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“The influence of *Guanxi* on physical distribution service quality availability in e-commerce sourcing fashion garments from China”

Abstract

The purpose was to investigate the influence of *guanxi* (personal relationships) on availability within physical distribution service quality (PDSQ) for sourcing high street fashion garments from China via e-commerce. The research reviewed articles on *guanxi* and although it is still widely considered important its contribution and nature appears to be changing as Chinese business practices and sourcing policy have matured over time. Qualitative research was used in two Chinese based case study companies with detailed access through semi structured face-to-face and telephone interviews. The findings suggest that personal relationships through *guanxi* can facilitate e-commerce availability of fashion product, particularly where there is limited lead time in the sourcing activity, although its form and application in each case study company and their respective supply network was not as widespread as had been previously reported. The form of *guanxi* was observed as personal relationships but some aspects of co-operative relationships were also found. Since the paper is based on a phenomenological ontology the findings are largely exploratory. Future research should focus on understanding physical distribution service quality and personal relationships in other sectors. *Guanxi* by definition is an unstructured array of socially-based relationships without a simplistic rationale or logic. By understanding how *guanxi* is applied in a supply chain management context will aid those practitioners involved in an e-commerce Chinese business practice.

Keywords

Guanxi; Physical distribution service quality; E-commerce; Chinese garment sourcing; Case study methodology



Introduction

Global sourcing, predominantly from South-East Asia and China in particular has brought customers new fashion garments at lower cost but challenged suppliers to provide reliable deliveries to underpin the need of high levels of product availability for the retailer. The long distances and lead times involved, the extended nature of garment supply chains and product availability highlight the physical distribution considerations. However the development of e-commerce via online channels and the customers' insatiable desire for fresh, stylish and trendy clothing continues to place increasing demands on retailers to provide on-time and available products throughout the whole of the selling season.

The concept of physical distribution service quality (PDSQ) has been an important facilitator of product availability to underpin customer service. Previous research had developed an economic understanding of physical distribution service quality by internet retailers in their transactions with customers (Rabinovich and Bailey, 2004). However sourcing product from China involves personal relationships (*guanxi*) within the Chinese culture which have been recognised as a key trading factor in the South-East Asian trading environment for some time (Arias, 1998; Leung *et al*, 2005; Abramson and Ai, 1997). The commercial cultural context of engagement between a Chinese supplier and a retailer is often characterised by 'family' style personal relationships (Tsang, 1998). Although the growth of fashion garments sourced through product manufactured in China is well understood (The World Bank, 2010) there has been only limited empirical evidence that explains the involvement of *guanxi* in the online physical distribution service quality process between retailer and producer at an inter business level. This is partly due to the difficulty in gaining access to Chinese businesses and also due to the commercial confidentiality of retailers.

Global sourcing has brought great cost advantages for retailers. The fashion textile manufacturing industry is labour intensive and retailers are constantly squeezing margins, where the response is to reduce labour costs drastically (Towers and Peng, 2006). However the fashion sector is heavily dependent on availability of the full range of product in stores during a relatively short (6/8 week) selling seasons (Mason-Jones *et al*, 2000). Consequently the delivery process has been the subject of much attention aimed at reducing lead-time (Chopra and Meindl, 2007), improving reliability of supply and availability (Yi *et al*, 2011), and responsiveness to changes in customer demand in the selling season (Zhang and Huang, 2012) through addressing the physical distribution service quality of internet e-commerce retailing (Rabinovich and Bailey, 2004).

The growing trend is for customers to engage with many channels-to-market as they seek new ways to purchase more fashionable garments. The demand for improvements has resulted in speeding up the supply process such as the use of web-based solutions (Anaza and Zhao, 2013). But the supply side has needed to respond to more efficient and effective methods of delivery from the producer through to the final destination (Forsberg and Towers, 2007).



This leads us to consider that this is an area worthy of study. China continues to produce more than 40% of the global textiles production and customer's desire for fashion is relentless. China has more Internet shoppers than any other country at 220 million in 2014 and is forecasted to overtake the US as having the world's largest on-line retail sales market by total value (Knight Frank, 2014). Total retail sales of consumer goods doubled to 20.7 trillion yuan in 2012 from 2008 (Fung Business Intelligence Center, 2013).

