

# **The impact of buyer-supplier relationship and purchasing process on the supply chain performance: a conceptual framework**

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## **ABSTRACT**

*Supply chain performance is a rapidly developing area of research. Many companies are trying to find tools for enhancing performance measures in response to turbulent business markets and for efficiently controlling their business activities. Little empirical research has been conducted on the performance of retail supply chain in Taiwan and other Asian countries. Two factors affecting current retail supply chains, buyer-supplier relationships and purchasing processes, and their antecedents that are relevant to this unique cultural environment will be investigated. The objectives of this research are: (1) to identify the determinants affecting the performance of the supply chain at the retail level; (2) to define the antecedents related to each determinant; and (3) to present the conceptual model for this particular context. This research will contribute by presenting a conceptual model for supply chain performance that is relevant to small and medium-sized businesses that predominate Taiwan.*

## **INTRODUCTION**

Supply chain management (SCM) is “a key strategic factor for increasing organizational effectiveness and for better realization of organizational goals such as enhanced competitiveness, better customer care and increased profitability” (Gunasekaran et al. 2001, p. 71). The major goals of SCM are to minimize non-value-added activities and associated investment cost and operating cost, increase customer responsiveness and flexibility in the supply chain, and enhance bottom-line performance and cost competitiveness (Stewart 1995). A recent study conducted by Petrovic-Lazarevic and Sohal (2002) reported that effective management of the supply chain has been identified as being of significant importance to achieving and sustaining a competitive advantage for firms in the Australian textiles, clothing, and footwear industry.

Many companies are trying to find tools for performance improvement in response to turbulent business markets and for efficiently controlling their business activities. The objectives of performance measurement are to improve the efficiency and effectiveness of a supply chain (Beamon 1999; Gunasekaran et al. 2001). In addition, Keeber (2000) also stated that the purpose of performance measurement is to reduce operating costs and customer service in logistics activities, improve firm's revenue growth, and enhance shareholder value.

Sportswear is a globalised industry, with major production undertaken in Asian countries, and three international brands dominating worldwide sales – Nike and Rebook from the US, and Adidas from Europe (Just-style.com 2001). Moreover, sports superstars, TV sports programs and sports activities have great influence on this market. The sportswear market possesses the same characteristics as the fashion market: strong seasonality, short product life, volatile demand, and high impulse purchasing (Christopher and Peck 1997; Fisher et al. 1994; Fisher et al. 2000). The seasons are affected not only by weather but also by the sporting calendar (Ashford 1997). The costs of stockout and markdown for big companies like Sport Obermeyer would be more than 10% of sales (Fisher et al. 1994). Thus, supply chain management in the sportswear market is critical to ensure that stock does not become out dated with the short product life cycle resulting in stockout and markdowns, thus reducing profits at the retail level.

The reasons for conducting such a research in the context of Taiwan are: (1) Taiwan lies at an advantageous geographic location in the Asia-Pacific region, which is the hub position connected to Northeast Asia, Southeast Asia and coastal mainland China (Taiwan Headlines 31 January 2000), and it is why the government planned to develop Taiwan into a "Global Logistics Center" (CEPD 2001); (2) supply chain management is still in its infancy in Taiwan, especially in the retail sector (MOEA 1999); (3) increasing leisure time and sports activities have led to a growing demand for sports products, especially sportswear and sports related accessories (U.S. Department of Commerce 1998); (4) due to the popularity of big brands, such as Nike, Adidas and Reebok, many retailers need to carry several brands on the shelves to attract more consumers' shopping at their stores; and, (5) Taiwan's official accession to WTO in January 2002 has significant impact on market liberalization including tariff reduction in merchandise trade as well as more open domestic market for overseas investors (Hong Kong Trade Development Council November 2001). Total retail sales will reach from NT\$1.078 trillion in 2001 to NT\$1.131 trillion in 2010 (Civil Services of Doc 2001), which makes significant contribution to the strength of Taiwan's economy.

The supply chain in Asia possesses special socio-economic characteristics such as a

preponderance of small independent retailers with big international suppliers dominating the market. Current retail supply chains in Taiwan have the same phenomena. Little empirical research has been conducted on supply chain performance at the retail level in Taiwan and other Asian countries. Therefore, the objectives of this paper are to; (1) identify the determinants affecting the performance of the supply chain at the retail level in Taiwan, (2) define the antecedents related to each determinant, and (3) present the conceptual model for this particular context. This paper will outline a conceptual development for the measurement of supply chain performance in Taiwan and illustrate a number of determinants that will affect performance.

### CONCEPTUAL MODEL

The study of buyer-supplier relationships and purchasing process has been the central issue in relationship marketing and purchasing as well as business-to-business marketing literature. A brief review of the literature will be based on the hierarchical conceptual model (Figure 1), and details will be discussed with posited hypothesis in the next following section.

