Dwaikat et al. (2018) who find that formal information sharing i.e. sharing demand forecasts with suppliers, enhances both supplier and buyer operating performance.

5.2 Informal Socialisation and Organisational Culture

Our second set of hypotheses: *Informal socialisation mechanisms* have a positive impact on *supplier's organisational culture (H2a-Hf)* found that informal socialisation had a significant positive impact on all organisational culture sub dimensions ($p < 0.10$), apart from the Norm dimension and the process oriented dimension. Significant positive relationships were between informal socialisation and hypotheses H2b (employee focused 0.24), H2c (open communication 0.49), H2d (loose management 0.28) and H2f (market focused 0.32). It is insightful to reveal that a governance mechanism such as informal socialisation, previously dismissed as a 'fad' or 'rhetoric' has such a powerful and positive impact.

This flexible relationship with high levels of relational capital has been acknowledged as an enabler to supply chain success in previous studies (Cousins et al., 2006; Braunscheidel et al., 2010; Cadden et al., 2013). It is therefore insightful to reveal that the most significant cultural sub dimension that informal socialisation impacts is openness. Building informal relationships through suppliers on site, on site visits, and regular communication (both formal and informal), appears to result in a culture, which espouses constructive criticism, problem solving and honest feedback in support of high supplier performance outcomes (Paulraj et al., 2008). This extends the work by Balthazard et al. (2006) who found in a large intra organisational study (60,900 respondents) that constructive cultures have a significant and direct impact on an organisations bottom line. This study reveals that such a culture has a similar impact on supplier operational performance in a supply chain setting. Interestingly, informal socialisation was also found to be significantly positively related to the loose and employee oriented cultures and negatively related to the process oriented (-0.25) cultural dimension. These results are in contrast to formal socialisation mechanisms and appear to suggest that informal mechanisms (often out of work contexts i.e. group outings) can influence suppliers to be more results oriented, open, employee focused and flexible. This

may be as a direct result of informal socialisation mechanisms such as out of work team building initiatives which build a group mentality. These findings support research by Cao et al. (2015), that finds that “flat”, as opposed to hierarchical cultures, are associated with group (i.e. employee/team based), rational (i.e. incentive/objective based) and developmental cultures and show the highest level of supplier integration. These findings also support research by Braunscheidel et al. (2010) who find that the adhocracy culture (flexible and informal systems) as opposed to a hierarchal culture are positively associated with supplier and customer integration, ultimately enhancing supplier flexibility metrics such as delivery performance.

Finally, the norm dimension was not found not to be significant. The authors believe this could be due to the normative rather than the pragmatic trait being deeply-rooted and may take time to evolve. Informal socialisation is a soft factor, just like trust, and as relationships evolve so does the level of informal socialisation. This finding is supported by previous studies that suggest formal structures are a platform to allow informal mechanisms to develop over time (Cousins et al., 2006). This in turn reduces opportunism and enhances a relationship of open collaboration (Tangpong et al., 2010).

Overall. The findings from H1a-H1f and H2a-H2f present some interesting findings. The results suggest that *both* formal and informal socialisation practices can influence suppliers to be more open and market facing. However, while formal socialisation can influence suppliers to be more process oriented, informal socialisation is linked to flexible, results focused and employee oriented cultures. resources, trust and finally communication.

5.3 Organisational Culture to Supplier Performance

Our third set of research question: *organisational culture* has a positive impact on *supplier operational performance* (H3a-H3f) were largely supported; with a results-oriented (0.38**)