It is therefore of great importance to retailers to understand how the established *guanxi* (personal relationships) will continue to support their specific needs to provide high levels of product availability to ever demanding customers (Tsang, 1998). This paper makes a theoretical contribution to the *guanxi* literature by analysing it in terms of an e-commerce delivery process between companies in a supply chain rather than describing it in the context of Confucian values or from a market perspective. The developed research question that underpins this research is “does the network of personal relationships (*guanxi*) facilitate e-commerce physical distribution service quality in sourcing fashion textile garments from China?” This leads to the general proposition that personal relationships have significant influence on successful e-commerce trading between retailers and suppliers and that successful *guanxi* contributes to their reliability of delivery performance.

The paper is structured as follows. We start with a literature review of the physical distribution service quality concept and an overview of the significance of the Chinese concept of *guanxi*. This is followed by a review the supply chain structure. A detailed discussion of two distinct case studies including the adopted methodology is followed by an analysis of our findings. The paper concludes with suggestions for further research.

Literature Review

Physical Distribution Service Quality (PDSQ)

Global sourcing of fashion garments has led to a greater emphasis on reliable and timely product delivery from different channels to an ever demanding customer. Maltz and Maltz (1998) suggested that customer service has two aspects. Firstly it involves order cycle time, on-time delivery and inventory availability. These traditional measures are easily quantified and objectives can be measured internally. The second customer service aspect of responsiveness represents the channels' ability to adapt to market-driven changes. Although a seller has sophisticated information systems its survival in a competitive market depends on servicing the customer in an efficient (fast) and effective (accurate) manner (De Vita *et al*, 2011). According to Karmarkar and Pitbladdo (1995), the relationship between the physical distribution service quality (PDSQ) and cost efficiencies is drawn from service production such as the intangibility of service output, the lack of inventories, the difficulty of portability and the complexity in definition and measurement. The difficulties in measurement have immediate implications for pricing and market mechanisms. The establishment and continuous monitoring of key performance indicators allow users to compare achieved and expected service



levels, with examples of such measures include delivery timeliness and accuracy, order fill rates and inventory turns (Wilding and Juriado, 2004).

Mentzer *et al* (1989) synthesize 26 elements of physical distribution and customer service that have been reported in the logistics literature over more than two decades to arrive at a three dimensional model. Rabinovich and Bailey (2004) refer to it as the three tangible result aspects of product availability, timeliness in the duration of order delivery cycle, and reliability in order fulfilment.

Product availability or inventory availability also refers to order release quantities and inventory capacity. The Chinese e-commerce context particularly reinforces this requirement due to the long distances involved internally in producing garments and the subsequent distances to the destination markets. Stockouts are believed to have a significant negative impact on customer satisfaction and loyalty but it is difficult to quantify the financial impact of these lost sales (Keebler *et al*, 1999). Reliability is an overarching measure (Mentzer *et al* 1989), which captures the ability of the retailer to maintain the performance of PDS and the customer's perception of PDS performance (Hutchison and Stolle 1968). This means that the improvement of PDS performance could be achieved by improving product availability, a core requirement for connecting internal transportation to onward international methods of transport. The higher the level that a retailer improves the PDS performance the closer it will get to match the customers' expectation and the more reliable the customer will perceive the retailer. Improvements in PDS quality should be achieved through improving product availability and the reliability of the service.

It has long been recognized that personal relationships have a relatively high importance for business practices in China compared to the enforcement of technical and contractual specifications elsewhere (Lovett *et al*, 1999; Ambler *et al*, 1999). Personal relationships have been seen to play a significant part in the context of Chinese trading environment and *guanxi* has been considered as being embedded in the business process within China (Wilson and Brennan, 2010). As physical distribution service is a measure of the retailer's trading activity there is a dependence on the presence of good *guanxi* to support this process.

The above discussion leads to the proposition of:

P1. Physical distribution service quality, PDSQ is a measure of delivery performance for fashion sourcing.

Mentzer *et al* (2001) described a Physical Distribution Service Quality (PDSQ) framework shown in Figure 1 below as a process with two stages. The first stage was referred to as the order placement stage, which included personnel contact in the sourcing process of order placement and has positioned *guanxi* contributing to product availability within the network of suppliers, arranging order release quantities, ordering information quality and ordering procedures. Mentzer *et al* (2001, p86) describe order placement to include "perceptions of interactions" with



company personnel which can often be as a result of informal relationships between suppliers. As online customers sometimes do not receive orders as expected they will then come to the service provider for compensation.