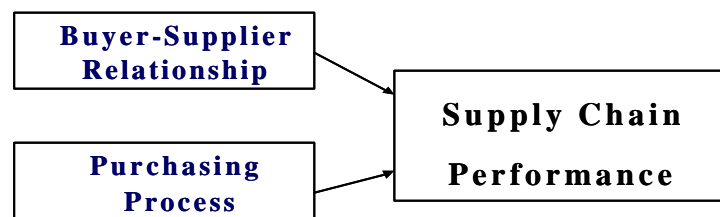


Figure 1: Conceptual Model

Buyer-supplier relationships in the supply chain are one of the most important elements of supply chain integration. Establishing and managing effective relationships at every link in the supply chain is becoming the prerequisite of business success. High volatility in the retail industry reflects rapid fluctuations in customer demand and unpredictable market trends. In addition, environmental diversity reveals uncertainty in the global business environment. Facing market volatility and diversity, retailers are encouraged to develop relatively flexible relationships with multiple channel partners to deal with unexpected market demands and thus reduce the dependence on the vendor (Ganesan 1994).

Several empirical studies conducted in China support that buyer-supplier relationships

have a positive effect on a firm's financial performance (Liu and Wang 2000; Luo 1997; Yeung and Tung 1996), or that manufacturer-distributor relationships and *guanxi* have an important impact on the performance of export ventures in China (Ambler et al. 1999). Firms engaged in long-term relationship with their customers achieve higher profitability, and ROI than firms using a transactional approach (Kalwani and Narayandas 1995). Maloni and Benton (2000) found that strong buyer-supplier relationships have a significant positive effect on manufacturer performance, supplier performance, and performance of the entire supply chain.

The study of buyer-supplier relationships and their impact on supply chain management is pertinent for two reasons. Firstly, the prevailing culture in Taiwan's distribution system emphasizes personal relationship between the manufacturers, wholesalers and retailers (Trappey and Lai 1996). Secondly, the Western literature of relational marketing or channel relationships may not fully explain the true essence of cross-cultural contextual factors (Mavondo and Rodrigo 2001). Thus, the cultural perspective in retailer-supplier relationships should be considered in deriving theoretical constructs.

On the other hand, both academics and practitioners have recognized that purchasing is key to a firm's competitive advantage, and that increased profitability, market share and technological innovation can be achieved through an appropriate purchasing strategy. A company's purchasing practices can impact the effectiveness of its SCM strategy and its financial and market performance (Tan et al. 1998). In current purchasing practice, orders from retailers are placed with the international suppliers many months ahead of the season, so the risk of both obsolescence and stock-outs is high. The lengthy pipeline increases inventory carrying cost and inefficiency in the supply chain. Besides, when it comes to the selling season, market demand may change and sales can be affected for various reasons such as economy, climate, consumer preference, sports events, unmatched supplies, etc. (Fisher et al. 1994).

## **BUYER-SUPPLIER RELATIONSHIP**

### **Dimensions of Buyer-supplier Relationship**

As suggested by Olsen and Ellram (1997), the links between the characteristics of the relationship such as trust, cooperation, and the performance of the relationship need further research. Considering the key issues discussed earlier, five prominent dimensions of the buyer-supplier relationship: trust, communication, interpersonal relationship (*guanxi*), cooperation, and power-dependence, will be explored in the following discussions. Therefore, this study makes an important contribution to the relational

literature and supply chain management literature through the investigation of the phenomena of retailer-supplier relationships and their impact on supply chains in the Chinese context.

### ***Trust***

Trust is a crucial factor in sustaining the complex business network and contributing to the success of a firm in Chinese business communities. To distinguish the basis of trust, in Chinese culture trust is cultivated at the personal level, whereas in Western culture trust is established at the organizational level (Fang and Kriz 2000; Wong 1996). Trust indicates “a person’s reputation for trustworthiness on both a professional and personal level as well as credibility in a business situation” (Woo and Phrud'homme 1999). Chinese businessmen deem the trustworthiness and *xingyong* (i.e. a person’s credibility) of their trade partners important in business dealings. Similarly, Ganesan (1994) reported that the reputation of the supplier’s fairness has a significant effect on its credibility in the business, and consequently satisfactory credibility (*xingyong*) will create higher level of trust. Table 1 summarizes other benefits of building trust in relationships as reported by many researchers.

