

Competitiveness of Indian Dry Ports and the Impacts of Government Policies: The Dualistic Approach of Policy-makers

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Abstract

Rapid economic growth in India demanded high quality logistical services, implying that dry ports, often characterized by inefficiency, would play pivotal roles. While the Indian government attempted to address this problem by introducing foreign private participation, at the same time, it had to uphold its social-democratic tradition where local operators and their interests should not be edged out by external competition. It is the endeavour of this paper to investigate how the Indian government had attempted to resolve these contradictory issues and provided insight on how political influences can shape an industry's competitive structure, especially in developing countries.

Keywords: Dry port; Competitiveness; Government; Dualistic policies; India

1. Introduction

Contemporary global economy is characterized by globalization which can be interpreted as the increasing universality and of consumption (Levitt, 1983; Dickens, 1998), production in separate locations (Brooks, 2000) and services, of which simultaneous technological progress has allowed services to be provided at a distant location, e.g., invoices, salary administration, marketing and promotion development, call centres, etc. Such development had also opened the global consumer markets to Indian industries which had direct implications on the Indian transport sector. In 2007, the Indian seaborne container trade has increased by nearly 14% to five million TEUs (Ministry of Shipping, 2008), while Indian ports are forecasted to handle 18 million TEUs by 2014 (Dayal, 2006). On the other hand, various duty free zones and special economic zones have been established in promoting exports with single window clearance system and no limits on sales and income tax exemption on profits made which could also be repatriated if the equity holder is a foreigner. Geographically, the northern states, notably Delhi, Punjab and Uttar Pradesh, were the home of which major agricultural and the manufacturing activities took place, e.g., textile, automotive components, etc., while international trade, including exports, was largely conducted through the gateway ports along the southern coast (Lall and Chakravorty, 2002). In 2007, for example, the two coastal ports of Mumbai, Jawaharlal Nehru Port Trust (JNPT) and Kandla (Mundra), had handled almost 80% of the country's containerized trade, of which the cargoes were almost entirely originated from these northern states (Indian Ports Association, 2008).

However, globalization would not be possible without the support of an efficient supply chain, with unimpeded flow of cargoes, of which when translated in colloquial terms implying integrated intermodal transportation network, with the need for high quality management of cargo flows with low inventory costs, more reliable delivery time and distribution. To ensure that Indian products can sustain their competitiveness in the global market, however, the shipment process of cargoes must be smooth and, perhaps more importantly, economical, which exerted substantial pressures to India's transport and supply chain development (Sahay and Mohan, 2003). Such requirement had become even more emphatic with the advent of containerization, and thus a well-developed transportation system would be pivotal in attracting foreign investments (Sachs *et al.*, 2000). For example, according to the World Bank's study interviewing 800 worldwide freight forwarders and logistics professionals, it was found

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that countries with the most predictable, efficient transport systems and trade procedures would most likely be able to take advantage of technological advances, economic liberalization and access to the international markets, while predictability, reliability and quality of services are even more important than the monetary cost of transportation (World Bank, 2005). Such results were supported by a later study conducted by the World Economic Forum where, rather than distance, the core factor in determining the quality of a supply chain should be connectivity, i.e., the ease with which trade can be transported (World Economic Forum, 2008). The same study also noted that, while distances account for 20% of variation in freight rates, competition and economies of scale have much stronger impact on transport costs, especially the transshipment costs incurred due to lack of direct connectivity.

Thus, it is clear that high delivery costs caused by fragmented supply chain, poor logistic service levels and connectivity would prevent developing countries from realizing their true potential, thus trapping them into sustained poverty. Under such situation, dry ports² is likely to play pivotal role in complementing the changing role of ocean carriers and other stakeholders within the intermodal supply chain (Heaver, 2002; Sánchez *et al.*, 2003; Notteboom and Rodrigue, 2005). Generally speaking, a dry port can be understood as an inland setting with cargo-handling facilities to allow several functions to carry out, for example, cargo consolidation and distribution, temporary storage of containers, custom clearance, connection between different transport modes, allowing agglomeration of institutions (both private and public) which facilitates the interactions between different stakeholders along the supply chain, etc. As inland logistics hubs, dry port plays significant roles in optimizing all activities to ensure the delivery of cargoes from one end to another in an efficient manner (Juhel, 1999). Usually located at strategic places near gateway seaports, industrial areas and/or along major transportation axes, a dry port attempts to support various needs along the supply chain, namely: (i) aggregation and unitization of cargoes; (ii) in-transit storage; (iii) custom clearance; (iv) issuance of bill of lading in advance; (v) relieving congestion in gateway seaports; (vi) assistance in inventory management; and (vii) deference of duty payment for imports stored in bonded warehouse (CONCOR, 2008). In many ways, a dry port conducts many functions similar to a modern seaport, especially its role as the distributional nodal points along intermodal supply chains (Meersman *et al.*, 2005). In India, many dry ports were also established within the hinterland regions with the perception that they would subsequently become catalysts of economic growth for their surrounding regions.