Take in Figure 1

The delivery element relating to timeliness is unique as it allows the retailer to service the geographically dispersed online customer without the need for a retail outlet where customer satisfaction is always based on availability and reliability in store (Novack *et al*, 1994; Ho and Lin, 2010).

Availability and reliability is even more important for a fashion business as they impact directly on delivery performance to the end consumer in the short 6/8 week selling season. Structured informal relationships between suppliers, the local Chinese sourcing function and the buying office can help to expedite product against a given schedule and assist in overcoming or predicting possible delays. The order placement activity is where the sourcing office interacts with the suppliers to achieve availability of product. It is through the interface with suppliers that reliability of deliveries will be determined, facilitated by productive relationships. Timeliness becomes an outcome of the physical distribution activity which is influenced by the developed relationships with the suppliers.

The use of technology to manage relationships and information sharing has been well documented (Tan *et al.*, 2002; Tachizawa *et al*, 2015). Information sharing of good-quality information flows between an enterprise and its partners (e.g. suppliers, the same tier manufactures and channel members) in the supply chain has been widely reported (Lee *et al.*, 1997; Monczka *et al.*, 1998). Through the use of internet-based technology, information flows among organizations can be facilitated and hence the quality can further be maintained (Johnson and Klassen, 2005). Information sharing and partner network relationships can represent the processes through which ecommerce contributes to supply chain performance. Physical distribution service quality performance is enabled by the flow of internet based information and the relationship within the network can act as a facilitator for ensuring product availability (Wilson and Brennan, 2010).

The next section will discuss the development of the Chinese concept of *guanxi* in product sourcing.

Guanxi

Guanxi has been considered as the Chinese version of relationship marketing or business networking (Trimarchi *et al*, 2010) and it is believed to be a striking feature that helps to enter a profitable and growing Chinese market (Wong 2007). It refers to the socially based relationships where resources are distributed in a beneficial way to individuals sharing the same personal network (Wang, 2005; Leung *et al.*, 2008).

The relational behaviour of *guanxi* is driven more by morality and social norms rather than by a focus on legality (Arias, 1998) which results in establishing personal trust with the buyers. Leung *et al*, (2005) suggested that competence through product knowledge, market development, and adaptation to buyers' requirements allows suppliers to show psychological commitment and establish *guanxi* with the buyers. *Guanxi* is an important informal component of partnership relationships between Chinese suppliers over the long term to cultivate common objectives of supply requirements "that cannot be written into a legal contract" (Leung *et al*, 2005, p535). Relationships involved in the network of supply will therefore help to facilitate timely deliveries of a period of time culminating in reliability of supply (Mukherjee *et al*, 2012). Suppliers should use *guanxi* to generate buyer's perception of personal trust whilst maintaining a reasonable level of buyer satisfaction with their products and services (Zolkiewski and Feng, 2012; Kam *et al*, 2011). It facilitates the relationship to allow the buyer to perceive that the seller has more personal trust and stimulate an insider perspective between them. The Physical Delivery Service Quality (PSDQ) framework, shown in Figure 2 provides more detail of availability and the connection between the suppliers and the Chinese sourcing office and the mediation influence of *guanxi* through the existence of strong personal relationships.

Take in Figure 2

In order to achieve customer satisfaction performance the Chinese supply chain should focus on improving reliability of physical distribution service quality mediated through developing *guanxi* based personal relationships (Kam *et al*, 2011). The Chinese sourcing function responsible for production availability can influence improvements to order release quantity, information quality and ordering procedure's contribution to availability. The Buying Office is mainly responsible for final delivery timeliness and focuses on improving order accuracy, condition and quality. Well trained personnel are necessary to deal with customers if discrepancies occur, leading to the third proposition of:

P2 Guanxi and the physical distribution service quality processes contribute to the reliability of order fulfilment.

Within this context online customer satisfaction will then be based not just on the product itself but on the delivery performance to the customer (Delfmann *et al*, 2002). Therefore the logistics and the physical distribution service quality (PDSQ) play an important part in the service delivery and any business that neglects these aspects of supply chain management will jeopardise their business performance (Bretzke, 2000).