**Table 1. Benefits of building trust in business relationship**

• Decrease transaction costs in an exchange relationship	(Ganesan 1994; Noordewier et al. 1990)
• Reduce the risk of opportunistic behavior	(Ganesan 1994)
• Increase long-term orientation	(Doney and Cannon 1997; Ganesan 1994; Liu and Wang 2000)
• Willing to make idiosyncratic investments	(Ganesan 1994)
• Willing to engage in future business opportunity	(Doney and Cannon 1997; Ganesan 1994; Liu and Wang 2000)
• Facilitate cooperative transaction	(Lui 1998)

According to Sullivan and Peterson (1982, p30), the essence of trust is described as “...where the parties have *trust* in one another, then there will be ways by which the two parties can work out difficulties such as power conflict, low profitability, and so forth.” Trust leads retail buyers and sellers to the focus on long-term benefits of the relationship (Ganesan 1994), and eventually enhance the performance outcomes in buyer-supplier relationships, including firm competitiveness and transaction costs reduction (Noordewier et al. 1990). Doney and Cannon (1997) indicated that trust influences long-term relationships, while Morgan and Hunt (1994) found trust has the strongest effect on achieving cooperation in relationship. Anderson and Weitz (1989) demonstrate

the evidence that trust is key to maintaining continuity in conventional channel relationships. Furthermore, Siguaw et al. (1998) concluded distributor trust is related significantly and positively to both cooperative norms and distributor satisfaction with financial performance.

Two major aspects of trust are personal trust and organizational trust will be focused to give more insights on how trust plays an important in the Chinese buyer-supplier relationship.

*Personal trust.* The emphasis on trust has prevailed among business industries not only in Western countries but also in Chinese business communities. Trust was the crucial factor in upholding the complex network of trading relations (Wong 1996). The Chinese business relationships appear to be highly personalized, based on personal trust (Kiong and Kee 1998). Kao's (1996) study of "personal trust" in large businesses in Taiwan indicated that personal trust plays a prominent role in the establishment of partnerships. Chinese business practices are based on personal trust, with less formally defined rights and obligations (Mavondo and Rodrigo 2001). The formal contracts are just as a backup of legal commitment. Therefore, Kiong and Kee (1998) conclude that the non-use of written contracts characterize the mutual trust between the channel members.

*Organizational trust.* Western business companies usually check their first-time customer's credit history before business transactions and credit position. If a supplier has a good reputation in his history of dealing with other firms, trust and credibility are easily built consequently. "*Xingyong*" in Chinese or "credibility" in the West implies the words or written statement that can be relied on between the supplier and the retailer (Doney and Cannon 1997). *Xingyong* generally refers to the "integrity, credibility, trustworthiness, or the reputation and character of a person," and "a person's credit rating" in business circles (Kiong and Kee 1998, p. 85).

Some studies conducted in China, Taiwan, and other Asian countries have also revealed the importance of *xingyong* in Chinese business transactions and the positive impact of *xingyong* on the trust-based exchange relationships (Barton 1983; Kiong and Kee 1998; Lui 1998). DeGlopper's (1978) study of Lukang in Taiwan also addresses the importance of *xingyong* in business and explains further that *xingyong* is evaluated upon one's business performance. If a firm does not keep its word or cheats, it will lose its *xingyong*. In a word, based on mutual trust *xingyong* further ensures the security and reliability in business deals. Additionally, Ganesan (1994) asserted credibility has a significant effect on long-term relationship.

In conclusion, the benefits and impact of trust, along with the background of different aspects of trust in Chinese relationships, explain the critical role of trust as a key success

factor in buyer-supplier relationships. Therefore, we hypothesize that

*H1: Trust will have a positive impact on supply chain performance*

### ***Communication***

Owing to the risk of seasonal and short product life, small firms are naturally inclined to reduce inventory carrying costs and maximize profits from the products provided by the suppliers. Many companies have perceived the importance of substituting information for inventory as a potentially powerful source of competitive advantage (Spekman et al. 1999). Therefore, effective communication plays a critical role in social and business relationships.

Anderson and Narus (1990) define communication as “the formal as well as informal sharing of meaningful and timely information between firms.” Cannon and Perreault (1999) suggest more open sharing of information is indicated by the willingness of both parties to share important information. However, lack of trust can be translated to unwillingness to share information (Fawcett and Marnan 2001), and can make it difficult to share sensitive information such as financial data, especially in Asian business (MOEA 1999). Therefore, Mavondo and Rodrigo (2001) bring up the issue of difficulties in cross-cultural communication and information sharing as they can be a significant obstacle to business.

Effective communication in channel relationships can enhance levels of channel member coordination, satisfaction, commitment levels, and performance (Goodman and Dion 2001; Mohr and Nevin 1990). In fashion apparel industry, frequent communication between retailers and suppliers can expedite quick and accurate response to volatile market, and reduce the costs and impact of inaccurate forecasts (Fisher et al. 1994). With the presence of trust and support, channel members are more willing to pass information upward and promote bidirectional communication (Blair et al. 1985). Consequently, it will help better match supply with demand and increase profitability for channel members. On the other hand, under unequal power relationship a less powerful channel party has a tendency not to provide information and feedback to more powerful ones (Blair et al. 1985). Thus, the restricted information flow will impede the channel relationships and affect the supply chain performance as well. Effective communication is crucial to maintain a long-term buyer-relationship and achieve high performance (Mohr and Nevin 1990; Morgan and Hunt 1994). Thus, we hypothesize that

