ABSTRACT

In an era of global supply chains, the vast majority of supply chain theory is bound up within the North American and European business contexts. To investigate its generic applicability within a global context, this study investigates how national culture affects the uptake of supply chain management theory in practice. Hoefstede’s (1980) well-known measures of international work-related values are used to compare the behaviours of a cross-national sample of supply chain managers. The exploratory research involves an anthropological approach of observing supply chain management behaviour within its natural setting. Supply chain management concepts need to be adapted to cater for managers’ cultural diversity. Identifying the most desirable supply chain improvement destination requires understanding of national, organisational and individual cultural norms. In particular, the pathway to change and the desirable leadership role must be matched to the demands of the local cultural environment. Cases from a number of national setting are investigated. Hence there is significant scope for further exploratory, intra-country and inter-country research into national cultural diversity and global supply chain management. Our findings show the general uptake of supply chain management in practice is slow and rather disappointing, particularly given some twenty-plus years of academic research. Although supply chain management concepts seem to be geographically generic in application, evidence indicates that the setting directly affects the approaches undertaken in practice. The cultural values in Asian versus Anglo-Saxon working environments significantly affect supply chain management practice.

KEYWORDS
Global Supply Chain, Anthropological Approach, Cultural Diversity

INTRODUCTION

From a particularistic perspective the context and culture should be considered when managing operations (Prasad and Babbar, 2000). In response to direct calls for further research into supply chain culture (Zhao et al., 2008) the aim of the present study was to investigate possible affects of national culture on supply chain management (SCM) practice. Although many supply chain networks extend internationally, little research has discussed the need to tailor SCM approaches to suit the local business settings. Alternatively, can generic approaches to management and leadership be applied internationally? An all too common ethnocentric perspective results in viewing other cultures through one’s own cultural lens. Hence, often overlooked are the underlying cultural factors that make one supply chain solution optimal in one country but almost infeasible in another (see for example; Aelera, 2004; Metters et al, 2010; Davies, 2006; Helmreich and Merritt, 1998; Wang, 2006; Ong, 1987).

Consider how national setting and SCM interrelate. Is there a need to tailor SCM approaches for these alternate international settings? Is supply chain theory truly generalisable, as some would have us believe (Friedman, 2006; Hoecklin, 1995)? The vast majority of research in this area has been based on the observation of supply chain practices internationally, followed by cross-comparisons of performance (for example, Childerhouse et al, 2010; Naor et al, 2010). There are however a number of shortcomings to this typical positivist approach since the context of each nation makes for unfair comparisons due to, among others: market conditions, national culture and infrastructure development that
arguably can be larger influencing factors on performance than the supply chain practises themselves. In this research the national culture effects on supply chain management are investigated as this provides one of the most powerful counter-arguments to the universalism movement (out of the USA, in particular). The research questions are:

Does the behaviour of supply chain managers differ internationally?
What effect does national culture have on the way supply chains are managed?

Following is a brief review of national culture and the possible effects on the application of supply chain management. The method section then provides justification for the research design. The analysis that follows is focused on the behaviour of supply chain managers and how this relates to national culture. The paper ends with a short conclusions section.

LITERATURE REVIEW

To emphasise the different national settings, the cultural differences between New Zealand, Thailand, and the United Kingdom (three of the major national setting investigated) are indicated in Table 1 using Geert Hoefstede’s (1980) cultural dimension values.

<table>
<thead>
<tr>
<th>Cultural Dimensions</th>
<th>Definition</th>
<th>NZ</th>
<th>Thai</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Distance</td>
<td>The degree of equality, or inequality, between people in the country's society</td>
<td>22</td>
<td>64</td>
<td>35</td>
</tr>
<tr>
<td>Individualism</td>
<td>The degree the society reinforces individual or collective achievement and interpersonal relationships</td>
<td>79</td>
<td>20</td>
<td>89</td>
</tr>
<tr>
<td>Masculinity</td>
<td>The degree the society reinforces, or does not reinforce, the traditional masculine work role model of male achievement, control, and power</td>
<td>58</td>
<td>34</td>
<td>66</td>
</tr>
<tr>
<td>Uncertainty Avoidance</td>
<td>The level of tolerance for uncertainty and ambiguity within the society - i.e. unstructured situations</td>
<td>49</td>
<td>64</td>
<td>35</td>
</tr>
<tr>
<td>Long-term Orientation</td>
<td>Society's time perspective and an attitude of persevering; that is, overcoming obstacles with time, if not with will and strength</td>
<td>30</td>
<td>56</td>
<td>25</td>
</tr>
</tbody>
</table>