and employee-focused (0.37**) culture having the greatest impact on supplier operational performance. The results also show that the loose (0.29**), market (0.28*) and pragmatic (0.19*) cultural dimensions positively impact supplier operating performance, while the open/closed dimension was found not to be significantly related to supplier performance. Overall the findings suggest that results/achievement focused cultures, which are underpinned by adhocracy (flexibility) and market oriented cultures (externally focused), enhance operating performance. The findings therefore support research by Kim and Nguyen (2018) which find that *collaborative* supply chain practices i.e. working relationships, joint problem solving, communication, trust, goals and objectives (i.e. results orientation), and sharing resources with suppliers, can positively impact SC performance. The results also support research by Braunscheidel et al. (2010) who find evidence that a firm's adhocracy (loose) culture score is positively associated with external integration and supplier delivery performance, while a firm's hierarchy culture score is negatively associated with both internal and external integration practices. Finally, the findings also endorse work by Cousins (2002) and Linderman et al. (2003) that employees at an operational level are central to the success of an organisation and where the best results can be achieved. Organisations that see employee growth, teamwork and learning as an enabler to success, rather than a cost, will reap benefits in higher performance outcomes (Balthazard et al., 2006; Cousins et al., 2006; Shub and Stonebraker, 2009; Bortolotti et al., 2015).

Overall, the findings of H3 find support for the interplay between supply chain socialisation practices, organisational culture and supplier performance. The findings from H1-H3 suggest that both formal and informal socialisation practices can influence suppliers to be market oriented and that market orientation enhances supplier operating performance. This is to be expected as market orientation relates to organisations that are externally focused on meeting

customer needs (Cadden et al., 2013). In this sense, embedding a market focus provides the foundation for both formal and informal socialisation mechanisms to achieve superior supplier performance. Crucially, however, the paths to which firms enhance firm supplier performance differ. For example, H1 suggests that formal socialisation practices can influence suppliers to be process, open and market oriented which facilitates the transfer of quality procedures and processes (Liu et al., 2013; Dwaikat et al., 2018). On the other hand, H2 suggests that informal socialisation practices influence suppliers to become more results focused, flexible and employee oriented with support from the open and market dimensions. Crucially, the findings seem to suggest that buyer firms can use socialisation measures to strategically align supplier culture with operational goals i.e. lean vs agile. Overall, the results from hypotheses three appear to suggest that informal socialisation practices in particular can influence culture to enhance performance with a results focused, employee oriented and external facing cultures enhancing supplier operating performance (Cousins et al., 2008).

5.4 Implications for theory and practice.

Previous research examined the impact of organisational socialization mechanisms on both relationship outcomes and supplier performance measures (Cousins et al., 2006, 2008).

This study extends and develops this knowledge by deconstructing culture into 6 sub dimensions prior to assessing the relationship between socialization practices and supplier performance. The study supports and adds to both the relational view of the firm and social exchange theories of the firm. Firstly, from a relational perspective (RV), the results suggest that the initial mechanisms for socialising partners in a relationship can lead directly to relationship-specific values and practices that enhance supplier performance (Tsanos et al., 2016). More specifically, the results suggest that the unique paths evolve from the socialised relationships which can become unique strategic resources for the parties involved (Tsanos et al., 2016, Kulangara et al., 2016).

For example, the results of the hypotheses 1 and 2 suggest that both formal and informal socialisation mechanisms can both influence suppliers culture to adopt a *market facing* and *open* organisational culture. This is not surprising as Cadden et al. (2013) and Kulanagar (2016) argue that socialisation practices are relationship oriented by nature, while Paulraj et al. (2008) find that open communication lines enhance relational capital and supplier performance. Moreover, the results of H3 suggest the market dimension, which is common to both formal and informal mechanisms, enhances supplier operating performance. However, from a relational view (RV) standpoint, although a market orientation is necessary for improving performance, it is the unique influence of formal and informal socialisation mechanisms and culture which facilitate unique and strategic buyer-supplier relationships. The results of H1 suggest that formal socialisation practices (i.e. cross functional teams and joint workshops) are associated with a process culture which aids the supplier's comprehension of internal quality and efficiency programs when supported by open and market dimensions (Khan et al., 2010, Liu et al., 2013). This, in turn helps facilitate operational coordination (Liu et al., 2013, Dwaikat, 2018). On the other hand, H2 indicates that informal practices such on site suppliers and team outings are influence suppliers to become more employee oriented, results focused and flexible (loose) which is also supported by open and market oriented cultures. Research shows that this combination facilitates relational capital i.e. knowledge sharing, teamwork, communication and trust (Paulraj et al., 2008; Cao et al., 2015) thereby reducing uncertainty and enhancing supplier performance. (Cousins et al., 2008; Braunscheidel et al., 2010).