*H2: Communication will have a positive impact on supply chain performance*

### ***Interpersonal Relationship (Guanxi)***

“Guanxi” is recognized as an “emergent form” of relationship marketing in Asia (Davies

1995) and has attracted researchers' attention to how *guanxi* works in business relationships in China (Ambler et al. 1999; Davies 1995; Davies et al. 1995; Hsu and Saxenian 2000; Kiong and Kee 1998; Lui 1998; Luo 1997; Mavondo and Rodrigo 2001; Standifird and Marshall 2000; Tsang 1999; Wong and Chan 1999; Yeung and Tung 1996). *Guanxi* is a deep-rooted socio-cultural phenomenon and plays an extremely important role in the Chinese business world, as well as in daily life. Chinese people attach great importance to cultivating, maintaining and developing *guanxi*.

Liu and Wang (2000) and Luo (1997) referred to *guanxi* as the concept of drawing on connections or networks, and it involves reciprocal obligations and favors between two parties in personal or business relations. Chinese tend to incorporate personal relationships in business decision-making and manage their business enterprises under personal control (Kiong and Kee 1998). Businesses in Taiwan are primarily based on personal connections among businessmen and families. Kao (1996) indicates that personal trust plays a prominent role in the establishment of *guanxi* and partnerships in the Taiwanese business community. As most of Chinese family businesses are small and managed by core family members, they are heavily dependent on business opportunities and credit lines provided by their *guanxi* network. Trappey and Lai stressed (1996) the prevailing culture in Taiwan emphasizes personal relationship between manufacturers, wholesalers and retailers, and suggest that retailers must devote a great amount of time and effort to building and maintaining relationships.

On the other hand, most Western literature focuses on inter-organizational relationships between the suppliers and buyers (Fang and Kriz 2000). Mavondo and Rodrigo (2001) pointed out that the existing literature overlooks the area of interpersonal relationships or *guanxi* in the context of business-to-business marketing. Therefore, this research will focus on why *guanxi* are important in the context of abundant small retail firms, their *guanxi* with international suppliers and local suppliers, and its impact on supply chain performance.

*Guanxi* provides resources for Chinese firms to coordinate and control transnational business. Davies et al. (1995) report that highly important benefits arise from *guanxi* such as smoothing business transactions, providing information and obtaining resources. Hsu and Saxenian (2000) conclude that the social networks (i.e., *guanxi*) help coordinate transnational (cross-regional) collaborations in high-technology regional development between Silicon Valley, California and Hsinchu, Taiwan.

Personal relationships play a significant role in Asian business and are a critical precondition for effective business (Ambler et al. 1999; Yeung and Tung 1996). Fang and Kriz (2000) point out many Western companies lacking the understanding of cultural differences in relationships and networks were not able to manage long-term business



relationships in Asia successfully. Thus, building and maintaining *guanxi* network is key to achieving long-term success in Chinese business markets.

Therefore, we hypothesize that

*H3: Interpersonal relationships (guanxi) will have a positive impact on supply chain performance*

### ***Cooperation***

Anderson and Narus (1990) define cooperation as “similar or complementary coordinated actions taken by firms in an interdependent relationship to achieve mutual or singular outcomes with expected reciprocation over time.” Cooperation between the exchange parties reflects the expectations of working together to achieve mutual and individual goals jointly (Cannon and Perreault 1999). The cooperative inter-business relationship is primarily based upon personal trust between business parties. Most businessmen say that the most reliable sources of information come from close relationships within and among business organizations. Without close relationship, the suppliers or buyers are not willing to share information and have less intention to cooperate. Ambler et al. (1999) state that active cooperation plays a role in export sales growth.

Previous research on channel distribution has suggested that there is a positive relationship between cooperation and satisfaction (Anderson and Narus 1990; Skinner et al. 1992). Cooperation between channel members will increase channel efficiency and help members attain their mutual goals. Therefore, we hypothesize that

*H4: Cooperation will have a positive impact on supply chain performance*

### ***Power-Dependence***

The issue of power is closely associated with the nature of dependency in business relationships. Gaski (1984, p23) pinpointed the roles of power and dependence in channels of distribution by noting that “channel member dependence and sources of power in marketing channels are conceptually inseparable,” and “dependence is a component or dimension of these power sources rather than a separate phenomenon.” Brown et al. (1995, p364) define marketing channel power as the ability of one channel member (e.g. supplier) to control the decision variable in the marketing strategy of another member at a different level of distribution (e.g. retailer).

Power plays a significant role in the supply chain, and the different sources of power have differing impact on inter-firm relationships and the performance of the entire supply chain (Maloni and Benton 2000). As most constructs associated with power are mainly built on concepts and findings in Western countries, it is important to identify

constructs that better fit a Chinese context (Liu and Wang 2000). Lee (2001) also recommends that channel members in different cultures may have different perceptions of power sources. Though the importance of power and dependence has received the attention of academic scholars and practitioners, research investigating how power and dependence affect the retailer's purchasing decision and supply chain performance is rare.

