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Regional Monopoly, Inter-regional and Intra-regional Competition: The Parallel Trade in Coca-Cola between Shanghai and Hangzhou in China^{*}

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Abstract

This article uses a “principal-agent-sub-agent” analytical framework and data collected from field surveys in China to (1) investigate the nature and causes of the parallel trade in Coca-Cola between Shanghai and Hangzhou, and (2) assess the geographical and theoretical implications for the regional monopolies that have been artificially created by Coca-Cola in China. The parallel trade in Coca-Cola is sustained by its intra-regional rivalry with Pepsi-Cola in Shanghai, where Coca-Cola (China) (the principal) seeks to maximize its share of the Shanghai soft drinks market. This goal effectively supersedes the market-division strategy of Coca-Cola (China), as the gap in wholesale prices between the Shanghai and Hangzhou markets is higher than the transaction costs of engaging in parallel trade. The exclusive distributor of Coca-Cola in the Shanghai market (the sub-agent), makes opportunistic use of a situation in which it does not have to bear the financial consequences of the major residual claimants (the principal and other agents), and has an incentive to enter the non-designated Coca-Cola market of Hangzhou by crossing the geographical boundary between the two regional monopolies devised by Coca-Cola. This promotes inter-regional competition between the Shanghai and Hangzhou bottlers (the agents). This article enhances our understanding of the economic geography of spatial equilibrium, disequilibrium and quasi-equilibrium of a TNC’s distribution system and its artificially created market boundary in China.

Keywords: regional monopoly, inter-regional competition, intra-regional competition, parallel trade, Coca-Cola, China.

1 Introduction

It is a common practice for manufacturers of frequently purchased branded goods, particularly of those with a short shelf life that demands local warehousing, to grant a regional monopoly to an authorized local distributor. The consequence of such a practice is a distribution network that often gives the illusion of involving separate geographic sub-markets for the product, each of which houses a monopoly distributor of the manufacturer's brand. This is an illusion because the manufacturer has little control over the ultimate disposition of its product once it leaves its hands, notwithstanding any seemingly inviolable contractual arrangements that it might have put in place. Thus, the manufacturer's authorized distributors in different geographic sub-markets frequently find themselves in competition with unauthorized imports of that same brand from other regions. This is the parallel-trading issue that may create the notion that a franchised distribution network invariably results in artificially bounded geographic sub-markets that operate in isolation from each other, ignoring the reality of spatial competition between those sub-markets and its broader implications.¹ The purpose of this article is to explore this issue and its implications with specific respect to the distribution of Coca-Cola in the economically important neighboring sub-markets of Shanghai and Hangzhou in China.

Despite it being the world's largest producer of carbonated drinks, accounting for more than half (about 16 billion unit cases) of the global market in 2003 (*Financial Times* 10 March 2004, 17), only three previous studies on the operations of Coca-Cola in China have been carried out: those of Nolan (1995), PU-TU-USC (2000), and Mok, Dai and Yeung (2002). Based on a case study of the Coca-Cola bottling plant in Tianjin, Nolan (1995) conducted the first in-depth analysis of the micro-economic impact of a single Coca-Cola plant in China. He found that the Coca-Cola business system in general has had a positive impact on the development of labor, capital, and product markets in China. Nolan's findings are in line with the conclusion reached in the meticulous input-output model that

¹ For extensive discussions of the impact of spatial competition on market definition, see, e.g., Horowitz (1981), Stigler and Sherwin (1985).

was constructed by a team of economists from Peking University, Tsinghua University, and the University of South Carolina (PU-TU-USC 2000). Based on the theoretical framework of internalization theory, Mok, Dai and Yeung (2002) investigated Coca-Cola's choice of mode of entry into China. They discovered that Coca-Cola had adjusted its initial choice of entry mode from franchises and equity joint ventures (EJVs, see Yeung 2001 for a definition of this concept) to a hybrid of EJVs and franchises as part of their market expansion strategy, and to consolidating the control of distribution channels for the soft-drinks market in China.

The existence of parallel imports of Coca-Cola is well known to the general public, and it is estimated that parallel imports from other European Union (EU) countries account for up to 20 percent of the Coca-Cola market in the UK (*Wall Street Journal* 6 July 1999). Few scholars have analyzed these phenomena, mainly because the existence of parallel imports involves proprietary information that is well guarded by Coca-Cola. Despite the significance of parallel imports, none of the aforementioned studies is able to give a satisfactory answer to the question of where and why parallel imports exist, or to detail the geographical implications of such activities. Specific questions remain as to why a parallel trade in Coca-Cola exists in China, and how such a parallel trade between Shanghai and Hangzhou is sustained, rather than occurring as a periodic phenomenon, as with parallel imports in other countries.

This article investigates the nature and causes of the parallel trade in Coca-Cola between two regional monopolized markets in China (Shanghai and Hangzhou) and assesses the geographical and theoretical implications of this trade for regional monopolies in China. In doing so, it provides an analysis of the intricate relationship of the regional monopolies and the inter-regional and intra-regional competition, all of which are vital elements of economic geography. It consequently contributes to understanding the geographical implications, in the form of spatial equilibrium, disequilibrium and quasi-equilibrium, of one transnational corporation's (TNC) distribution system and its artificially created market boundaries in China. Our study differs from conventional studies in two ways. First, in contrast to conventional studies on parallel imports, which focus on

the gray distribution of genuine brand-name products across national boundaries by unauthorized importers (Malueg and Schwartz 1994; Barfield and Groombridge 1998; Maskus 2000; Maskus and Chen 2004), this article focuses on the trading of Coca-Cola outside of the designated territory of the Shanghai bottler (but still *within* China). Second, in contrast with those analysis arises from the perspective of inter-regional and intra-regional competition (i.e., MacKinnon and Phelps (2001a, 2001b) on regional governance and foreign direct investment in the UK, and Sparke et al. (2004) on geographies of power in the Indonesia-Malaysia-Singapore growth triangle), this article aims to disentangle the complex relationships between regional monopoly and inter-regional and intra-regional competition through a proposed “principal-agent-sub-agent” analytical framework.

The case of Coca-Cola is an especially intriguing one because of the company’s status as one of the world’s leading TNCs and its expanding presence in China’s large and rapidly growing economy. Thus, although we focus on a single pair of geographic regions in China, the omnipresence of the company and its products throughout the world render our results and the novel methodology that we introduce to reach them applicable in both other countries and other contexts. Moreover, this article contributes to the literature of economic geography by providing valuable insights into how intra-regional rivalry between Coca-Cola and Pepsi-Cola in China created a spatial disequilibrium in the form of parallel trade, and how the subsequent inter-regional competition between Shanghai and Hangzhou bottlers led to a breakdown of the regional monopolized market boundaries established through Coca-Cola’s market-division strategy. Apart from disentangling the inter-firm network embedded in Coca-Cola, its bottlers and distributors, our findings could have profound implications for corporate and public policy with regards to the demarcation and regulation of monopolized market boundaries on both macro-geographical (international) and micro-geographical (local) scales. From the perspective of efficiency, for instance, should TNCs or the state allow parallel trade (imports)?

To collect first-hand information on the parallel trade in Coca-Cola, six rounds of field surveys were conducted in China and Hong Kong between June 2002 and December 2004 (see Appendix). A number of interviews with veteran

executives and owners of all of market agents were duly undertaken at different periods. These agents included Coca-Cola (China), which is the regional headquarters of Coca-Cola; the bottler in Shanghai, whose products are involved in the parallel trade; the bottler in Hangzhou, whose monopolized market is affected by the parallel trade; and major wholesalers and retailers in Shanghai and Hangzhou, who operate independently of the Coca-Cola system, selling either authorized or unauthorized Coke or both. All interviews were conducted in a semi-structured manner to facilitate conversational flow, and each interview lasted for at least an hour. The interview questions focused on empirical evidence relating to the two central research issues of this study: the causes of parallel trade between the two regional monopolized markets of Shanghai and Hangzhou, and its geographical implications in terms of regional monopoly and inter-regional and intra-regional competition.

Before discussing the phenomenon of parallel imports and the market-division strategy of Coca-Cola, relevant literature in economic geography will be reviewed and the analytical framework of this article will be presented in the following section. The effects of parallel trade and the market-maximization strategy of Coca-Cola on the designated markets in Shanghai and Hangzhou and the geographical and theoretical implications will be then be analyzed. The major findings of this article will be highlighted in the concluding section.

2 Literature Review and Analytical Framework

Research on parallel imports has often been undertaken by scholars in business schools and economics departments, e.g., Palia and Keown (1991), Dutta, Bergen and John (1994), Malueg and Schwartz (1994), Barfield and Groombridge (1998), Maskus (2000), and Maskus and Chen (2004). Game-theory based models developed by Dutta, Bergen and John (1994) and Maskus and Chen (2004) are probably the most important theoretical works on parallel imports.