The Supply Chain Structure in China

It is important for retailers to at least meet an acceptable level of fulfilment performance otherwise they are unlikely to keep their current customers or attract new ones (Kodusi, 2000). Product availability and reliability of fulfilment are



important measures of service quality for the sourcing of product particularly because of the typical 6/8 weeks transportation lead time from China to Europe and the geographically dispersed and inter-connected fashion textile supply chains involved from producing raw material through to manufacturing finished product (Towers and Song, 2010).

The fashion sector is characterised by supply requirements of many different styles throughout the year with relatively low volumes for each order. The key order winning criteria for a fashion apparel supply chain are responsiveness and customer services (Mason-Jones *et al*, 2000; Childerhouse and Towill, 2000). Consequently the retail delivery process provides an interesting context for the application of the PDSQ concept. Availability and reliability is even more important for a business sourcing from China as they impact directly on the end consumer. Repeated delivery reliability for each order is essential to underpin continuous availability of product for the internet based end consumer over time. (Rahman and Wu, 2011; Novack *et al*, 1994; Ho and Lin, 2010).

The fashion garment Buying Office has responsibility for the commercial and scheduling activities and manages the sourcing function that takes responsibility for the selection process. It procures the available garments according to their customers' demand through the e-commerce channel and also the traditional 'bricks and mortar' retail store. The Chinese sourcing function co-ordinates the selection and co-ordination of the manufacturing activity against the planned delivery schedule provided by the Buying Office. The manufacturer of the final product will source their materials, such as fabric, different yarns and other components including fasteners, accessories and packaging materials. Throughout this supply chain accurate and up-to-date information regarding current requirements, actual production performance, and stock status and location is crucial. The formal and informal relationships between the various parties involved in the interconnected network are a crucial element is facilitating a timely and reliable supply process.

The above discussion leads to the proposition of:

P3. Informal personal relationships (guanxi) will be developed in the sourcing network to benefit the e-commerce delivery requirements of product availability and reliability.

It was noted by Rabinovich and Bailey (2004) that previous research had studied PDS in a non-internet based context and from a buyer's perspective. But there has been an increasing use of internet based systems in the e-commerce supply process together with a large increase in sourcing fashion products from China (Davidson and Ou, 2008). *Guanxi* is an accepted and central part of business in China yet its influence on service quality is unclear (Wilson and Brennan, 2010). A significant part of the reason lies in the fact that access to the Chinese business community is difficult and also that secrecy is commonplace within their personal

relationships. This paper seeks to gain a greater insight into how *guanxi* is understood within this context.

The following section will discuss the approach to the adopted research methodology and the analysis of the case study investigation.

Adopted Qualitative Methodology

As George and McKeown (1985) suggested, the main advantage of qualitative case design is its ability to provide full and in-depth insight into dynamic phenomena in organizations. The case study approach allows critical factors to be identified, causality to be inferred and occasionally allows new theories to be developed (Stake, 1994; Towers and Chen, 2008). This is consistent with the aim of this study which is to gain an in-depth understanding of the network of personal relationships (*guanxi*) that influence physical distribution service quality to enhance sourcing of fashion garments from China. The phenomenological orientation of this research was selected as it allowed us to observe and gain very specific and detailed information of the how *guanxi* exists in the specific context of fashion apparel. O'Donnell and Cummins (1999) highlighted it was necessary for the framework to be deliberately broad and flexible in order to allow themes and patterns to emerge freely and yet to allow data collection and analysis to occur concurrently. This is consistent with our developed PDSQ framework and the resultant analysis. However in our research a trade-off was essential between the depth and completion of data and the number of cases to be studied, given the sampling method was non-random (Ogawa and Malen, 1991).

Selection of the Case Study

The selection criteria used was based on purposive sampling where the researchers had to exploit their own network of *guanxi* to gain access for the purpose of the interviews with the potential to achieve a greater understanding of the research problem (Thompson, 1999). The two case study companies were selected as they were known to the authors and it would be possible to gain open access to their operation, particularly from being able to explore the personal relationships by all members of the organisation. Both companies deal with e-commerce customer orders from foreign countries and are responsible for sourcing the product according to their customer orders. In addition, both of them have been involved in the business for more than three years and were forecasting future growth in their exporting business. The first company sources product for foreign companies and provides exporting support for local manufacturers whilst the second company has been set up in China by a foreign parent company.