Overall, the results of hypothesis three indicate that it is informal socialisation practices in particular which have the greatest influence on supplier culture and operating performance with results based, employee focused and supply chain oriented supply chains enhancing supplier performance (Cousins et al., 2008).

From a social exchange perspective, socialisation mechanisms signal to the parties involved a commitment to the relationship ensuring that if there is a power imbalance that power will not be used as a coercive or punitive tool (Cadden et al., 2013). This leads to the formation of supply chain cultures embedded in trust and commitment and lead to better supplier performance (Wu et al., 2014; Kulanaga et al., 2016). In relation to this study, formal mechanisms involve embedding operational procedures and processes, thus affording suppliers a degree of specificity, giving the buyer firm a power advantage in the relationship (Gurcaylilar-Yenidogana, et al., 2013). The downside of this scenario is that buyer can hold the supplier firm to ransom due to the “lock-in” scenario which can ultimately disrupt relationship performance (Artz 2002; Gurcaylilar-Yenidogana and Windsperger, 2014). On the other hand, informal socialisation practises are linked to results-based, employee-orientated and supply chain focused organisations. In other words, cultures which focus on joint development, teamwork and building trust (Wu et al., 2014). Hence, management can use informal socialisation mechanisms to reduce the risk of opportunism and strengthen the relationship with suppliers. Indeed, the results of this study show that informal socialisation mechanisms, which encourage trust and teamwork, are more effective in terms of influencing supplier culture and enhancing supplier operating performance than formal socialisation mechanisms (Cousins et al., 2008). Moreover, the benefits (cost, conformance on-time delivery and flexibility) will also transfer to the buyer firm and align with the buyer firm’s strategic operating goals.

Overall, the results seem to suggest that aligning the correct socialisation mechanisms with the ‘right’ cultural practices from early in a supply chain relationship appear to be critical to success. The old adages of ‘*start as you mean to go on*’; and ‘*you reap what you sow*’ are true in respect of organisational culture.

6. CONCLUSION

This study extends and develops this knowledge by deconstructing socialisation and organisational culture, which to the best of our knowledge has not been done, yet, it is often called for (Cadden et al., 2013; Cousins et al., 2008; Liu et al., 2010). The study has brought additional insights into the area of supply chain relationships. The importance of deconstructing key constructs such as socialisation and organisational culture have shown that some elements of organisational culture are more important than others in developing strategic buyer-supplier relationships.

6.1 Limitations and Future Research

Our study has a number of limitations worth highlighting. First, the data employed was gathered from the perspective of one respondent (the buyer) in each organisation. This may cause an element of common method bias. Future studies should ensure data is collected from a number of respondents throughout the supply chain to address this issue of common method bias.

Second, our study took a snapshot of culture at one point in time. Culture is a complex construct that changes over time (Bititchi et al., 2006). Therefore, to further understand the intricacies of culture, a longitudinal study is needed.

Third, we aggregated cultural data at a product and service level. It has been noted in previous studies that sub cultures may exist in organisations (Saffold, 1998). Therefore, future studies could explore culture at a sub level to understand how differing cultural types may impact supplier performance.

Fourth, our study was undertaken in the UK. It would be useful to replicate this study in a different setting, including Eastern countries. Further, cross-national studies would be insightful whilst controlling for the impact of national culture.

Fifthly, future studies could consider themes such as green supply chain management and sustainability.

Our study was primarily quantitative across a large cross section of industries. A focus on a key industry sector would allow for deeper insights to be gained using the case method.