Although there are no previous published studies on parallel imports in mainstream Anglo-American economic geography, there are numerous studies on TNCs. These studies vary considerably. Some adopt the earlier corporate geographical approach to investigate the effect of policies and structures of multi-

product, multi-plant enterprises on changes in industrial location and regional economic development (Hayter and Watts 1983, 157). More recent work concentrates on networks and embeddedness. O'Neill (2003, 677, 679) has, however, noted that the TNC "has slipped from the geographer's view and grasp", even though "enlivened corporate research is likely to yield important understandings about spatial economies, understandings that are critically important to contemporary policy-making at all levels of government and allied agencies".² Furthermore, O'Neill (2003, 677) argued that in economic geography, TNCs have been "sidestepped" by studies that are conducted around, rather than in the issues of contention; notably under the paradigms of flexible specialization and the customization of production (Eng 1997; Norcliffe 1997; ÓhUallacháin 1997; Jin and Stough 1998; Scott 1988a; Storper and Salais 1997), and global production networks and their embeddedness (Amin 1997; Dicken and Thrift 1992; Dicken and Malmberg 2001; Dicken et al. 2001; Dicken 2003; Yeung 1994, 1997, 1998, 2002; Henderson et al. 2002; Coe et al. 2004).

These strands of literature are very useful in explaining the dynamics of industrial location (and relocation) and provide valuable insights into the linkages of TNCs (especially their backward linkages and their determinants and forms) and their geographical implications, yet they are not particularly relevant to the analysis of the geographical distribution of products through unauthorized channels, the impact of parallel imports on the market boundaries of regional monopolies, and the geography of supply system. Contemporary Anglo-American economic and industrial geographies are unable to provide an analytical framework to analyze these important geographical phenomena.

The application of transaction-cost economics by economic geographers can, however, yield an insight into the selection of an analytical framework for this study. ÓhUallacháin and Wasserman (1999, 39) applied the transaction-cost theory of the firm to analyze the organizational, technological and territorial strategies of Brazil-based tier-one suppliers of chassis, engines, and bodies for

² There are, however, some notable exceptions, such as Maskell (2001) and Taylor and Asheim (2001). See also Yeung and Lin (2003, 111-15) for an excellent review of the major theories in mainstream economic geography.

automobiles. They argued that tier-one suppliers in an automobile production chain are vertically integrated to internalize parts production and subsystem assembly to exploit economies of scale, to assure quality, and to protect proprietary knowledge from opportunistic subcontractors. Scott (1988b, 1988c, 1992, 225) incorporated transaction-cost economics in the reconceptualization of neo-classical location theory and the delineation of flexible production agglomerations. He highlighted the need for firms to internalize certain production processes that could otherwise be efficiently externalized because of imperfect and asymmetrical information. By doing so, firms are able to mitigate the transaction costs associated with inter-firm linkages in a decentralized production system. Apart from labor quality, Brannstorm (2000) made the case that supervision costs, asymmetrical information and risk also contribute to the creation of coffee groves in São Paulo, Brazil.

Nonetheless, Phelps (1992, 41) argued that Scott's (1988b, 1988c) transaction-cost analysis of vertical integration and disintegration applies largely to a market close to perfect competition. Pietrykowski (1995, 398) also contended that the transaction-cost theory of industrial production proposed by Scott (1988b, 1988c) is unable to explain the location decisions of Ford Motor Company in Michigan in the mid-twentieth century. Yeung (1996, 1997) also pointed out that conventional transaction-cost analysis tends to overlook social and cultural factors, such as the role of *guanxi* (personal relationships), which is embedded in the development of Hong Kong-based TNCs.

Although the above studies are not on parallel imports, they demonstrate the potential explanatory power and drawbacks of transaction-cost economics. In light of the strengths and weaknesses of existing analytical frameworks, in this article we employ the framework of agency theory and transaction-cost economics for our analysis.

Agency theory is a theory of the firm that explores the contractual relationship between a property rights owner (the *principal*) and its employees (managers and workers: the *agents*) (Jensen and Meckling 1976). Transaction-cost economics analyzes the contractual issues of a transaction that arise out of the existence of *bounded rationality* and *opportunism* (the opportunistic or self-

interested behavior) of agents, and *asset specificity*, which is the unique character of a durable asset that may not be redeployed to alternative uses (Figure 1) (Williamson 1975, 1979, 1985). According to behavioral economics, the rational choice of a decision-maker is subject to cognitive limits, as human beings never have perfect information and have only a limited knowledge and ability to forecast the future, which means that irrational decisions may be made due to bounded rationality (Simon 1957, 1982).

[INSERT FIGURE 1 ABOUT HERE]

Fama and Jensen (1983a, 302) argued that an organization (firm) is the nexus of written and unwritten contracts between the owners of property rights and the factors of production. These contracts specify the rights and obligations, appraisal criteria, and payoff (remuneration) functions of each agent in the organization, either in terms of fixed payoffs, or incentive payoffs that are tied to specific performance benchmarks. Fama and Jensen (1983a, 303) further divided the decision processes of the agents in an organization into two major categories: decision management and decision control. Decision management involves decision initiation (the generation of proposals for resource utilization and the structuring of contracts) and decision implementation (the execution of ratified decisions), and decision control involves decision ratification (the choice of the decision initiatives to be implemented) and decision monitoring (the measurement of the performance of decision agents and the implementation of rewards).

When an organization is the nexus of contracts, agency problems often arise, as the preparation and enforcement of contracts involves agency costs (Figure 1). These costs include the costs of structuring, monitoring and bonding a set of contracts amongst agents with conflicting interests (the interests of the firm versus self-interest), and the value of output that is lost when the costs of the full enforcement of contracts exceed the benefits (Jensen and Meckling 1976, 308-10). According to Williamson (1989, 138), agency problems are part of human nature, as employees are prone to opportunism under a mixture of stewardship and agentship. In the context of the theory of incentives, employees can be motivated on the one hand by their own commitment to be loyal stewards of the organization, and on the other hand by the promise of rewards (through remunerations) or the

threat of bearing the financial consequences of their decision-making. Therefore, the imperfect enforceability of contractual agreements is a natural consequence of the opportunistic behavior of agents and the bounded rationality of decision makers (Williamson 1989). Apart from involving the enforceability of contractual agreement, the high transactions costs associated with some economic activities (representing as much as 35-40 percent of the costs; North 1990) suggest that transaction-cost theory is an appealing approach to explaining the existence of parallel trade, e.g., parallel trade will not exist if the enforcement of contracts carries no cost.

3 Parallel Imports and Distribution Strategies of Coca-Cola

Parallel imports (gray marketing) exist when an unauthorized distributor procures genuine brand-name products and then resells them to others (wholesalers, retailers, or consumers) without the permission of the owner of the intellectual property rights (copyright, patent, or trademark). It is estimated that in the US alone up to US\$10 billion worth of goods are sold every year outside the authorized distribution networks of manufacturers (Cespedes, Corey, and Rangan 1988, 75). From the perspective of the manufacturers or authorized distributors, it is desirable to eliminate parallel imports to protect market share. From the perspective of consumers, parallel trade is desirable to achieve the lower prices and the increased choice that comes with the availability of parallel imported commodities.³

According to the doctrine of national exhaustion, the right of the owner of the intellectual property to control distribution ends only upon the first sale within a country, and therefore the owner of such a right is allowed to exclude parallel imports from other countries. Countries with national exhaustion are segmented markets, as original manufacturers have complete authority to distribute goods and services directly or indirectly through authorized dealers. This is not the case

³ This generalization does not always hold, as some manufacturers need the gray market to clear excessive stock, and some consumers complain about the lack of after-sales service that is associated with gray market products (Cespedes, Corey, and Rangan 1988, 76).

with international exhaustion, where the right of the owner of the intellectual property right to control distribution ends upon the first sale anywhere, and therefore parallel imports are allowed. In the case of regional exhaustion, where the right of the owner of the intellectual property right to control distribution ends upon the original sale within a group of countries (but not the first sale outside the region, hence, parallel imports outside the region are not allowed), parallel trade in the region is allowed (Maskus 2000; Maskus and Chen 2004, 551). Arbitrage can occur when the differences in price between different markets (including differences that are due to substantial fluctuations in exchange rates) are greater than the transaction costs that are involved in engaging in parallel imports, or when efforts are made to offset supply shortages in regions at below the prevailing market price (Cavusgil and Sikora 1988, 75-7).