In Thailand, if these societal norms are carried over into supply chain practise, one might expect to observe a very strong/domineering leader and a strong leadership doctrine; extensive use of standard operating procedures, forecasting and other models, and many tightly formalised supplier and customer relationships – all aimed at reducing supply chain uncertainties; a prevalent group/process view, with a team equally comprised of loyal male and female staff with no great sense of self importance; finally, the Thai organisation will tend to adopt a long-term view of business. In New Zealand, if its societal norms are carried over into supply chain practise, one might expect to observe a consensus style of leadership; some evidence of SOPs, forecasting and other models and some supplier relationships to reduce supply chain uncertainty; and probably prevalence of a silo view of the organisation. In the UK, if its societal norms are carried over into supply chain practise, one might expect to observe a clearly-defined leader who others look to for direction; relatively rare occurrences of standard operating procedures (SOPs) and forecasting and other models, and loose supplier relationships that would increase supply chain uncertainty; and again a prevalent silo view. Because New Zealand and the UK rate similarly on three cultural indices, if such societal norms are carried over into supply chain practise one might expect to observe in both of these countries individuals with egos who do not automatically feel loyalty to the organisation and its leader; male-dominated decision-making; and a tendency for the organisation to adopt a short-term view of business.

The underlying logic of our research perspective to be tested is illustrated in Figure 1, in which the behaviour of supply chain managers is considered to be affected in four separate ways by the national culture and business setting. Firstly, the alternative norms, expectations and values of different nationalities provide a broad cultural setting for supply chain management decision making. These values often also affect the organisational culture based on country of origin (Ayacan et al, 1999; Schneider, 1988; Ralston et al, 1997). However, the specific organisational culture may differ from the national norms to have a different affect on supply chain management behaviour (Von Glinow et al, 2002). In many instances the individual supply chain managers are from different countries than the organisation in which they are employed. As a result an individual’s cultural background may also affect supply chain management behaviour; at times
contrary to the national setting. Finally Figure 1 indicates the possible effects of the national business setting on the behaviour of supply chain managers.

**FIGURE 1**
**NATIONAL CULTURAL FACTORS AFFECTING THE BEHAVIOUR OF SUPPLY CHAIN MANAGERS**

**METHODOLOGY**

In order to conduct exploratory research into supply chain cultural behaviour a thorough investigation of the behaviour of supply chain managers is required (Metters et al., 2010); since detailed comprehension of the actions, values and norms of supply chain managers is necessary. The target data concerns how these individuals act according to their own national culture, which may be moderated to an extent by the wider workplace culture and national setting. Through the application of standard research protocols (Naim et al., 2002) anthropological data was acquired by an international team of practice-based researchers in five countries. This was combined with insights from action research projects and from long term collaborative research relationships. All this first hand face-to-face primary observation data of supply chain managers in action provides a rich stream of supply chain cultural data.

**ETHNOGRAPHIC STUDY FINDINGS**

Through many hours of direct observation and enquiry the behaviours of a wide range of supply chain managers was collected. A number of similarities in the behaviours were observed. Table 2 categorises thirteen supply chain manager types identified from the international sample, including the all to common non-existent supply chain manager.