According to Skinner et al. (1992), the bases of power are defined for this research as the resources the supplier has available to influence the retailer's purchase decisions. The bases of power (Table 2) are classified as coercive power and non-coercive power (reward, legitimate, referent, and expert) (Gaski 1984; Gaski and Nevin 1985; Hunt and Nevin 1974; Liu and Wang 2000; Lusch 1976; Skinner et al. 1992).

**Table 2: Description of Power Base**

<b>Power base</b>	<b>Description</b>	<b>Examples in sportswear industry</b>
<b>Coercion</b>	The retailer's perception that the supplier has the ability to mediate punishment.	Supplier cancels business or withholds orders with retailer
<b>Reward</b>	The retailer's perception that the supplier can mediate rewards of it.	Supplier offers bonus or cash discount to retailer for reaching a sales target in a season, special offer for sales promotion allowances and better credit terms.
<b>Expert</b>	Supplier has information or expertise knowledge and skills desired by retailer.	Supplier has good knowledge in product and retail selling skills.
<b>Referent</b>	The retailer desires a sense of identification and association with the supplier.	Some suppliers pride themselves on having their brands carried in certain outlets.
<b>Traditional legitimate</b>	The supplier is perceived to have a legitimate right to influence the retailer and the retailer is obliged to accept this influence.	Large suppliers may be felt to legitimately influence certain marketing policies.
<b>Legal legitimate</b>	Based on contractual arrangement	Supplier and retailer maintain a formal sales contract.

Several studies on power have shown that channel power has significant impact on the buyer-supplier relationship and performance in channel distribution (Etgar 1978; Gaski and Nevin 1985; Lee 2001; Liu and Wang 2000; Maloni and Benton 2000; Skinner et al. 1992). Table 3 summarizes the key findings of the impact of power on performance.

**Table 3 Impact of Power on Performance**

<b>Impact of power on performance</b>	<b>Authors</b>
♦ Channel member performance can be affected by power as well as countervailing power.	(Etgar 1978)
♦ Supplier's use of mediated power results in attributing lower performance to supplier and the use of non-mediated power results in retailer attributing higher performance to supplier.	(Brown et al 1995)
♦ The use of power affects marketing channel member performance.	(Gaski and Nevin 1985)
♦ International joint venture supplier's use of aggressive power is negatively related to the Chinese distributors' satisfaction with the relationship.	(Lee 2001)
♦ The use of non-aggressive power is positively related to the distributors' satisfaction with the relationship with the IJV supplier.	
♦ Rewards (non-coercive power) are negatively related to financial performance.	(Liu and Wang 2000)
♦ Coercive power has a negative impact on financial performance and operational performance.	
♦ Coercive and legal legitimate power each has a significant negative effect on the buyer-supplier relationship.	(Maloni and Benton 2000)
♦ Expert and referent power each has a significant positive effect on the buyer-supplier relationship	
♦ Dependence and non-coercive bases of power have a positive impact on cooperation, while coercive bases of power have a negative impact on cooperation.	(Skinner et al. 1992)
♦ Coercive bases of power are positively related to conflict and non-coercive bases of power are inversely related to conflict.	

Based on the empirical findings discussed above, the coercive power and non-coercive power exercised by international suppliers and local suppliers can have positive and negative impact on retail supply chain performance. In this research, the extent of the retailer's dependence on international suppliers and local suppliers, and coercive power and non-coercive power by international suppliers and local suppliers will be investigated. Therefore, we hypothesize that

*H5a: Retailer's dependence on supplier will have a positive impact on supply chain performance*

*H5b: Supplier's coercive power will have a negative impact on supply chain performance*

*H5c: Supplier's non-coercive power will have a positive impact on supply chain performance*

## **PURCHASING PROCESS**

Factors influencing the retail buying behavior in fashion industry include contribution to margin, consumer demand, product reputation, delivery, and aesthetic properties (Ettenson and Wagner 1986; Wagner et al. 1989). Because of limited financial resources for small retail sports firms in Taiwan and consumer's brand preference, the profitability (i.e., contribution to margin) and brand selections (i.e., consumer demand and product reputation) have become the most important criteria in retail purchasing decision-making. The retailer's financial position may influence the buying decision (Holm and Skytte 1998). For example, retailers with limited capital will tend to be more interested in memorandum buying and consignment buying than in advance buying. Retailers with sufficient capital will purchase those big international brands on the basis of advance buying. Whatever types of supply contracts a retailer chooses, two goals fundamental to the success of a retailer are customer satisfaction and profitability (Ettenson and Wagner 1986).

As Carr and Leong (2000) commented, while Taiwan is a famous commercial center in Asia, little is known about the purchasing practices of Taiwanese firms. Though the number of retailers in business sectors is large, academic research on retail purchasing practices is scarce in Taiwan. This research attempts to explore retail firms' purchasing practices in sportswear, and the impact of the different types of supply contracts and parallel imports on supply chain performance.