Methods of Data Collection

The two investigated case study companies sourced product from China. The two participating Chinese e-commerce exporting businesses were both located in the south east region of China, which is one of the most industrially developed regions of China and accounts for the highest percentage of exporting fashion product (Towers and Peng, 2006). During the process of selecting the appropriate respondents for this research, careful consideration was taken to ensure that the



study clearly gained access to senior personnel, middle ranking managers and operational staff responsible for planning in both case study companies in China. Each respondent was identified prior to the meeting to ensure they met the selection criteria. In each company there were four respondents including the General Manager, the senior director responsible for the commercial activity, a manager from the planning department and an operational administrative member of staff responsible for daily contact with the suppliers. A detailed questionnaire was first designed in three parts. The first part included questions asking respondents to describe the nature of the relationships they had with their counterparts in the supplier organisations. The second part included a number of open and closed questions relating to their experience of *guanxi* in their roles. And the third part identified sources of evidence for *guanxi* within the order placement stage. We agreed with both clients on confidentiality including questionnaire content, respondents' identity and company name. Each interview took approximately 50 minutes and all the interviews were held face-to-face. Following transcription and initial analysis a second round of follow up questions were undertaken which for logistical reasons the were conducted by telephone. Each interview was recorded and transcribed into English and the qualitative analysis was conducted on the collected data.

Case Study Analysis

Case Study One

Company History

Company One was a foreign trading company that has its own export and import license and is located in Shanghai, China. Company One has been involved in the international trading business for over 12 years and also provides exporting and importing support for many local enterprises. It had 200 existing customers with regular business transactions, which are spread in 27 countries around the world. The total import and export volume of Company One had reached \$42m (2010), of which 90% accounted for export transactions. The major product/service groups were mechanisms, craftwork and high street fashion garments, the latter group which account for about 15-20% of its total sales and framed the unit of analysis for this research.

Order Cycle

The order cycle normally takes about 40-50 days, and is described below:

- i. Attract Foreign Customers
Company One placed advertisements via the internet and attended international trading events (such as the Canton Fair) to attract or make contact with potential customers through developing close personal relationships with a core group of customers. The customers (mostly from outside China) may ask for further information or samples until they are satisfied and trust the company to progress the ordering procedure.
- ii. Order Taking and Supplier Selecting Procedure

Contact between Company One and their customers include telephone calls, written letters, e-mails or face-to-face meetings. In most cases the order came with all the design detail or a sample but sometimes the customer orders were received without the full design detail. In this case Company One needed to complete the design requirements for the customer using their own design capability or an external design house whom they've worked with previously and had developed a strong personal relationship. The final designs would then be sent to the customer for approval prior to commencing the manufacturing process.

If the order was received with a full design description or agreed samples it would progress directly to the supplier selection stage. At this stage, Company One would select the manufacturer from their existing suppliers according to the experience and the *guanxi* that the company had working with them. This was seen as part of the informal structured network developed over a period of time. A typical response was that some suppliers try to create *guanxi* on a personal level through presenting greeting cards and gifts to certain personnel in management positions. Alternatively if the product needed a new supplier the selection process involved a very sensitive approach to developing new personal relationships. New suppliers were usually introduced by the existing suppliers within the industry to ensure that they were known to be reliable within the network. Final selection was based on a combination of product quality, competitive price, capability of manufacturing and reputation within the industry.

iii. Manufacturing Stage

During the whole process of manufacturing, quality inspectors would be sent to the supplier's manufacturing location from time to time to ensure that all the finished product met the agreed quality standard and that the order was on schedule. At the end of this stage, the finished product would be re-checked for both quality and quantity by the inspectors and the orders would then be transported to Company One's distribution centre.

iv. The Company's Distribution Centre

When the finished product arrived at the distribution centre, staff involved in the manufacturing stage and their counterparts from Company One would undertake the final check of both the quality and quantity for the finished product. The personal contact and close relationships were seen to be very important and maintaining the public image was an important factor in ensuring conformity.

v. Transportation

Company One would make arrangements for despatch of the final consignment to the overseas customers using international third party logistics providers.

The following Figure 3 shows the business process of Company One.

Take in Figure 3

Case Study Two

Company History

Company Two, a Russian retailer was part of a well-known Russian sportswear and sports equipment brand and had 54 stand-alone stores throughout Russia and the Ukraine that sell fashionable leisurewear. Company Two was formed in 2002 and is based in Shanghai, China to work as the sole sourcing company for all products sold in the 54 stand-alone stores in Russian and the Ukraine. There were usually between 8 to 10 ranges introduced each year.