Further, a number of other mediating factors would be useful to include in future studies.

Factors such as the length of the buyer supplier relationship, level of power, trust, communication and risk may all have an influence in the creation of a culture of high performance.

However, whilst the above are areas to be cognizant of when reading this paper, it also highlights some very important insights into the influence of socialisation mechanisms (both formal and informal) on creating an organisational culture of high performance.

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Appendix 1: Survey Measures (Each measured using a 1-5 Likert scale, where 1 is strongly disagree and 5 is strongly agree).

Formal Socialization Mechanisms
Effectiveness of supply chain workshops in understanding and enhancing knowledge of each participant in the supply chain Effectiveness of cross functional team in understanding and enhancing knowledge of each participant in the supply chain Effectiveness of supply chain reporting structures in understanding and enhancing knowledge of each participant in the supply chain
Informal Socialization Mechanisms
Effectiveness of communication guidelines in understanding and enhancing knowledge of each participant in the supply chain Effectiveness of awareness of supply chain issues in understanding and enhancing knowledge of each participant in the supply chain Effectiveness of on site visits in understanding and enhancing knowledge of each participant in the supply chain
Results
When confronted with problems suppliers help each other The tasks of supplier employees that are absent are taken over by colleagues Requests from other departments are carried out without delay On special projects there is always cooperation between the various supply chain participants Suppliers are encouraged to contribute by coming up with their own ideas
Employee
When people are unhappy with their job but still perform well, new possibilities are found for them Whenever an employee is ill, or has personal problems, managers ask after their problems with interest Suppliers are encouraged to go to courses, seminars and conferences to help their personal development If there are personal conflicts, supply chain managers will attempt to solve these problems With respect to birthdays, marriages and births, managers show a personal interest In matters that directly involve them, employees usually have a say Managers are quick to compliment employees on a job well done Management ensures our work doesn't become too pressurized

Open
<p>If a manager has a criticism of an employee they discuss it openly with them</p> <p>Employees express criticisms of management directly to the management</p> <p>Suppliers employees are asked for constructive criticism to help their managers perform</p> <p>The mistakes of a colleague are personally discussed with them</p>
Loose
<p>Managers rarely check if the employees are working</p> <p>If someone is a little late for an appointment with a manager, they will never be reprimanded</p> <p>If a supplier employee goes out for personal reasons during working hours, there is no check on how long s/he stays away</p> <p>the supplier expects their employees to specify expenses in detail</p> <p>If a supplier employee is late for work, but works extra at the end of the day no one is bothered</p> <p>The number and duration of the breaks employees take are rarely checked by the managers</p> <p>If a supplier employee has to go to an important appointment they only have to report it to someone in the company</p>
Normative
<p>In my organization major emphasis is on meeting customer needs</p> <p>Results are more important than procedures</p> <p>Supplier employees never talk about the history of the organization</p> <p>The suppliers business contributes much to society</p> <p>The suppliers business actively honors its ethical responsibilities:</p>
Market
<p>The satisfaction of the customers is measured regularly</p> <p>Product promotions and actions by the competition are reported in detail</p> <p>Consumers preferences are investigated thoroughly</p> <p>The company provides products and services that meet the needs of the various customer segments</p> <p>The future needs of the customers are discussed extensively with the various departments</p> <p>In talks with customers, people try to find out about the future needs of the customers</p>
Supplier Operational Performance
<p>In the past 3 years, on time delivery has improved due to our supply chain relationships</p> <p>In the past 3 years, conformance to product specifications have improved due to our supply chain relationships</p> <p>In the past 3 years, our flexibility to respond to changing customer demands has improved due to our supply chain relationships</p> <p>In the past 3 years, increasing number of successful cost reduction initiatives have resulted due to our supply chain relationships</p>