### ***Supply Contracts***

The contractual agreements specify the obligations and roles of both parties in the relationship (Cannon and Perreault 1999). Lusch and Brown (1996) described the important role of explicit, formal contracts in marketing channels. Although formal, detailed contracts are common business practice, many firms prefer to operate with a "handshake" agreement, which is quite common in Taiwan.

The two common types of supply contracts for ordering in Taiwan sports retail businesses are futures orders (i.e. advance buying) (Ashford 1997) and in-season orders (i.e. consignment buying and memorandum buying) (Rogers and Gamans 1983). With most of the big international suppliers, *advance buying* is adopted for retail ordering. The retailer is required to place his orders about six months ahead of the selling season to

ensure his product availability during the season (Ashford 1997). The payment should be made within a month upon receiving the goods, and no return items or product exchange at the end of season is allowed, unless for defective items.

To minimize financial risks, fashion retailers like to purchase certain products on consignment. *Consignment buying* means the retailers possess the physical products but the title still remains with the seller (Rogers and Gamans 1983). The retailers only pay for those sold items and have full-return privileges for the unsold products at the end of season. Thus, the advantage of smoothing the cash flow with consignment buying attracts lots of merchandisers (Sanborn 1991). It is a very popular business practice in Japan (Sanborn 1991), as well as in Taiwan apparel retailing. For *memorandum buying*, retailers are entitled to own the goods and have the right to return any unsold products for full credit (Rogers and Gamans 1983). It provides the benefits of low financial risks and the variety of newest styles for customer's selections. Supply on the basis of memorandum is the most widely used by local brand designers and the international brands licensed to exclusive manufacturers or distributors in Taiwan. They offer in-season orders with the flexibility of small order delivery and exchange or return for slow moving items during or at the end of season. The payment also should be made within a month after the goods are received.

As different types of supply contracts can affect the cash flow, inventory carrying costs, and delivery flexibility for retail outlets and the efficiency of the whole supply chain, we hypothesize that

*H6a: Advance buying will have a positive impact on supply chain performance*

*H6b: Consignment buying will have a positive impact on supply chain performance*

*H6c: Memorandum buying will have a positive impact on supply chain performance*

### ***Parallel Imports***

The issue of parallel imports has been confronting many international corporations not only in the US and European Community countries, but also in Asia, and also attracts heated discussion and research in academic (Ahmadi and Yang 2000; Assmus and Wiese 1995; Cavusgil and Sikora 1988; Chang 1993; Michael 1998; Weigand 1989). Several industries have encountered the challenges and threats of parallel imports with their products, including pharmaceutical products, cosmetics, automobiles and brand-name sportswear and footwear. According to Cespedes et al. (1988), the sales of parallel imports sold throughout the world exceeds billions of dollars every year, and estimated at from \$7 to \$10 billion in the US market.

Parallel imports, or "gray marketing", are genuine products brought into a country without the authorization of a copyright, patent, or trademark owner to compete against

existing authorized channels (Ganslandt and Maskus 2001; Maskus and Chen 2000). Factors create incentives to motivate the participation of parallel imports activities (Ahmadi and Yang 2000; Assmus and Wiese 1995; Cespedes et al. 1988; Chang 1993; Cullwick et al. 1999; Duhan and Sheffet 1988; Maskus 2000), such as foreign currency exchange fluctuations, market inflation rates, price differentials, low tariffs and legal barriers, and surplus items or unsold stock. Parallel marketers usually buy products overseas, either from manufactures or authorized dealers, at relatively low prices and import them into a country where prevailing prices are high (Cavusgil and Sikora 1988). For example, Tesco, a supermarket chain in the U.K., started selling branded products in 1997 including Nike clothing and footwear, Adidas tracksuits, Levi jeans, and Calvin Klein underwear and jeans at 30% to 50% lower than the recommended retail price (Cullwick et al. 1999).

When market demand for more international branded products increased, more growth opportunities rose for parallel importers. Parallel imports attract price-sensitive shoppers because of lower prices. As Chang (1993) noted, Taiwan's consumers are highly aware of *water goods* (parallel imports) as many consumers purchase such goods frequently and show strong support for parallel imports. It is a common phenomena in Taiwan that a lot of sports retail outlets (both authorized and unauthorized retailers) cluster on the same street or nearby to compete each other. Price is usually the powerful motivator in competition war. Therefore, the threat of parallel imports is increasing and the potential detrimental to the authorized retailers' profits also raise their caution (Maskus 2000).

The impact of parallel imports on the supply chain can be significant in terms of profit and market share (Yang 1996). However, it depends on the standpoint of manufacturer or distributor or dealer. Some researchers argue that parallel imports can increase the trademark owner's total market share and sales (Ahmadi and Yang 2000), and retailers can reduce purchasing cost and provide consumers a purchase option at lower price (Lowe and McCrohan 1989).