For products with short lifecycles or those that require sale economies, sales teams are under constant pressure to sell off excessive stocks to distributors (including parallel traders) before the cost of the product is written off in the company balance sheets. This price reduction by manufacturers and the subsequent fire-sale by parallel importers further erode the price of the product, and may lead to a vicious circle in which the accumulation of excessive stock prompts price discounts by the manufacturers, which entails further fire-sales by parallel importers. A gray market for a product can also exist when an authorized distributor sells excessive stock to gray marketers outside their designated territories to become eligible for a volume-discount pricing scheme or to meet sales quotas that are assigned by the manufacturer. A manufacturer's authorized distributors may end up competing with parallel traders, which may erode that brand's prestige. Moreover, parallel imports may strain the relationship between manufacturers and authorized dealers, partly because of the erosion of market share and profit margins, and partly because of the disruption of marketing strategies. It can, however, be argued that the existence of parallel imports actually facilitates the penetration of the market by manufacturers, because parallel imports help to maintain a brand's price competitiveness (Maskulka and

Gulas 1987; Cavusgil and Sikora 1988, 76; Cespedes, Corey and Rangan 1988, 75-7).⁴

Manufacturers can control the gray market by disenfranchising offending distributors or by setting a one-price-for-all policy for all distributors. Disenfranchisement is costly for manufacturers because of the expenses that are incurred in monitoring the incidents of offence, and a one-price-for-all policy eliminates the opportunities for price discrimination (Cespedes, Corey and Rangan 1988, 79; Cavusgil and Sikora 1988; Palia and Keown 1991).

Coca-Cola divides the world into different regional markets, each of which is monopolized by a corresponding exclusively franchised or EJV bottler. Coca-Cola implements a *market-division* strategy by including “territorial sales provisions” in the exclusive contract that is signed by each independently operating bottler. These provisions forbids any bottler’s sales team from selling Coke outside the designated market where it was bottled, thus in effect forbidding the inter-regional competition of Coke.⁵ Should Coca-Cola products be found on sale outside their designated territories, such as the sale of US Coke in Japan, then Coca-Cola imposes a fine on the bottler responsible for the parallel import. The fine is equivalent to the wholesale price of the Coke and is payable to the bottler affected by the parallel imports. In the example given above, the US bottler would have to pay a fine for its parallel export of Coke to the Japanese bottler to compensate for its financial losses. The actual quantity of Coke involved in the parallel trade is verified by an independent intellectual property consultancy employed by Coca-Cola (Field survey June 2002). In other words, Coca-Cola creates a number of *de facto regional monopolies* for its products all over the world through its market-division strategy and its associated penalty system. In spite of the strict distribution rules that are imposed by Coca-Cola, the parallel import of its products still exists, because there is a significant difference in the

⁴ In May 1988, the US Supreme Court upheld the legality of gray-market imports (Cavusgil and Sikora 1988, 83-4; see also Duhan and Sheffet 1988; Palmeter 1988; NERA 1999).

⁵ The 1980 Interband Competition Act in the US allows Coca-Cola and other soft drinks companies to grant exclusive franchise rights to bottlers in given locations. This law, however, may not be enforceable outside the US, as no such law exists elsewhere (*The New York Times* 26 January 2000).

price of Coke in different markets to allow arbitragers to earn profits. For instance, at US\$0.67 for a 12-ounce can from a vending machine in Japan, parallel-imported US Coke is 40 percent cheaper than Japanese Coke, even when the extra transportation costs are included (*The New York Times* 26 January 2000).

Given China's population of 1.3 billion, which accounts for 21 percent of the world's population, and its average annual real GDP growth rate of about nine percent since 1979, the country has long been viewed as an important market by Coca-Cola. Faced with keen competition from its close competitor, Pepsi-Cola, and an unfamiliar and highly volatile local market environment, Coca-Cola has utilized different modes of market entry from franchises and EJVs to a hybrid of EJVs and franchises to penetrate the Chinese carbonated drinks market (Mok, Dai and Yeung 2002).

Coca-Cola implements a market-division strategy in China, which means that it divides the Chinese market into different regions, where each regional bottler is vested with monopoly rights to sell Coke in its own territory. In 1993, Coca-Cola signed territorial arrangements with the Hong Kong-based Swire Pacific Group and the Malaysia-based Kerry Beverages Group and took up an equity stake of 12.5 percent in each company. Swire Pacific is responsible for the production and distribution of Coca-Cola products in southern China and in selected interior provinces, and Kerry Beverages is responsible for the northern and interior parts of China. At present, Swire Pacific is an equity partner in nine EJVs, and Kerry Beverages is an equity partner in another ten EJVs with Coca-Cola in China (PU-TU-USC 2000, 20-1). Since its entry into China in 1979, Coca-Cola has invested US\$1.1 billion in building 25 bottlers (34 bottling plants) and in setting up a sales and distribution system with 600 service centers and 1.1 million distributors that reaches about 80 percent of the population in China. Coca-Cola is the number one brand in the carbonated drinks market in China, and accounts for a 23 percent share of the market. Together with other brands under its distribution network, such as Sprite, Fanta, and the local brand, Smart, Coca-Cola represents more than 50 percent of the Chinese market, nearly doubling the share held by Pepsi-Cola. With an expected increase in sales of 20 percent over 2003, China is expected to overtake Japan in 2004 to become the largest market for

Coca-Cola in Asia in terms of volume. By 2008, China is expected to be the third-largest market for Coca-Cola (*Financial Times* 26 February 2004, 13; *China Daily* 22 June and 13 December 2004).

4 Regional Monopoly, Inter-regional and Intra-regional Competition

For the sake of simplicity, we do not investigate the roles of chain supermarkets, such as Metro and Carrefour, as they account for a relatively small amount of parallel-traded Coke. The relationship between the three major agents that are involved in the parallel trade is as follows (Figure 2) (Field surveys June and November 2002, December 2004):

- Shenmei Food (Shanghai) Ltd (hereinafter Shenmei) is Coca-Cola's authorized bottler in Shanghai. It was established in the form of an EJV by Coca-Cola (China) Ltd in 1986. Coca-Cola (China) became the majority equity owner of this JV (40 percent) after it bought equity shares from its EJV partners, the Ministry of Light Industry and the Shanghai Investment and Trust Company, in 1995. It sets the wholesale price of Coca-Cola in the exclusive and designated Shanghai market indirectly by selling Coke to its exclusive distributor, Jiashan Co. (a pseudonym).⁶
- The Jiashan Co. (hereinafter Jiashan) is the exclusive distributor of the Coca-Cola that is bottled by Shenmei in the Shanghai market. It distributes about 80 percent of the Coca-Cola that is bottled by Shenmei, and Shenmei sells the remaining Coke to chain supermarkets and restaurants directly. It also sells Coca-Cola in the non-designated Hangzhou market through parallel trade.
- Zhongcui Food (Hangzhou) Ltd (hereinafter Zhongcui) is Coca-Cola's authorized bottler in Hangzhou. It was established by the Swire Pacific Group in the form of an EJV (with China National Cereals, Oils and Foodstuffs Import and Export Corporation) in 1989. The Swire Pacific Group is the majority equity owner (44.6 percent) of this JV, which is financially

⁶ Due to the sensitive nature of the business dealings between Shenmei and its exclusive distributor, we have simply named the distributor "Jiashan", the geographical name of its location and business registration, to protect its anonymity.

independent from Shenmei, although Coca-Cola has an equity holding of 12.5 percent in the Swire bottling unit. Zhongcui distributes Coca-Cola directly to wholesalers in the designated Hangzhou market.

[INSERT FIGURE 2 ABOUT HERE]

Shanghai is a monopoly market with only one entrant – Jiashan – whereas Hangzhou is a duopoly market with two entrants: the authorized bottler, Zhongcui, and the unauthorized parallel trader, Jiashan.

4.1 Inter-regional Competition in the Form of Parallel Trade

Parallel trade in Coca-Cola exists between the designated Shanghai and Hangzhou markets when the gap in the wholesale price between these two markets is higher than the transaction costs (including the cost of transporting the products from Shanghai to Hangzhou and the risk premium of being punished by Coca-Cola (China)) involved in engaging in parallel trade.

By applying agency theory and transaction-cost economics in the context of parallel trade, the business relationship between Coca-Cola and its bottlers can be regarded as the nexus of contracts (or the inter-firm network, according to Yeung 1994, 1997, 4) between the principal and its agents. Agency problems arise when a bottler (the agent) that engages in parallel trade does not have to bear a major share of the financial consequences of the major residual (profits) claimants (shareholders, owners, or principals that have the responsibility for net cash flows and bear the residual risk), which include Coca-Cola (the principal) and the other bottlers (agents) (Figure 1) (Fama and Jensen 1983a, 304-5, 1983b).⁷ In other words, the decision of an agent to engage in parallel trade generates an external cost to the principal and the other agents. When an effective control mechanism is not available to the principal, the bottler is thus more likely to act against the interests of the residual claimants. To deal with agency problems and to maintain the distribution system in an orderly manner, Coca-Cola creates a number of regional monopolies through a market-division strategy that prevents inter-

⁷ Residual risk is the risk of the difference between stochastic inflows of resources and promised payments to agents (Fama and Jensen 1983a, 302).

regional competition to maximize the profits of each designated bottler within its own designated market.