Order Cycle

The main aim of Company Two was to ensure the continuous supply for the retailer in Russia, In order to achieve this aim Company Two's main responsibility included the following three aspects:

i. Attract Foreign Customers

Suppliers were considered with great importance to the business. One of the most important responsibilities of Company Two was to keep a very close contact with existing suppliers and develop new suppliers. Personal relationships were considered as a very important business activity and had a number of strategic suppliers within *guanxi* relationships. In order to keep the existing suppliers, Company Two would e-mail or phone the suppliers between orders to obtain up-to-date information about its suppliers and maintain personal relationships with their counterparts in the key supplier's organisation through mutual social contact with them.

ii. Order Taking and Supplier Selecting Procedure.

Company Two has been working with a core of suppliers for some time. They have developed a very close working relationship with them which has involved close collaboration with an example of developing the product range for the parent company. It appeared that the professional relationship has been extended into this co-operative activity for their mutual benefit. However to develop new suppliers, Company Two or its retailer in Russia may get information about potential suppliers from the internet advertisements and international trading events (such as the Canton Fair). Supplier selection started with receipt of their catalogue and samples. A formal audit process would follow to evaluate their equipment, labour force ability, existing products and fabric sourcing processes. The reputation and credibility within the industry was also considered with great importance. If the company was satisfied with the potential supplier it would be added to their approved suppliers list. If the supplier was selected for sourcing a group meeting of all the managers from each department of Company Two would be held to discuss the sample, set up

solutions according to the design detail and development/change comments, and select a number of suppliers to make second samples. This was a very formal meeting discussing very technical issues but also involved an assessment of the degree of the personal relationship between the supplier and the Russian retailer and whether this was suitable to allow a company to progress to the next stage.

iii. Manufacturing stage

The order would then progress to the manufacturing process with the selected supplier. The on-site Inspector and the supplier would check the quality and quantity a second time before the finished product were transported to the company's distribution centre and then transferred to the third party logistics provider for delivery to Russia. The whole process could take up to 25 weeks.

Following Figure 4 shows the business structure of Company Two:

Take in Figure 4

Case Study Analysis

There appeared to be significant and continuous interaction at a close personal level within each case study company between customers and its suppliers. The network of personal relationships appeared evident at the different stages of the sourcing and delivery process and will be discussed from the PDSQ framework perspective.

Availability Issues

As Company One had been in operation for more than ten years, it would appear that they were very experienced, conscientious and seemed to understand the marketplace. The company had maintained the same operating procedures since it first entered the business and the availability issues did not appear to relate to an integrated system in managing PDSQ. The company relied heavily on 'guanxi' with their suppliers to prioritise deliveries as a result of a lack of formal ordering procedures or the order information necessitated a quick response. The Expediter explained that:

...we ask the suppliers to confirm the order list for item type, quantity and description. We also ask them to confirm receipt at the distribution centre. We don't measure the quality of the order taking process but respond to when mistakes are made.

Although it did send inspectors to the manufacturers and did check the finished product three times before transportation to the customers, expediting the orders lacked structure and organisation in Company One.

Company Two did not measure delivery lead time performance. This was the responsibility of the transportation company. The transportation company used by Company Two was always selected by the Russian retailer. It did not measure the quality of the order-taking procedure and the personnel contact skills unless there

were discrepancies. But the company realized that there could be potential mistakes or misunderstandings during these stages. The response from the Assistant Manager highlighted the challenge.

“We use transportation agencies which are selected by the parent company in Russia. They have the responsibility for scheduling the deliveries but we have the problem of managing product availability for collection at the suppliers. We rely heavily on our close personal relationships to make this system work.”

In addition Company Two did not provide training courses to the employees, including the new employees. The Planning Manager noted that the supplier selection process had developed into a complicated activity. In general the company only seemed to respond to order discrepancies usually resulting from administrative errors or misunderstandings in what was required.

Guanxi issues

Company One believed that the approach to *guanxi* had changed over the period it had been in business. *Guanxi* from 10 years ago meant pure personal relationships that did make doing business much easier. The General Manager suggested that:

“they may try to send us gifts during major festivals such as Chinese New Year”

And observed that “the business relationship is combined with some kind of personal relationship. Pure personal relationships are part of the co-operation between us, our customers and Chinese suppliers”.