On the contrary, Myers (1999) found that parallel imports have an adverse impact on strategic export performance indicating such as distributor relationships, market share and customer's purchase needs. In addition, other negative effects of parallel imports are described in Table 4. Based on the findings of Table 4, we hypothesize that

*H7: Parallel imports will have a negative impact on supply chain performance*

#### **Table 4 Negative effects of parallel imports**

Negative effect	Authors
• Damage the brand image	(Cavusgil and Sikora 1988; Cespedes et al. 1988; Lowe and McCrohan 1989)
• Detrimental to manufacturer-dealer relationship	(Cavusgil and Sikora 1988; Cespedes et al. 1988; Lowe and McCrohan 1989)
• Disrupt the authorized distributor's profitability and market share	(Cavusgil and Sikora 1988; Lowe and McCrohan 1989; Myers 1999; NZ Institute of Economic Research 1998)
• Lose trust to consumers	(Cavusgil and Sikora 1988)
• Offer a free ride to parallel importers on the investment of distributors	(Cespedes et al. 1988; Lowe and McCrohan 1989; Maskus 2000; NZ Institute of Economic Research 1998)

## MEASURES OF SUPPLY CHAIN PERFORMANCE

Supply chain performance is an important and multi-faced issue in supply chain management. Performance measurement is defined as the information regarding the processes and products results, that allow the evaluation and the comparison in relation to goals, patterns, past results and with other processes and products (Petrovic-Lazarevic and Sohal 2002). It is important to identify those determinants that drive supply chain success. What should be measured and what action should be taken based upon the measure are the key issues in today's fast-paced, competitive economy. To achieve an efficient and effective supply chain, many companies have realized the importance of performance evaluation and what measures should be used. The objectives of performance measurement are to improve the efficiency and effectiveness of a supply chain (Beamon 1999; Gunasekaran et al. 2001), and also consider the overall supply chain goals and the metrics to be applied (Gunasekaran et al. 2001).

### Measures of Performance

To evaluate the effectiveness and efficiency of retail supply chain performance, the performance measures for this research is based on Gunasekaran et al's (2001) classification; measures are identified as financial and non-financial. A detailed description of each measure will be discussed in the next section.

#### *Financial measures*

Sales growth rate and profitability, which are frequently used as predictors of financial performance (Bourne 1999; Gales and Blackburn 1990; Tan et al. 1999).

*Sales growth rate* is measured as the percent change in annual sales over the last three years (Gales and Blackburn 1990; Tan et al. 1998; Tan et al. 1999).

*Profitability* refers to the average retail profits that the retailer can make from the sportswear.

The study of Dollinger and Kolchin (1986) shows there is a strong positive correlation between purchasing activity and firm profitability.

### ***Non-financial measures***

The non-financial measures characterize the essence of flexibility and customer service in the supply chains.

*Flexibility* refers to the ability of making available the products or services to meet the particular customer demands (Gunasekaran et al. 2001). Flexibility is a key measure of supply chain performance and is often regarded as a reaction to environmental uncertainty (Beamon 1999; Suarez et al. 1991; Vickery et al. 1999).

*Supply flexibility.* Fashion is a precarious business, and heavy stock-keeping units associated with variety of sizes, colors and styles of sportswear are a big burden for retailers. To carry enough inventory to satisfy consumer demand with minimum inventory carrying cost, it is a trend that retailers tend to place small order quantities and receive frequent deliveries. Tsay (1999) suggests implementing quantity flexibility (QF) as a response to inefficiencies, such as over-stocking and under-stocking, occur in the supply chain.

*Product exchange and return.* Some retailers prefer buying some brand named sportswear on consignment as there is no inventory investment, or on memorandum buying as any unsold items can be returned for full credit or exchange (Rogers and Gamans 1983).

*Delivery efficiency.* Nowadays, customers are raising their service expectations with regard to ever-shorter delivery time (Fawcett and Marnan 2001). Stewart (1995) concluded that delivery performance is the first key to supply chain excellence and the driver of customer satisfaction in supply chain management.

The main purpose of *customer service* metrics is to measure how the suppliers are serving (or not serving) the retailers (Hausman 2000). Customer service has been highly differentiated and become one of the major competitive advantages for a sports apparel retail outlet.