In this particular case of parallel trading of Coke between the designated markets of Shanghai and Hangzhou, an extension of the “principal-agent” (“PA”) framework that is outlined in Figure 1 is required. Although they are both agents of Coca-Cola (China), the relationship between Shenmei and Jiashan can also be regarded as the nexus of contracts between the principal (Shenmei) and its agent (Jiashan). Thus, this is not a conventional “PA” relationship, but a more complex “*principal-agent-sub-agent*” (“PAS”) relationship between Coca-Cola, Shenmei and Jiashan (Figure 3). In the proposed “PAS” framework, agency problems arise when the opportunistic decision of Jiashan (the sub-agent) to engage in parallel trade bears none of the financial consequences of major residual claimants, which include Coca-Cola (China) (the principal), Shenmei and Zhongcui (agents). In the case of Shenmei, their gain in market share and the subsequent increase in production value that is brought about by allowing Jiashan to engage in parallel trade are partially offset by the fine that is imposed by Coca-Cola (China) for violating the market-division strategy. In the case of Zhongcui, the existence of parallel trade results in a loss in market share and profits, but it gets part of the lost profits back in the form of fines. Locating the parallel trade of Coca-Cola within a transaction-cost paradigm reveals that the enforcement of contractual agreements by the principal to rein in the opportunistic market behavior of its agents and sub-agents involves a high transaction cost, and any reliance on a self-enforcing agreement in the form of market-division and their associated penalty system appears to be ineffective.

[INSERT FIGURE 3 ABOUT HERE]

4.2 Regional Monopoly versus Intra-regional Rivalry with Pepsi-Cola

It is inconceivable that Shenmei does not know about the existence of parallel trade in Coke in Hangzhou, as it has been fined by Coca-Cola (China) for engaging in such activities as the sole supplier to the parallel trader, Jiashan. It can be argued that Shenmei is able to manipulate the Coca-Cola market in both

Shanghai and Hangzhou by adjusting the selling price of Coke to Jiashan. If Shenmei lowers its selling price, then Zhongcui will lose its designated market share in Hangzhou to the parallel trader as long as Jiashan can arbitrage the difference between the prices in Shanghai and those in Hangzhou. According to the estimate of an experienced beverage wholesaler in Hangzhou, the value of the arbitrage when Jiashan can transport Coca-Cola into Hangzhou market and undercut Zhongcui is about US\$0.074 (0.6 *yuan*)/case/100 km (each case has twelve 1.25 liter bottles of Coke or an equivalent quantity) (Field survey April 2003).

The crux of the issue is why Shenmei is lowering its selling price and thus contributing to the existence of the parallel trade, and whether it is lowering the price deliberately or has another agenda. To answer these two vital questions, we have to understand the marketing strategy of Coca-Cola (China).

Coca-Cola (China) aims to dominate the Chinese cola market, and especially to defeat its major competitor: Pepsi-Cola. Pepsi has two key strongholds in China: Chengdu and Shanghai. As its Shanghai market accounts for about 40 percent of all of the Pepsi-Cola that is sold in China, it becomes the natural battleground for Pepsi and Coca-Cola. A management executive from Coca-Cola told us, “it is Pepsi’s pricing policy to undercut Coca-Cola by always charging a lower price than Coca-Cola in China.... Therefore, the Shanghai bottler [Shenmei] has no choice but to simply follow the orders of the Division [Coca-Cola (China)] to try to match the price of Pepsi by charging the lowest possible price for Coke, even though it is earning next to nothing in profit. In fact, the price of Shanghai’s Coke is already the lowest in China. *It is the aim of Coca-Cola (China) to conquer as much market share as possible from Pepsi in Shanghai*” (italics added, Field survey December 2004). This helps explain why the parallel trade takes place between Shanghai and Hangzhou rather than between other regional monopolies in China. This market-maximization policy is the strategic response of Coca-Cola (China) to its intra-regional rivalry with Pepsi-Cola in Shanghai. A similar strategy was pursued by Toyota and Nissan to compete with General Motors, Ford and Chrysler in the US automobile market in the 1970s (Johnson 1982, 1995).

In 2003, Shenmei set the selling price of Coke to Jiashan at US\$5.99 (48.5 *yuan*)/case (each case has 12 bottles), which is about 6 percent lower than Zhongcui's selling price to the wholesalers in Hangzhou (Table 1). With the prevailing wholesale price of Coke standing in the region of US\$6.3-6.43 (51-52 *yuan*)/case, independently operating wholesalers who sell the authorized Hangzhou Coca-Cola in Hangzhou are in an embarrassing situation, which ranges from suffering a loss of US\$0.062 (0.5 *yuan*)/case to making a minimal profit of 0.5 *yuan*/case. Even with a lower wholesale price of parallel-traded Coke to retailers in Hangzhou at US\$6.18 (50 *yuan*)/case, the wholesalers are still able to earn a higher profit margin up to US\$0.18 (1.5 *yuan*)/case if no transportation costs need to be considered by selling parallel-traded Coke from Shanghai in Hangzhou.⁸ In fact, the real price of Shanghai Coke in certain package formats is even more competitive. Apart from the lower nominal selling price, the volume in a 500ml can of Shanghai Coke is 52 percent greater than that of 330ml can of Hangzhou Coke. Furthermore, Jiashan's selling price for parallel-traded Coke to major wholesalers in Hangzhou already includes the cost of transportation, which is why unauthorized Shanghai Coke has been able to capture up to 90 percent of the beverage wholesale market in the suburban and rural areas of Hangzhou and up to 20 percent of the Coke market in Hangzhou (Field surveys July 2002, April 2003, June and December 2004).

[INSERT TABLE 1 ABOUT HERE]

As far as Shenmei is concerned, the consequence of adopting the market-maximization strategy by charging the lowest possible price is a tiny net profit margin of x (a small value single digit) percent. By comparison, the average net profit margin of Coca-Cola's bottlers in China is about three times higher, whereas the net profit margin of Zhongcui is up to six times higher (at 2-digit), which is the highest amongst Coca-Cola's bottlers in China. Small wonder that a bottler's management executive complained that "we are operating like a transportation company by simply earning the fees to transport the Coca-Cola

⁸ Due to the risk premium involved in having stocks confiscated, or having a fine imposed by Coca-Cola (China), the parallel-traded Coke in Hangzhou commands a lower wholesale price (Field survey April 2003).

from our plant to wholesalers ... we are all '*coolies*'!" (italics in original, Field survey December 2004). The market behavior of Shenmei is a typical example of sales-volume maximization subject to a minimal-profits constraint (Baumol 1967). Other similar predatory pricing policies to enlarge a firm's market share can be found in the Chinese beverage industry. Mr. Kon, for example, prices its products at the lowest level in Tianjin, which is the major market of its major competitor, Uni-President (Field survey December 2004).

5 Geographical and Theoretical Implications of the Parallel Trade

There are several profound implications of the parallel trade in Coca-Cola for the principal, its agents, and the sub-agent.

5.1 Spatial Equilibrium, Disequilibrium and Quasi-equilibrium of the Coca-Cola Distribution System

The market-division strategy and the associated penalty system that are implemented by Coca-Cola (China) are cost-effective ways to enforce contractual agreements and keep in check agency problems with its bottlers. This is to say that there is a spatial equilibrium in the market boundary between different regional monopolies. This is especially the case for the EJV bottlers in which Coca-Cola is a partner.

Under the market-maximization strategy that is executed by Coca-Cola (China) in Shanghai, however, the market-division policy of the Coca-Cola system is essentially void due to the existence of agency problems, the opportunism of the agents and sub-agent, and the bounded rationality of the principal, where the focus is on Shenmei's market share rather than on profit maximization. Subsequently, the previous spatial equilibrium in the market boundary has been transformed into a spatial disequilibrium with inter-regional competition between regional monopolies in Shanghai and Hangzhou.