The current approach to *guanxi* was on a co-operational relationship level instead of pure personal relationship. The managerial staff in the exporting sourcing agency, Company One made only limited effort to develop any informal personal relationship with the suppliers. The Commercial Office Manager believed there was no benefit to be gained from devoting time in developing such relationships and preferred not to have a formal barrier between their key suppliers. There was no effort to exchange a favour for another one or to gain benefit from such behaviour at the junior/operational levels in the business. However, the senior manager responsible for planning in Company One considered good *guanxi* still involved working with suppliers for some time where both parties were willing to continue the symbiotic close relationship and on-time supply of quality product played a very important part in this process. This could be understood as a co-operational level of *guanxi* where close personal relationships developed over a period of time were embedded within formal ordering procedures. The developed *guanxi* aimed at maximising order placement to maximise availability and reliability of e-commerce order fulfilment.

Company One does not have a formal process for recording and reporting PDSQ measures. They rely on the quality inspector to check conformity to the specification but suggest that the order taking process is the measure. The Planner indicated that:



“they only look back when something has gone wrong. The relationship we have with our suppliers is important to us and allows for quick response to resolving problems, often with the intervention of the General Manager”.

The process appeared totally reactive and was facilitated by the depth of *guanxi* present in the relationship. A typical response was:

I personally think the most important difference is that when doing business with Chinese people the relationship will combine with some kind of personal relationship. It provides an opportunity for us to learn how to deal with and communicate efficiently with different people (suppliers). Guanxi exists and allows us to work happily together. It is difficult to describe precisely what *guanxi* is but its presence gives us confidence in suppliers to respond with reliable deliveries.

The management at Company Two agreed that *guanxi* still existed no matter how business with western or Chinese people was achieved. The Commercial Manager simply explained it was ‘cultural’. But the *guanxi* was considered to be limited although the traditional pure personal relationship still existed as well. The sourcing company's Team Leader was encouraged to manage the suppliers on a personal level over a period of time of many years and develop a co-operative personal approach in their daily operational activities. The Team Leader suggested that they keep good contact with all our suppliers to keep a close working relationship and to have up to date information. A typical response from her was:

“For me *guanxi* is based on a co-operational relationship level rather than on the specific issues and related previous experiences we have had. We are a small business and don't have the ability to use expensive computer system to measure PDSQ. However the transportation company provides us with performance measures which we respond to when we have a problem.”

The General Manager also spent considerable time developing informal personal relationships with the suppliers. Typically this involved socialising with the families of suppliers' senior management, invitations to family events such as anniversaries and annual festivals such as the Chinese New Year celebrations. It would also appear to extend to personal favours although specific examples were not readily forthcoming. But favour and face were evident as if an ongoing 'brotherly' type relationship existed. His view was:

Guanxi used to be understood as pure personal relationships but with the development of society it now has been developed into a much wider meaning. The trust is *guanxi* between my company and my suppliers. But long term co-operational relationship may help build up personal relationship, *guanxi* between personnel work within the supply chain and this will help in improving co-operational satisfaction.

Also suppliers would be included as part of business hospitality at professional trade shows such as at the Canton Trade Fair which was seen as a continuation of the other informal relationships. The close relationship was extended throughout the working environment. For example, Company Two would consider the result of *guanxi* with a supplier was a good experience of working with each other and



the supplier provided good quality product with the right quantity and on time. In addition, Company Two suggested that the traditional understanding of a pure personal relationship *guanxi* and the newly understood view of the co-operational level *guanxi* were related.

Summary of case analysis

By analysing the in-depth interviews of the two cases studies, the main points that arose during the interviews have been summarized in Table 1 below.

Take in Table 1

In the next section we discuss the implications and impact of the case study analysis.

Case Study implications

The case analysis seemed to support the view that e-commerce customer service aspects were influenced by the three dimensions of availability, (order release quantity, information quality and ordering procedures) through close personal relationships supporting overall PDSQ performance for sourcing fashion garments from China.

The presented model in Figure 1 suggested that embedded relationships impacted on sourcing high street fashion garments from China. It plays a part in the availability of product through facilitating the order information process at the order placement stage with suppliers. *Guanxi* in a Chinese context did appear to contribute, particularly to the information quality and the awareness of its importance to product availability, a key supply requirement of fashion apparel.