*Product availability.* Because the nature of the sportswear market involves volatility



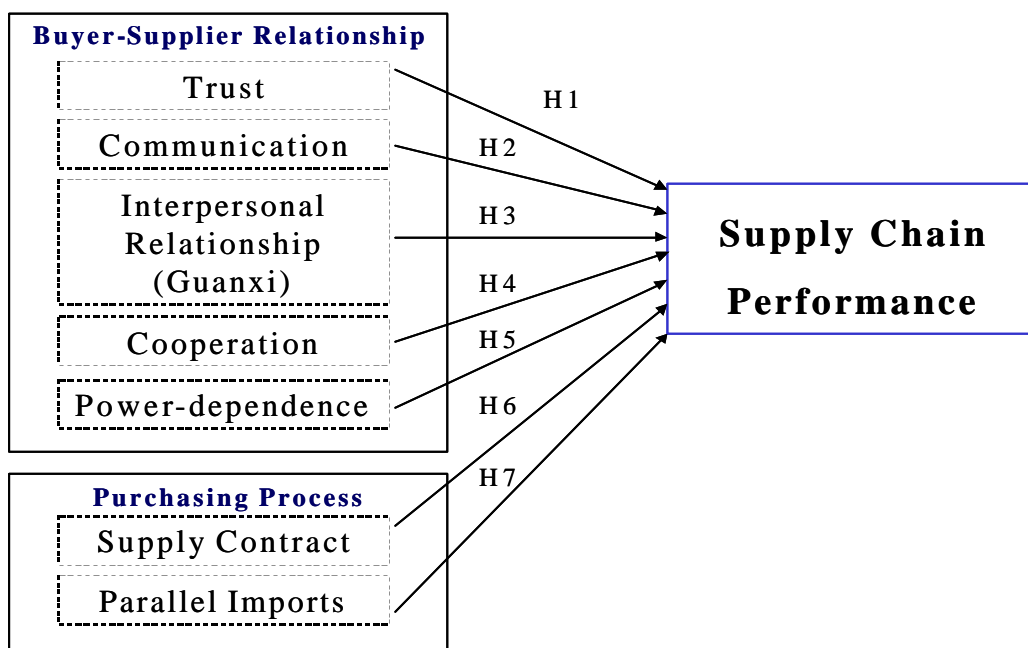
and seasonality, product availability is a critical factor to customer satisfaction and customer loyalty at the retail level (Sabath 1995). Unsatisfied demand will cause lost sales, lost customer and obsolete inventories (Ashford 1997; Stewart 1995).

*Product quality.* The quality of the product provided by suppliers reflects the brand's image and value (Chaudhuri and Holbrook 2001). Wisner and Tan (2000) include product quality as a criteria of supplier performance, and Tan et al. (1999) show that quality has a positive impact on growth and return on assets.

On understanding the characteristics of sportswear industry, the measures defined above will provide an effective evaluation for analyzing the impact on retail supply chain performance in the context of Taiwan.

After detailed reviews of key dimensions of buyer-supplier relationship (i.e. trust, communication, guanxi, cooperation, and power-dependence) and purchasing process (i.e. supply contract and parallel imports) and their impact on supply chain performance, Figure 2 summarizes a clear framework of this research with developed hypotheses.

**Figure 2. Conceptual framework**



**Conceptual Framework**

## CONCLUSION

Previous literature is utilized in developing a conceptual framework that provides reliable and valid antecedents associated with each determinant buyer-supplier relationship and purchasing process. Pre-established conceptual measures for the outcome of retail supply in performance consisting of financial measures and non-financial measures are used. The findings will extend our understanding of what factors have impact on retail supply chain performance in Taiwan, and how performance measures predict the retail supply chain performance. Therefore, this research is expected to make two contributions: (1) no previous research has been conducted on the determinants of supply chain performance for retail outlets in Taiwan; (2) this research includes determinants such as relationship and purchasing process, which are important in Chinese ethnic business communities and are now widely discussed by Western scholars.

Future research proposal will investigate the interrelationships among the factors influencing the supply chain performance in Taiwan. The buyer-supplier relationships and purchasing process with international suppliers and local suppliers will be compared based on various key performance measures. Face-to-face interviews will be conducted by using a structured questionnaire to gather the retailers' perceptions of relationships with their suppliers and their purchasing processes. The sample of this study will be selected from the members of Taiwan Sporting Goods Association located in major cities and sample size will consist of 250 small and medium-sized sporting goods retailers (the standard of identifying small and medium enterprises in service sectors, the number of its regular employees shall not exceed 50 persons according to the Small and Medium Enterprise Development Statute in 2000 by Taiwan's Ministry of Economic Affairs). The respondents in the sample are storeowners or managers as they are the primary link between the retail outlet and the major suppliers (Brown et al. 1983).

A preliminary informal face-to-face interview with one big supplier, three local suppliers and 10 retailers will be conducted as a pilot survey to test out all aspects of the survey and question wording. The questionnaire will be designed in English first and then translate into Chinese, and the results will be translated from Chinese to English. Furthermore, using personal *guanxi* networks, one manager who has considerable experience in the sports business and who has good contacts with national retailers will be brought on board to establish a trust-based relationship during the interviews. In this way, it can decrease the non-response rate and unreliability of surveys as Chinese people are less inclined to be open with strangers (Carr and Leong 2000).

Structural equation models (SEMs) and the AMOS computer program will be used in the

data analysis. Finally, the model presented in this research can be applied to footwear sector and fashion or apparel business, and be extended to the other Chinese-culture territories such as China, Hong Kong, and Macao.

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