**TABLE 2**
**OBSERVED SUPPLY CHAIN MANAGER BEHAVIOUR TYPES**

<table>
<thead>
<tr>
<th>Manager type</th>
<th>Description</th>
<th>Case Occurrence</th>
</tr>
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<tbody>
<tr>
<td>SC manager as Obstacle</td>
<td>An immoveable object that will not pass on information or agree to any form of change. Promoted over time from a shop floor trainee, minimal qualifications but in charge of a sizable budget. Due to lack of relevant experience and expertise all decisions are delayed.</td>
<td>NZ heavy machinery, NZ health sector, NZ dairy industry, UK auto heat treatment</td>
</tr>
<tr>
<td>SC manager as Firefighter</td>
<td>A live wire reactive manager, keen to keep an eye on operations and participate in strategic decision making. Lacks a holistic view and any real sense of direction. Busy being busy putting out operational fires that recur because the root causes are not addressed.</td>
<td>NZ 3PL, NZ heavy machinery, NZ forging, NZ commodity w’sale, UK auto components</td>
</tr>
<tr>
<td>SC manager as Administrator</td>
<td>Procedural based management. Task orientated with specified goals as agreed in committee meetings. Slow in responding to external stimulus. The focus is more on being seen to have made the right decision rather than making the right call.</td>
<td>NZ health sector, NZ forging, UK auto systems</td>
</tr>
</tbody>
</table>
SC manager as Commander
Direct command and control of multiple levels of decision making. All initiatives come from above and directives are issued to the troops. The SC operates as a ship of the line and is as polished as possible within the limited imagination of one commander.

NZ FMCG
German auto forging

SC manager as Negotiator
A key intersection of functional heads and external interactions makes for a potentially powerful position for the SC manager. Here sides are drawn and the managers utilize their position to further their goals.

NZ dairy industry
UK auto systems
UK aerospace systems

SC manager as Cost Accountant
Balanced and analytical approach to managing SCs. The costs of alternative value adding and other activity are carefully cross-checked with re-engineering alternatives to identify optimal efficiency. Can at times overlook the human element of SC operations.

NZ dairy industry
NZ FMCG

SC manager as Coordinator
Linking the SC processes together across functional boundaries is a full time task for these managers. Acting as information conduits, filtering and passing relevant information to the different functions.

NZ FMCG
UK Food Retail
UK Milkshake

SC manager as Relationship Builder
Developing a shared view of the SC and bringing a range of stakeholders together to enhance SC performance. Good listening skills are coupled with charisma with the aim to educate key players for better SC decision making.

NZ primary producer
UK auto components

SC manager as Change Agent
Dynamic markets and the focus on core competence require SC managers to constantly refresh their SCs. Keeping up with best practise, global sourcing and international trends. Continuous improvement is a mantra.

NZ primary producer
UK auto systems
UK lighting products

SC manager as Integrator
Synchronisation of material and information flows and the removal waste is achieved through a well orchestrated SC. Responsibilities are clearly defined and holistic trade-offs performed. Appropriate external interfaces are designed and operated.

UK auto systems
UK FMCG

SC manager as Innovator
Creative and holistic entrepreneurs. As an information hub wider trade-offs and more innovative options can be developed. Open discussions with multiple SC personnel and a willingness to accept mistakes as part of learning.

NZ commodity wholesaler
UK lighting products

SC manager as Leader
Clear, decisive yet considered and balanced. Overall effectiveness achieved through empowered leaders at all levels of SC management. Open and willing to learn; decision making is based on experience and reflection.

NZ Mass merchant

SC manager as Absentee
No one responsible for the SC, often leaving large procurement budgets un-checked and limited effort placed on cross-functional trade-offs.

A large number of cases

CONCLUSION

Our exploratory research into supply chain behaviour has provided some initial insight into the role national culture affects the way supply chains are managed internationally. A wide range of management styles were observed and in many cases these are clearly linked to the different national cultural settings. This brings into question the quest by researchers for generic and generalisable supply chain concepts. Hence our research highlights the shortcoming of universalism within the context of global supply chain management.

From a particularistic perspective the behaviour of an individual supply chain manager should be tailored to the national setting they are operating within (especially the cultural and business contexts). Our research indicates that supply chain managers who originate from a common national culture can behave quite differently according to the local national culture they operate within. This highlights the need to tailor the link between supply chain management behaviour (especially leadership skills) to specific national settings. For example, do South Africans make the best supply chain managers in New Zealand? or do Americans only make good managers of American supply chains? Is there multi-linearity between the national culture of the manager and the most suitable international supply chain context?
ACKNOWLEDGEMENTS

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Available on request