China has a long history in producing and exporting textile products that had developed into a mature and diverse industry. China's long experience in exporting textile products abroad had contributed to its ability to predict, design and produce a large variety of garments that satisfy the needs and demands of international apparel customers. Direct sourcing seemed to benefit the proposed fashion garments business in the following aspects: first, low price and better value; second, more fashion and choice of fitting and size; and third, simplified ordering procedure using a highly developed and credible network of garment manufactures.

Investigations into the Chinese exporting industry provided supportive information for the proposed model. Both of the two investigated Chinese case study companies source from existing manufacturers in China rather than manufacturing themselves. This allowed for inventory to be closely managed by the sourcing function at each stage of the supply process and the information to be regularly relayed to the buying office.

Taking the extended distance and long lead time from China into consideration, the lack of a closely related supply structure seemed to contribute to



misunderstandings of information sharing and exchange and inefficiency in supply. This leads to mistakes in the supplying process eventually affecting the end-customers' satisfaction. The PDSQ sourcing model in Figure 2 proposed that an efficient and closely related structure in a fashion garments business sourcing from China should include a sourcing function in China responsible for supplier selection, quality/process control and management and a Buying Office responsible for the delivery service, market research and general enquiry of the customers. The evidence of *guanxi* observed in the order placement stage seemed to help facilitate attention on availability despite many operational and process shortcomings. The effect of *guanxi* seemed to help expedite deliveries and sustain reliability of the physical distribution service quality.

Having investigated the two companies it was found that the supply chain structure of the Company One showed a lot of similarity to the multiple supplier chain structure suggested by Han *et al.* (2005) and the supply chain structure of Company Two and is surprisingly similar to the proposed model in Figure 2. Company Two brought evidence to show that such a structure is helpful in improving efficiency and effectiveness of the supply chain with particular reference to high street fashion garment business.

The proposed PDSQ model highlighted that the Chinese sourcing function was responsible for production availability through order release quantity, information quality and ordering procedures. Through the extensive access to the working environment within the two case study companies it was evident that personal relationships played a major part in the decision making process of supplier selection and product availability. Developing the informal networks and personal relationships with suppliers over an extended period of time was seen to be an essential part of the trading activity of the two companies. The developed *guanxi* was brought into the selection and supply process through the management meetings where important sourcing decisions were made. However, there was a difference between the observations in the two companies in the degree of the personal relationships involved and the aspect of co-operation between the company and their supplier network.

Conclusions

Where availability performance measurement is part of the operating procedures the reliability of order fulfilment appeared to be understood. However there was evidence of widespread informal *guanxi* personal relationships which placated the lack of business competencies. *Guanxi* appeared to be used as a facilitator to overcome the shortcomings in the business operation to achieve physical distribution service quality demanded by the customer. The empirical evidence suggested that the closely managed and guarded *guanxi* relationships contributed to servicing fashion garment product availability for the online customers in the UK and Russia.

It was found that personal relationships through *guanxi* supported the sourcing activity although it was not widespread throughout each case study company and



their respective supply network. This is consistent with the findings of Wilson and Brennan (2010) who suggested that the use of online intermediaries can 'side step' the direct involvement of *guanxi*. Nevertheless, managing the supplier's performance in such a manner seemed to have a positive effect on the customer service aspects, eventually improving the overall PDSQ performance.

However, the study has several limitations. Firstly the research used an inductive case study methodology that provided a better understanding of the factors relating to the research question but is unable to provide statistical generalisations. Our purposeful sample is limited in its ability to extrapolate our findings to the whole of the Chinese context. Secondly we would acknowledge that despite our best endeavours we may not have gained a full understanding of this sensitive topic in the Chinese business community.

Evidence from our empirical research suggests that the network of personal relationships (*guanxi*) has some influence on the physical distribution service quality and that it can enhance sourcing of textile garments from China. The extended supplier chain from the base level raw material through to the final apparel assembly will continue to require close cooperation and synchronisation between producers to service the ongoing demands that international trading places on sourcing and exporting companies. The presented model provides a basis for developing process improvements within the fashion business aimed at better reliability of order fulfilment. However as the fashion market continues to grow with lower price and faster response times of supply combined with different product designs we would suggest that this topic provides a rich opportunity for further research in gaining a better understanding of personal relationships in the Chinese PDSQ sourcing activity in other sectors.

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