The opportunism of Jiashan is motivated by its relatively low transaction costs (and hence, its higher profit margin) and its high liquidity cash flow as a result of engaging in parallel trade in Coke. Jiashan is physically located and registered in Hangzhou, according to the official administrative boundaries of the

Chinese government, but according to the designated market boundary of Coca-Cola, it is located in the Shanghai market (Figure 4). As the cost of delivering Coke from Shenmei to Jiashan is already incorporated in its selling price, the cost of transporting parallel-traded Coke from Shanghai to Hangzhou is relatively small to Jiashan. Obviously, the locational advantage of Jiashan lowers the transaction costs, and thus facilitates the existence of a parallel trade in Coke from Shanghai to Hangzhou market (Field survey July 2002).

[INSERT FIGURE 4 ABOUT HERE]

Apart from earning its profit margins, Jiashan profits from the substantial cash flow generated by the parallel trade. The wholesalers in Hangzhou have to settle their accounts with Jiashan on cash on delivery (C.O.D.) terms, whereas Jiashan settles its accounts with Shenmei on a three-month credit basis. The profits that are generated from the cash flow are not inconsiderable. As an independent investigator has uncovered at least 125,000 cases of parallel-traded Coca-Cola every month, we can estimate that Jiashan generates at least US\$749,000 (6.06 million *yuan*) in cash flow per month (Field surveys July and November 2002). Obviously, this high liquidity cash flow facilitates the business operations of Jiashan, as the cash can be used for other business activities, which in turn further strengthens the incentive for it to break into the regional monopolized market of Zhongcui.

Coca-Cola (China) is unable to control such opportunistic market behavior of Jiashan in a direct and cost-effective way, as illustrated by the “PAS” framework (Figure 3). Rather than imposing administrative sanctions in the form of fines, as it does with the bottlers over which it has certain administrative control, Coca-Cola can only seek to influence the market behavior of Jiashan indirectly by putting pressure upon Shenmei. This has proved to be ineffective and inefficient in comparison with the vertically integrated tier-one suppliers for the automobile industry described by ÓhUallacháin and Wasserman (1999, 39). It is clear that Coca-Cola (China) has relatively limited control over the distribution of its products by opportunistic sub-agents.

Theoretically, Coca-Cola (China) may be able to file a lawsuit against Jiashan for disrupting its market-division policy on the grounds of the national exhaustion of intellectual property rights. In reality, the high transaction costs involved in such a lawsuit would prevent Coca-Cola (China) from taking legal action against Jiashan or other participants, such as chain supermarkets, that are involved in the parallel trade. Legal redress is costly and often inefficient in terms of the ongoing principal-agents relationship (Telser 1981). It may even be legally impossible for TNCs in foreign markets to enforce private contractual agreements that limit sales outside their designated monopolized markets (Chard and Mellor 1989). There are also no legal precedents for parallel trade cases in China. Should the court rule in favor of Coca-Cola (China), it would then leave the effectiveness of its implementation in doubt, as Jiashan is operating independently of the Coca-Cola system. Furthermore, Coca-Cola (China) would be extremely reluctant to disclose to the general public the operation of its market-division and market-maximization strategies in such a court case, as these are *de facto* regional monopoly and predatory pricing policies, respectively.

As for Shenmei, it has to overcome its own agency problems to monitor the opportunism of Jiashan (Figure 3). Under the bounded rationality of market-maximization, Shenmei has poor incentives for preventing Jiashan from deviating from the self-enforcing contractual agreement with its principal and entering the unauthorized market in Hangzhou, say, by restricting its supply of Coke to Jiashan. The transaction costs that would be incurred by Shenmei (the agent) for monitoring Jiashan's (the sub-agent) opportunistic involvement in this parallel trade would certainly be higher than the potential benefits of action: the most effective way to prevent Jiashan from being involved in the parallel trade in Coke would be for Shenmei to appoint inspectors that are based at the distributor and other major wholesalers to record and inspect the delivery of goods. Moreover, it would be extremely costly for Shenmei to replace its existing distributor, as Jiashan distributes about 80 percent of Shenmei's output (Field survey December 2004).

To maintain the delicate quasi-equilibrium between the regional monopolies of Shenmei and Zhongcui, Coca-Cola (China) has a penalty system in

place to punish bottlers that violate its market-division strategy. Coca-Cola (China), however, cannot and would not fully implement this penalty system due to its insistence on its market-maximization strategy of competing with Pepsi-Cola in Shanghai. Moreover, as the majority equity owner of Shenmei, Coca-Cola (China) has its own benefit at stake. In these circumstances, Coca-Cola (China) compromises its policy on the control of parallel trading (inter-regional competition) through fining the offending bottler, as it has been unable to effectively curb the market behavior of its agent, Shenmei, and its sub-agent, Jiashan. Officially, Coca-Cola (China) imposes a fine on Shenmei of US\$1.85 (15 *yuan*) per case of parallel-traded Coke once an allegation has been verified by an independent consultancy. As a compromise between the principal and its agents, however, the actual amount of the fine is negotiated by Coca-Cola (China), Shenmei, and Zhongcui. The result is that Coca-Cola (China) has fined Shenmei over US\$2.47 million (20 million *yuan*) per annum for engaging in parallel trade (Field surveys June and November 2002, April 2003, December 2004).

Can Zhongcui fight back against the parallel trade? Given the inter-regional competition from Shenmei on lower pricing, the authorized Hangzhou bottler has few cost-effective options to hold in check the entrance of parallel-traded Coke from Shanghai, other than protesting against the practice to Coca-Cola (China). First, the transaction costs of eliminating the parallel trade are too high, as Jiashan is located in Hangzhou and thus has the locational advantage of low transportation costs when engaging in parallel trade. Second, Zhongcui's profit margin would be squeezed should the company engage in a price war with the parallel trader, Jiashan. Third, the reimbursement of the fines (about US\$206,400 or 1.67 million *yuan*/month) that are imposed by Coca-Cola (China) upon Shenmei for its violation of the market-division strategy helps mitigate Zhongcui's loss of profits, but it does not prevent the erosion of its monopolized market share in Hangzhou. This is illustrated by the animated statement of a management executive from Coca-Cola: "Zhongcui cannot complain vigorously to the Coca-Cola (China) as it is literally *taking money by doing nothing* ... the reimbursement of fines alone is over 20 million *yuan*/year, and accounts for 15-20 percent of its total annual revenue. What else do they want? ... As long as their profitability is able to grow annually, the Hangzhou bottler will not complain too

much [to Coca-Cola (China)].” (italics in original, Field survey December 2004). Given the fact that the present net profit margin is already the highest among Coca-Cola’s bottlers, Zhongcui actually has a limited incentive to match the price to fend off parallel-traded Coke from Shanghai (Field surveys July and November 2002, December 2004). From this perspective, it appears that Zhongcui is rather passive in handling the issue of parallel-traded Shanghai Coke on the Hangzhou market, in spite of the fact that it is the authorized bottler and has the regional monopoly in the designated market of Hangzhou.

5.2 Policy and Theoretical Implications

As long as parallel-traded Coke is not disrupting Coca-Cola’s distribution system excessively and the spatial quasi-equilibrium between the regional monopolies can be maintained, Coca-Cola (China) may not be very keen to eliminate the existence of parallel trade and thus does not have to control the opportunistic market behavior of Jiashan. This is because the key priority of Coca-Cola (China) is to dominate the Chinese soft drink market rather than to regulate the boundary disputes between regional monopolies. First, the existence of a parallel trade in Coke will not have a negative impact on the reputation and quality of Coca-Cola, because the trade is still in genuine Coke, not a counterfeit product. Second, the existence of the parallel trade promotes inter-regional competition in Coke between the regional monopolies in Shanghai and Hangzhou, which will increase rather than decrease the total market share of Coca-Cola in China due to the relatively lower retail prices of the parallel-traded Coke. Third, Coca-Cola (China) could benefit from the higher demand for concentrate, from which the company derives the majority of its revenues from the wholly owned Coca-Cola Concentrate Plant Co. in Shanghai, should the total demand for Coke in China increase due to the existence of the parallel trade. It is thus unsurprising that a management executive from Coca-Cola says: “Coca-Cola cares, most of all, about market share and the sale of concentrate, from which it derives its revenues.... Bottlers have to execute the marketing [pricing] strategy implemented by the Division [Coca-Cola (China)], even if they are not earning a profit” (Field survey December 2004). If this explanation holds any water elsewhere, then this might also explain why parallel imports of Coke exist in other parts of the world.