Figure 1: Research Model and Hypotheses

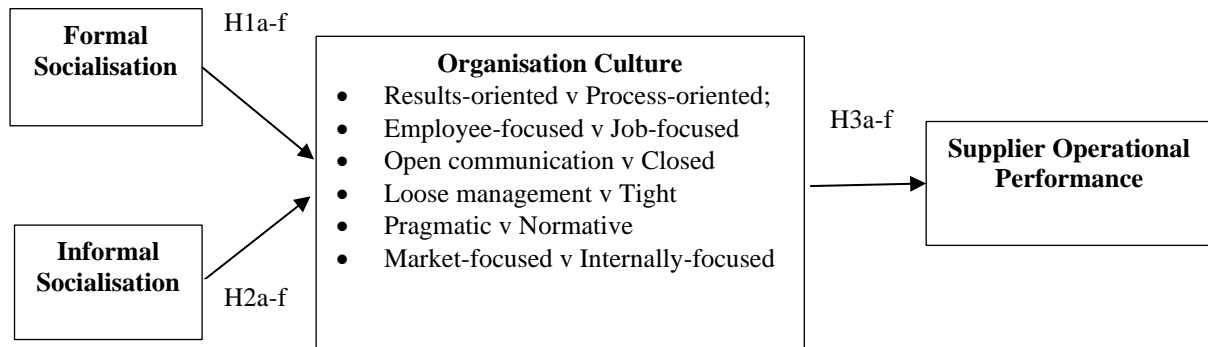


Table 1: Profile of Respondents:

Major Sector (from UK SIC 2007)	N	%	Business Unit Sales	N	%
10 – 30 (Range of manufacturing)	171	61.3	<£50m	168	60.1
47 – Retail services	62	22.5	£50m - £100 m	44	15.8
61 – Telecommunications	10	3.3	£100m - £250m	35	12.7
64- Financial Services	36	12.9	O£250m - £500m	13	4.8
Total	279	100	£500m- £1 billion	9	3.1
Number of Employees	N	%	Over £1 billion	10	3.5
100-500	203	73	Total	279	100
500-1000	43	15.3			
1000+	33	11.7			
Total	279	100			

Table 2: Reliability Statistics

Instruments	Cronbach's α	Cronbach's α Standardized	No. of Items	Mean	Standard Deviation
Results	.756	.745	5	3.10	0.68
Employee	.820	.821	8	3.06	0.93
Open	.824	.827	4	3.11	0.78
Loose	.731	.731	7	3.23	0.92
Pragmatic	.824	.827	5	3.37	0.61
Market	.763	.769	6	3.07	0.66
Informal Socialisation	.734	.767	3	3.48	0.75
Formal Socialisation	.792	.791	3	3.22	0.80
Operational Performance	.775	.812	4	3.82	0.63

Table 3: Factor Analysis

Factor and Items	Loadin g	Error Term	t-value	R²	Factor and Items	Loading	Error Term	t-value	R²
Results					Pragmatic				
Results1	0.64	0.11	10.15	.43	Pragmatic 1	0.72	0.12	13.25	.58
Results 2	0.66	0.12	10.24	.42	Pragmatic 2	0.76	0.10	13.95	.59
Results 3	0.72	0.14	14.68	.57	Pragmatic 3	0.67	0.09	13.22	.49
Results 4	0.70	0.09	13.12	.50	Pragmatic 4	0.68	0.08	13.23	.50
Results 5	0.68	0.10	11.34	.42	Pragmatic 5	0.70	0.15	13.07	.52
Employee					Loose				
Employee 1	0.57	0.11	10.63	.30	Loose 1	0.66	0.13	12.50	.44
Employee 2	0.67	0.13	13.04	.46	Loose 2	0.60	0.11	11.48	.42
Employee 3	0.72	0.14	14.33	.56	Loose 3	0.71	0.12	13.35	.55
Employee 5	0.76	0.15	15.43	.57	Loose 4	0.74	0.16	9.56	.37
Employee 6	0.69	0.16	13.55	.50	Loose 6	0.75	0.14	14.23	.52
Employee 7	0.67	0.13	13.49	.40	Market				
Open					Market 1	0.63	0.12	12.12	.39
Open 1	0.51	0.14	10.11	.37	Market 2	0.65	0.17	12.89	.40
Open 2	0.71	0.11	9.02	.30	Market 3	0.71	0.14	13.73	.53
Open 3	0.78	0.15	14.15	.69	Market 4	0.61	0.15	12.06	.37
Open 4	0.70	0.15	13.00	.51	Market 5	0.67	0.12	12.89	.45
Informal Socialisation					Market 6	0.74	0.10	13.55	.59
InfSoc1	0.75	0.12	14.09	.48	Formal Socialisation				
InfSoc2	0.69	0.11	12.67	.31	FSoc1	0.63	0.11	12.31	.58
InfSoc3	0.74	0.15	14.02	.64	FSoc2	0.76	0.17	14.27	.55
Supplier Performance					FSoc3	0.77	0.13	14.54	.56
Perf1	0.81	0.12	19.02	.60					
Perf2	0.78	0.18	16.28	.58					
Perf3	0.83	0.15	21.06	.69					
Perf4	0.71	0.12	13.28	.50					

