Title: The Effect of Buyers' Socialization Efforts on the Culture of their Key Supply Chain Partner and its Impact on Supply Chain Performance

Track: Supply Chain Management in Manufacturing

- Collaboration and coordination issues in SCM

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1. Purpose

This paper investigates if inter-organizational socialization mechanisms by a buyer organization towards a strategic supplier can influence the culture within that supplier organization to ultimately improve the supplier's supply chain performance to the buyer. Organizational culture has been conceptualized as very different things: (1) as language (Srivastava et al, 2016; Barley et al, 1988); (2) as emotion (Barsade & O'Neill, 2014); (3) as ways of thinking (Harris, 1994); (4) as organizational practices (Cadden et al, 2013; Verbeke, 2000; Christensen & 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 at 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. Therefore, this paper

makes a significant contribution to the current supply chain literature which has focused on culture at the level of values.

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, 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 e.g. Xu et al (2017), Chavez et al (2015), Cao et al (2015), Petersen et al (2008).

The principle reasons that organizations develop strategic supply chain relationships are to improve quality and reduce costs (Petersen et al, 2008). Research that investigates the factors influencing the management of strategic buyer-supplier relationships is still under-developed (Jack & Powers, 2015). Indeed culture is known to influence relationship performance (Cadden et al, 2015; Cadden et al, 2013; Beugelsdijk et al, 2006; Newman and Nollen, 1996).

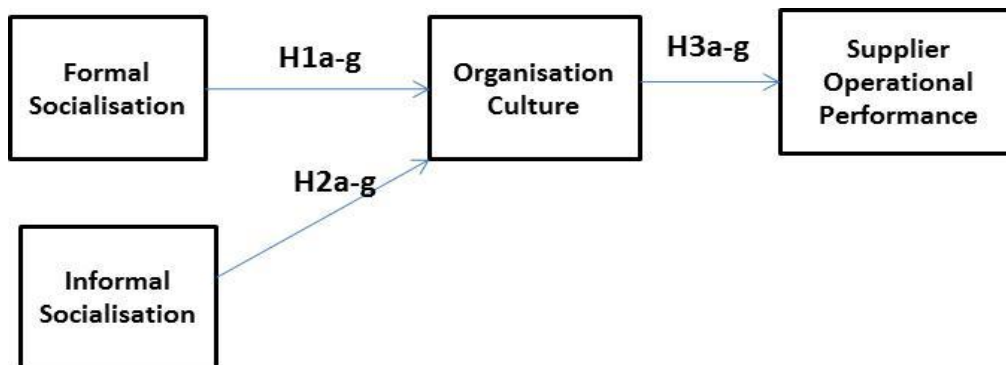The conceptual model developed is shown in Figure 1.

Figure 1: Model

2. Design/methodology/approach

Similar to other UK studies investigating buyer supplier relationships (Cousins et al, 2006; Krause et al, 2000), the national SIC database of Manufacturing and Service industries was used. Companies with greater than 100 employees were filtered to provide a population of 4,199 companies across the sectors (when anomalies were removed). A random sample of 1000 companies was selected and the survey forwarded based on job role (purchasing manager or equivalent). A mail-based survey was used. Buyers were asked to respond to the questionnaire with their most strategic long-term supplier in mind. 311 respondents returned questionnaires (279 were usable). Therefore, a response of 27.9% was returned which was deemed reasonable and exceeds the level of 20% reported by Malhotra & Grover, (1998) as an acceptable response rate in survey research.

The Informal Socialization scale was based on scales developed by Cousins and Menguc (2006) and Cousins et al, (2006). Supplier on site visits, communication guidelines and awareness of supplier issues were the three items used.

The Formal Socialization scale was based on work by Feldman (1976; 1981) alongside later work by Cousins et al (2006) and Grojean et al, (2004). Key socialization mechanisms were examined using a three-item scale, which included cross-functional teams, joint workshops and reporting structures.

Hofstede et al's (1990) tool is well recognized for measuring organizational practices (Pothukuchi et al, 2002). Verbeke (2000) extended and developed this tool to ensure additional reliability and validity; Singh et al, (1996) reported these as major issues with Hofstede's (1990) version. Organizational practices was measured using a 35 item, 5 point Likert scale. The 35 items are broken down into six independent dimensions to

assess organizational practices: results versus process; employee versus job; open versus closed; loose versus tight; normative versus pragmatic; and external versus internal.

The Supplier Operational Performance scale was developed from previous operational performance measures (Cousins et al, 2008; Da Silveira and Cagliano, 2006; Naor et al, 2010; Wiengarten et al, 2010) and encompassed a 4 item, 5 point Likert scale including items such as on time delivery, conformance to product specifications, flexibility to change volume, and unit cost of product.

Findings

Respondent Profile and Survey Biases

311 respondents returned questionnaires (279 were usable). Therefore, a response of 27.9% was returned which was deemed reasonable and exceeds the level of 20% reported by Malhotra & Grover, (1998) as an acceptable response rate in survey research. 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.

In order to test for non-response bias, a set of t-tests were conducted based on early versus late respondents, (Armstrong and Overton, 1977) by sales volume and number of employees. No significant differences were found.

Table 1 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).

Table 1: Reliability Statistics

Instruments	Cronbach's α	Cronbach's α Standardized	No. of Items	Mean	Standard Deviation
Results	.756	.745	5	15.73	3.34
Employee	.820	.821	8	25.35	6.432
Open	.824	.827	4	11.18	3.60
Loose	.731	.731	7	20.03	2.85
Pragmatic	.824	.827	5	14.85	4.51
Market	.763	.769	6	21.27	3.75
Informal Socialisation	.7 34	.767	3	11.96	3.92
Formal Socialisation	.792	.791	3	9.65	4.84
Operational Performance	.775	.812	4	15.29	2.53

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 2)

Table 2: Factor Analysis

Factor and Items	Loading	Error Term	t-value	R^2	Factor and Items	Loading	Error Term	t-value	R^2
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					

Relevance/contribution

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 (2012) 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 2012). 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.

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.

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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