Our findings are incompatible with Scott's (1992, 225) argument that firms have to internalize their activities to counter the existence of imperfect and asymmetrical information. It is not the strategy of Coca-Cola to internalize its supply chains backwards and its distribution channels forwards, as the internalization of the distribution channels involves a tremendous amount of investment in a vast country like China (Mok, Dai and Yeung 2002). We have also made out a case for parallel trade, which is different from those analyses, such as Cavusgil and Sikora (1987), which focus on the disruptive effects of parallel trade, saying that this should not thus be tolerated. Instead of unraveling the distribution system, our analysis shows that the existence of inter-regional competition in the form of parallel trade is inherent in regional monopolies in the particular context of intra-regional competition between different TNCs. This argument is largely consistent with the model developed by Dutta, Bergen and John (1994, 91), which concludes that the optimal enforcement policy for manufacturers is to tolerate some level of parallel imports as this reduces the transaction costs on self-enforcing contracts with distributors. Given the fact that the transaction costs of effectively policing parallel trade and effectively maintaining the market-division strategy of Coca-Cola are higher than the economic benefits that can be gained by Coca-Cola in the entire Chinese market, it seems that Coca-Cola (China) is content to tolerate the existence of parallel trade in the Shanghai and Hangzhou markets. Theoretically, this can be explained by the Coase Theorem (Coase 1960): the existence of parallel trade has no effect on the ultimate penetration into China's carbonated soft-drink market (the ultimate allocation of resources in a society), but only affects the division of market share and profitability between Shanghai and Hangzhou bottlers.

As a strategic response to the intra-regional rivalry with Pepsi-Cola in Shanghai, Coca-Cola (China)'s market-maximization strategy has an intrinsic spatial disequilibrium with its market-division strategy. Under its market-division strategy, Coca-Cola creates a *de facto* regional monopoly in each designated market, while under its market-maximization strategy, Coca-Cola creates an artificial price difference between the regional monopolies in Shanghai and Hangzhou. This not only explains the emergence of the spatial disequilibrium in the form of parallel trade between Shanghai and Hangzhou, it also accounts for

the creation of unintentional inter-regional competition between these two regional monopolies, which contributes to a possible increase in the market share of Coca-Cola in China. This strong argument can be partially verified by the experience of two bottlers in Liaoning province in China. Liaoning is the only province in China to have more than one Coca-Cola bottler, one in Shenyang and the other in Dalian (both of which are controlled by the Kerry Beverages Group, but each of which has its own local EJV partners and general manager). The spatial disequilibrium in forms of parallel trade in Coca-Cola here is not as significant as it is in the Hangzhou market, but the intra-regional competition between these two regional monopolies actually leads to a significant increase in market share, and Liaoning has the highest per capita consumption of Coca-Cola in China at 24-25 bottles/person (Field survey December 2004). An interview with an experienced manager of an authorized distributor of popular Japanese electronic products in Hong Kong also lends support to the above proposition: parallel trade (imports) promotes inter-regional competition between regional monopolies (authorized dealers) as they realize that their market shares are not guaranteed (Field survey December 2004).

As the parallel-traded Coke from Shanghai already accounts for up to 20 percent of the Coke market in Hangzhou, this sends a strong signal to the Hangzhou bottler: its regional monopolized market cannot be taken for granted and it is up to the sales team to maintain its market share and profitability. Feeling the heat of parallel-traded Coke, Zhongcui implemented a series of marketing campaigns to try to defend its market share in Hangzhou. In 2002, Zhongcui twice implemented a “bundling” sales strategy for its Coca-Cola in Hangzhou, whereby each wholesaler would get three bottles of mineral water at no extra charge for every case of Coke that was ordered. Nonetheless, this marketing strategy was ineffective in eliminating the parallel trade in Hangzhou, as the nominal price of Hangzhou Coke, at US\$6.37 (51.5 *yuan*)/case, was still higher than the parallel-traded Coke from Shanghai, at US\$5.99 (48.5 *yuan*)/case, without even taking into consideration the differences in volume (Field surveys July 2002, April 2003).

6 Conclusions

This investigation of the parallel trade in the Chinese beverage industry contributes to the literature of economic geography in two major ways: it is the first study of the existence of parallel trade and its geographical implications on the product distribution system of a TNC, and it introduces a “PAS” framework to analyze the complex relationship between regional monopoly and inter-regional and intra-regional competition through a representative case-study – the parallel trade of Coca-Cola in two regional monopolized markets in Shanghai and Hangzhou in China.

First, our article analyzes the issue on parallel trade, which is an important phenomenon that reveals the inefficiency and limitations of TNC distribution networks in foreign markets. Given the opportunities for arbitrage, market players have the incentive and means to break into the market boundaries of the regional monopolies that have been devised by Coca-Cola’s market-division strategy. The exclusive distributor of Coca-Cola in the Shanghai market, Jiashan Co., can enter the non-designated Hangzhou Coke market only through parallel trade when the gap between the wholesale prices in the Shanghai and Hangzhou markets is higher than the transaction costs of engaging in parallel trade. The fortuitous location of Jiashan in Hangzhou gives it the locational advantage of lower transportation costs to conduct its parallel trade in Coke in Hangzhou. Moreover, Coca-Cola’s existing policy of attempting to regulate the parallel trade and to maintain the regional monopoly’s market boundary by imposing a fine upon the responsible bottler proves to be ineffective because the offending bottler, Shenmei Food (Shanghai) Ltd, is under the direct management of Coca-Cola (China). In such circumstances, Coca-Cola (China) cannot act as an impartial referee in case of arbitrage that involves parallel trade. As a strategic response to the intra-regional rivalry with Pepsi-Cola in Shanghai, the Shanghai bottler has to obey the market-maximization strategy of Coca-Cola (China) and charge the lowest possible price for Coke so as to compete for its market share with Pepsi in Shanghai. This contributes to the spatial quasi-equilibrium with other regional monopolies artificially created by Coca-Cola and subsequently results in the occurrence of a parallel trade in Coca-Cola in the non-designated market in Hangzhou. This

circumstance is consistent with the manufacturers-dealers' quasi-equilibrium hypothesized by Dutta, Bergen and John (1994, 91). However, this is different from the conventional mechanism whereby parallel imports facilitate market penetration by the manufacturers by maintaining the price competitiveness of the manufacturer's products or by serving to clear excessive stock (Maskulka and Gulas 1987; Cavusgil and Sikora 1988). The relatively limited control that Coca-Cola (China) has over the distribution of its products in two presumably regional monopolized markets in China is a *prima facie* case in which one of the largest and most powerful TNCs in the world may have tightened control over production networks within and between different countries, it actually has limited control over the distribution and redistribution of its products in competitive foreign markets. In addition to showing the importance of the corporate strategy of a dominant TNC, this article highlights the limits of corporate authority over the wider value chain of product distribution, thus responding to O'Neill's (2003) criticism of the lack of corporate research in mainstream economic geography.

Second, this article proposes a "principal-agent-sub-agent" ("PAS") framework for analyzing the complex relationship between regional monopoly and inter-regional and intra-regional competition through the case of parallel trade in Coca-Cola. The conventional "principal-agent" ("PA") analytical framework (Jensen and Meckling 1976) explains the basic contractual relationship between Coca-Cola (China) (the principal) and its bottlers (agents). However, the extension of this framework – the proposed "PAS" paradigm – not only serves to explain the contractual nexus of Coca-Cola (China) (the principal), its bottlers (agents) and their distributors (sub-agents); it also provides an analytical framework for the existence of a spatial quasi-equilibrium in forms of parallel trade in Coke between two regional monopolized markets in Shanghai and Hangzhou. It furthermore accommodates the effects of a market-maximization strategy implemented by the principal as a strategic response to its intra-regional rivalry with Pepsi-Cola in Shanghai (Figures 1 and 3). Moreover, the "PAS" is able to explain that, under the circumstances of bounded rationality (Simon 1957, 1982) and the high transaction costs needed to enforce the contractual agreements with agents and sub-agents (Williamson 1975, 1979, 1985; North 1990), TNCs (the principals) may actually have relatively limited control over the distribution and redistribution of its

products by the opportunistic agents and sub-agents. This article demonstrates that the simplified stylistic representations of market area analysis produced under the geography of enterprise tradition (see Hayter and Watts 1983) do not take into account phenomenon such as parallel trade and the complexities of constructing and maintaining market areas by TNCs.

Another significant contribution of this article is to provide a *prima facie* case for the proposition that the *efficiency* of a regional monopoly can be *improved* by the introduction of inter-regional competition through parallel trade (or parallel imports, as a result of intra-regional competition), and that the theoretically deadweight loss of regional monopolies (*vis-à-vis* a perfectly competitive market) can be minimized. The policy and theoretical implications of this finding are profound, should they be verified in other regions and industrial sectors, such as the parallel imports of electronic appliances from Japan into other Asian countries and the parallel imports of automobiles between different European countries. From the perspective of efficiency, should we encourage a view that there should be a global/national regime of parallel trade (imports)? Further research could usefully be conducted in these areas.