Table 4: Inter-Item Correlation Matrix

	Results	Employee	Open	Loose	Market	Pragmatic	Informal Socialisation	Formal Socialisation	Performance
Results	1.00								
Employee	0.29	1.00							
Open	0.31	0.45	1.00						
Loose	0.23	0.57	0.27	1.00					
Market	0.35	0.21	0.46	0.53	1.00				
Pragmatic	0.18	0.37	0.54	0.39	0.45	1.00			
Informal Socialisation	0.22	0.26	0.43	0.19	0.48	0.39	1.00		
Formal Socialisation	0.34	0.52	0.53	.39	0.52	0.26	0.56	1.00	
Performance	0.26	0.24	0.28	0.32	0.47	0.38	0.41	0.45	1.00
AVE	0.63	0.70	0.74	0.65	0.73	0.64	0.80	0.66	0.71

Table 5: Dyadic Study Results

	Group	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)
Results	suppliers	50	3.09	.49	.088	0.096
	buyers	279	3.10	.68	.072	
Employee	suppliers	50	2.99	.93	.164	0.859
	buyers	279	3.06	.93	.099	
Open	suppliers	50	3.19	.75	.129	0.427
	buyers	279	3.11	.78	.083	
Loose	suppliers	50	3.38	.99	.175	0.691
	buyers	279	3.23	.92	.098	
Pragmatic	suppliers	50	3.27	.40	.072	0.052
	buyers	279	3.37	.61	.064	
Market	suppliers	50	3.08	.66	.117	0.914
	buyers	279	3.07	.66	.070	
Informal Socialisation	suppliers	50	3.39	.27	.157	0.298
	buyers	279	3.48	.75	.079	
Formal Socialisation	suppliers	50	3.13	.73	.130	0.761
	buyers	279	3.22	.80	.085	
Operational Performance	suppliers	50	3.73	.69	.122	0.278
	buyers	279	3.82	.63	.067	

Table 6: Standardised Regression Co-efficients (Standard Error) for the initial part of the Cultural Model (Hypothesis H1 and H2) socialisation and culture

	Results	Employee	Open	Loose	Pragmatic	Market
Formal Socialisation	.85 (.05)**	.11(.05)*	.56 (.06)**	.15 (.12)	.22 (.10)*	.48 (.08)**
Informal Socialisation	-.25 (.10)**	.24(.08)*	.49 (.05)**	.28(.10)**	.09(.06)	.32(.09) **

*p<.05; **p<.01

Standardised Regression Co-efficients (Standard Error) for the final part of the Cultural Model (Hypothesis H3)

	Supplier Operational Performance
Results	.38 (.13)**
Employee	.37(.09)**
Open	-.29 (.15)
Loose	.29(.11)**
Pragmatic	.19(.07)**