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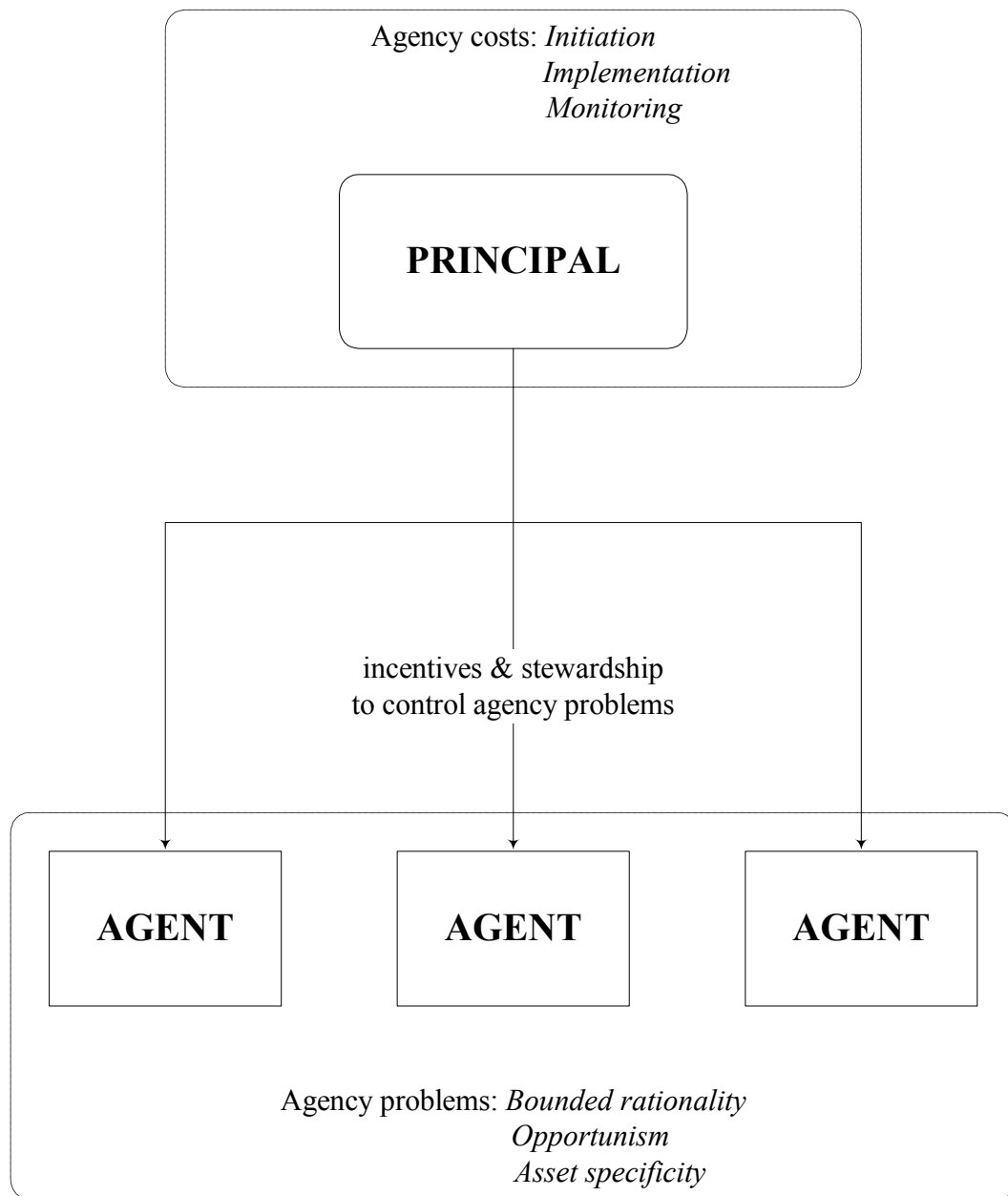
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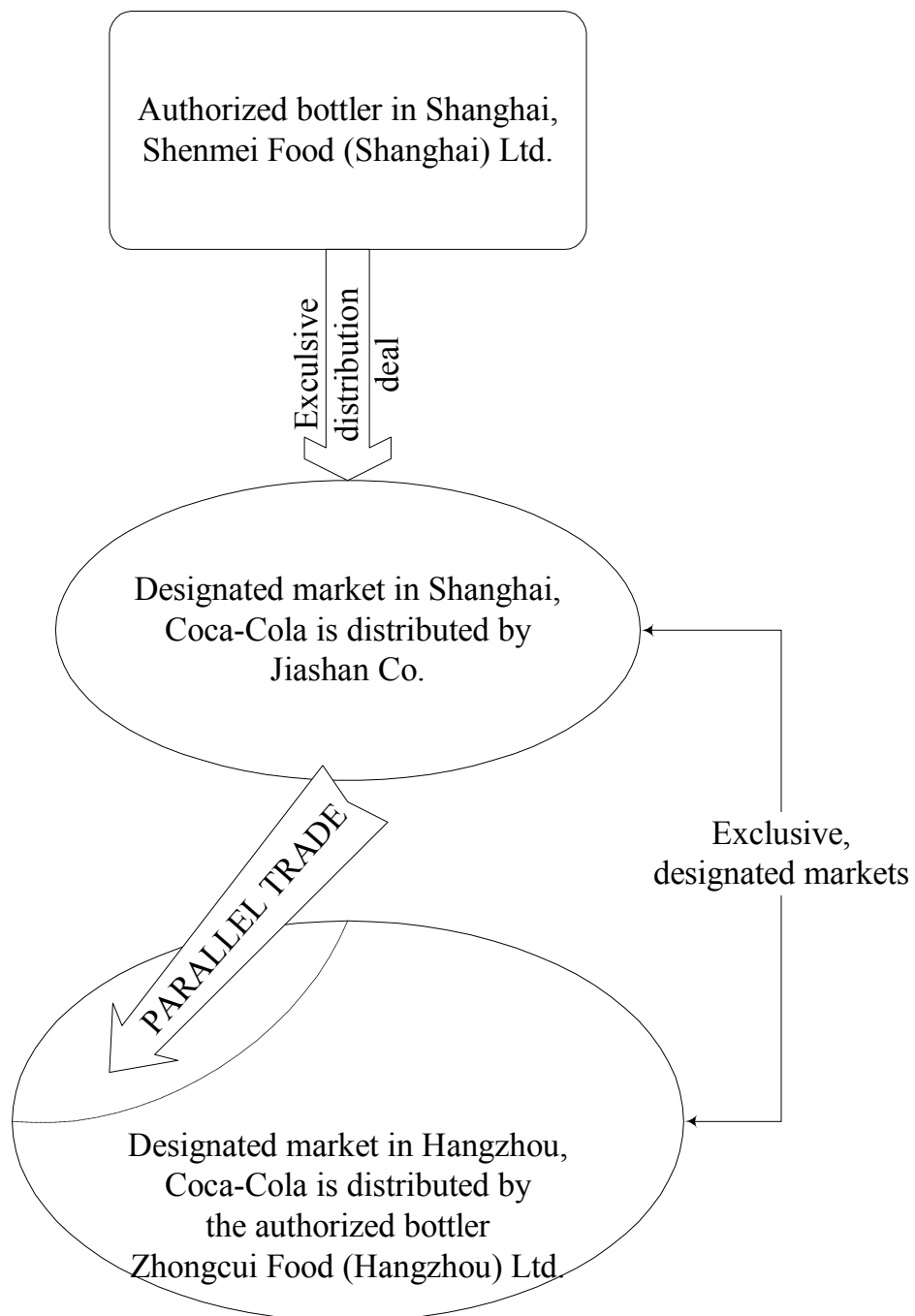
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Figure 1: The “Principal-Agent” (PA) Analytical Framework



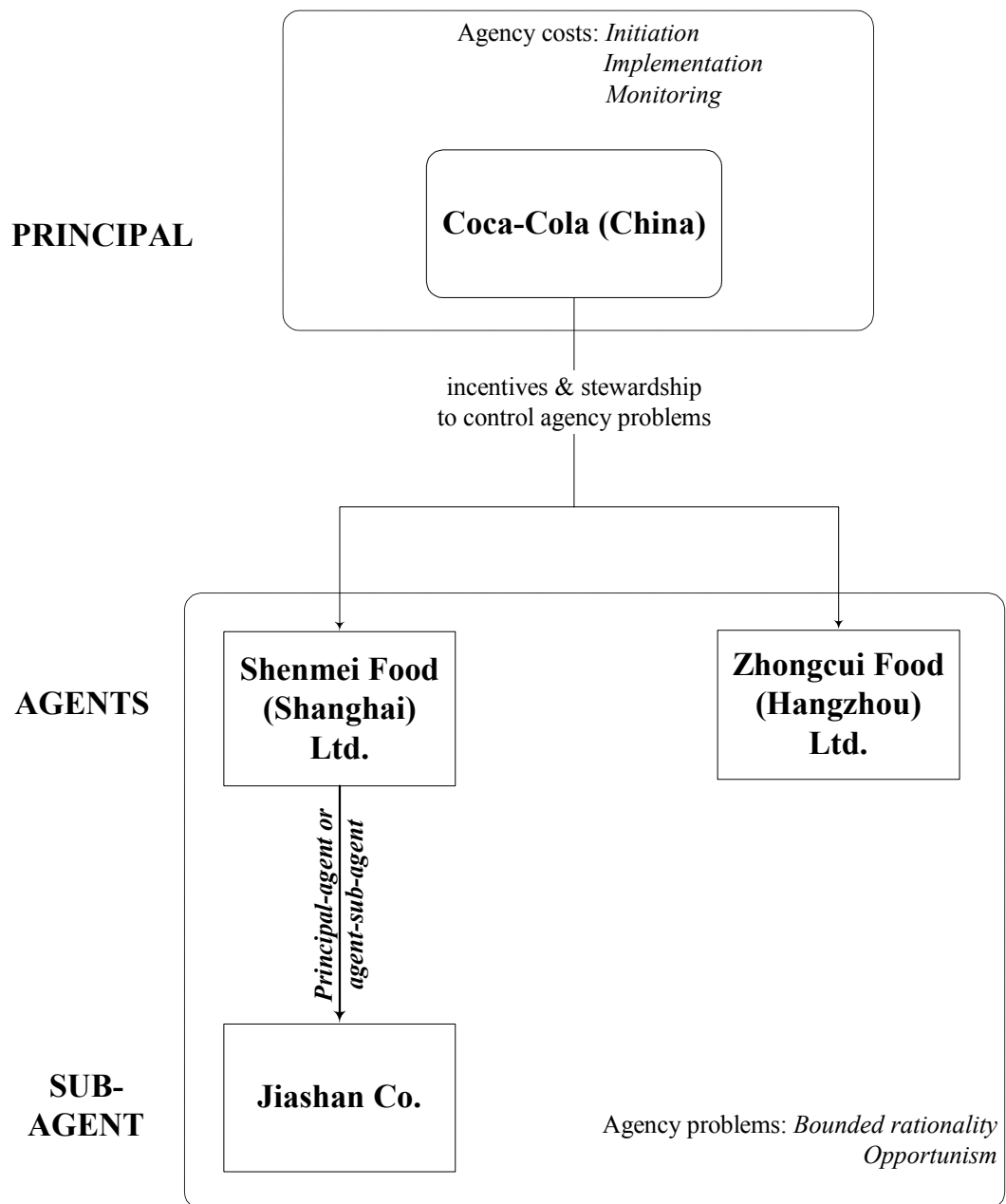
Source: Authors

Figure 2: Market Division and Parallel Trade in Coca-Cola in Shanghai and Hangzhou, China



Source: Authors

Figure 3: The “Principal-Agent-Sub-agent” (PAS) Analytical Framework of Parallel Trade in Coca-Cola in Shanghai and Hangzhou, China



Source: Authors

Figure 4: The Location of Jiashan Company

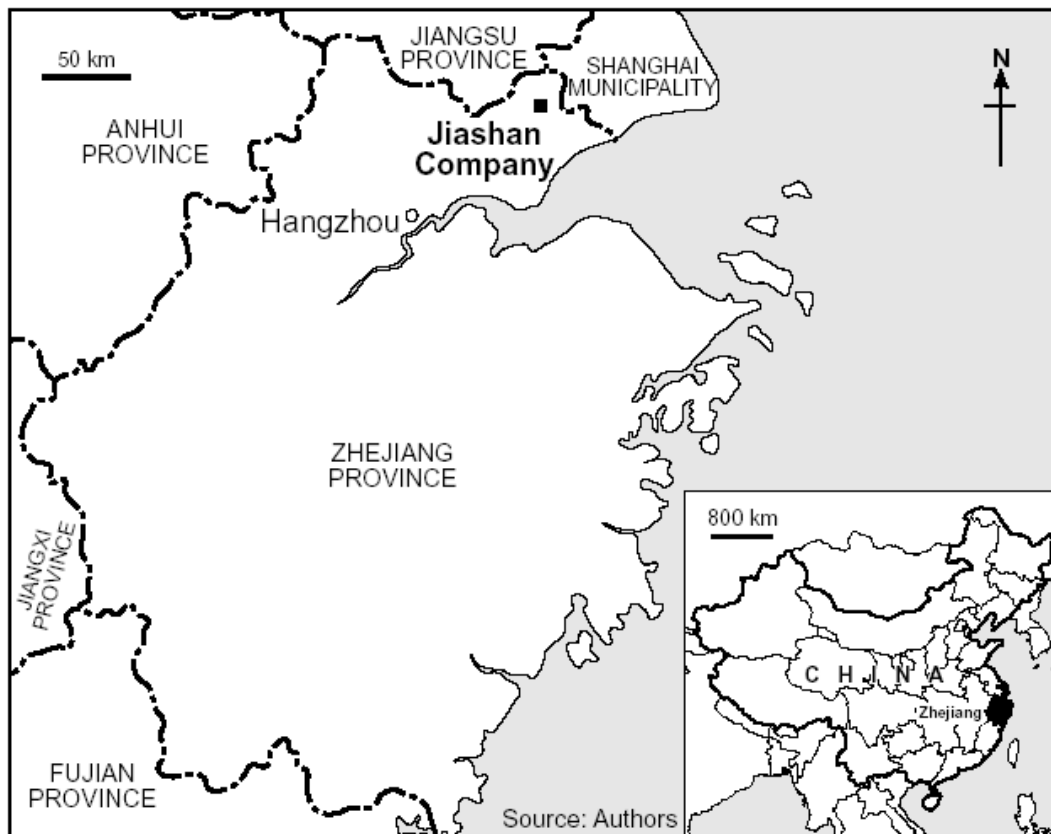


Table 1: Prices of Coca-Cola Supplied by Shenmei Food (Shanghai) Ltd and Zhongcui Food (Hangzhou) Ltd, 2003

	Coke supplied by Shenmei (parallel- traded Coke)	Coke supplied by Zhongcui in Hangzhou
	Per case of 12 bottles (1.25 litres each), in <i>yuan</i>	
Bottlers' selling price to wholesalers	48.5	51.5
Wholesale price (to retailers) in Hangzhou	50	51-52
Profit margin of wholesalers in Hangzhou	1.5	-0.5 to 0.5

Source: Interviews to various wholesalers in Shanghai and Hangzhou markets (Field survey April 2003).

Appendix: Profile of the Field Surveys

The first round of the field survey was conducted between June and November 2002, and incorporated interviews with experienced executives of Coca-Cola (China) Ltd (which is also the major shareholder of the Shanghai bottler), and the owners of eight major wholesalers and three retailers in Shanghai and Hangzhou. In April 2003 and June 2004, seven major beverage wholesalers (four of which were revisited) and two retailers in Hangzhou were interviewed to collect the latest pricing and distribution information on the parallel trade in Coca-Cola. To clarify certain specific points about Coca-Cola's market-division and market-maximization strategies, in-depth interviews with experienced executives of Coca-Cola was conducted in China in December 2004. They have extensive work experience in the cola industry, and are extremely familiar with the operation of Coca-Cola's system, and in particular the market-division and market-maximization strategies, in China.

To assess the impact of parallel trade in the Chinese beverage industry, and to collect information from other branches of the beverage industry as a cross-reference, an interview was also conducted with a former executive of a leading local beer manufacturer in China. In addition, an interview with an experienced manager of an authorized dealer of popular Japanese electronic appliances in Hong Kong also provided us with material regarding the effects of parallel trade on the behavior of market monopolies. These two interviews were conducted in December 2004.

[INSERT TABLE A1 ABOUT HERE]

Table A1: The basic background information to the field study

Date	Interviewees	Interviews conducted by
June 2002	Management executives from Coca-Cola	Second author
July 2002	Eight major wholesalers and three retailers in the Shanghai and Hangzhou markets*	Second author, accompanied by a research assistant from Hangzhou University of Commerce
November 2002	Management executives from Coca-Cola	Second author
April 2003	Five major wholesalers in the Hangzhou market*	First author, accompanied by a research assistant from Hangzhou University of Commerce
June 2004	Six major wholesalers and two retailers in the Hangzhou market*	A research assistant from Hangzhou University of Commerce
December 2004	Management executives from Coca-Cola	Both authors

Note:

* There are many beverage wholesalers in Shanghai and Hangzhou. The research assistant from the Hangzhou University of Commerce guided the authors to visit the owners of some randomly selected wholesalers.