Until recently, however, dry ports in India, of which most of them were operated by state-owned corporations, with Container Corporation of India Ltd. (CONCOR) being the flagship operator, were characterized by mediocre performance, which could negatively affect the competitiveness of Indian manufactured products in the global market. While the Indian national government (hereafter called the 'Indian government') was fast to address this problem through the introduction of foreign participation within the sector, at the same time, the sector had fallen into the dilemma that the competitiveness of existing local state-owned operators would be in jeopardy, of which the consequence was not something that the government would be ready to bear. However, while previous works on seaports existed, e.g., Heaver (2002), Sánchez *et al.* (2003), Notteboom and Rodrigue (2005), etc., studies on dry ports remained very scarce, despite the fact that dry port is, in many ways, seaport's inland extension, where shippers can leave and/or collect cargoes as if directly at seaports (Woxenius *et al.*, 2004). Thus, it is the endeavour of this paper to fill in this gap by addressing how the Indian government attempted to play a dualistic game in balancing such contradictory interests.

This paper is structured as follows. Section 2 will introduce the theoretical background, while Section 3 will illustrate the research methodology. An introduction to Indian dry port industry will be given in Section 4, including the dilemmas and the rationale for dualism. The focus will turn to the Indian government's policies on dry port development in Section 5, with special emphasis on how the government's dualistic approach would impact on the competitive platform, finally followed by

² In India, dry ports are usually known as Inland Container Depot (ICD) or Central Freight Station (CFS), which are common user customs bonded facility with public authority status, equipped with warehousing space, adequate handling equipments and IT infrastructure. ICD and CFS offer services for handling and temporary storage of Import and Export laden, as well as empty containers. Cargoes carried under custom control and other agencies competent to clear goods for home use, warehousing, temporary admission, re-export, temporary storage for onwards transit and outright export. The transshipment of cargo can also take place from such stations.

discussions and conclusions in Section 6. It is anticipated that this paper can shed light not only on the development of dry ports in India, but also on how the forces of globalization had its impacts on economic development, especially in newly developing countries.

2. Theoretical Background

Given the study nature which investigated the competitive structure of the Indian dry port industry, the authors had employed Porter's Competitive Diamond (hereafter called 'CD') as the theoretical framework for this study. CD was introduced by Porter in 1990, with the core objective in explaining how a firm could enhance its competitiveness through creating competitive advantages, as well as capturing the key elements of the major attributes which could influence a firm's position within the industry (Porter, 1990; Bowman and Faulker, 1997). The structure of CD can be found in Figure 1.

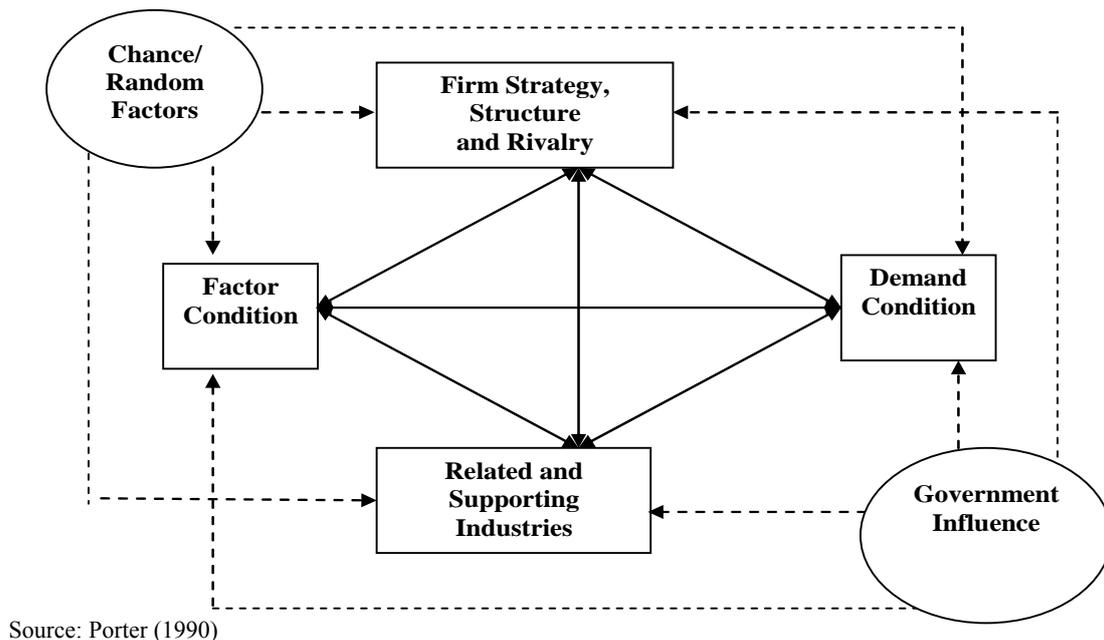


Figure 1: Porter's Competitive Diamond

According to CD, firms, rather than countries, were the principal players in deciding the competitive structure of a particular industry, and the role of a country would be restricted to the provision of a home base for firms, which in turn affected their culture, characteristics and behaviours. Rather than static focus on cost minimization in relatively closed economies in previous competitiveness models, like the Five Forces Model (Porter, 1985), CD argued that competition in the contemporary world should be dynamic, based on innovation and strategic differences due to the increasing number of countries open to the international economy, and thus diminishing the factor intensities of competitions (Porter, 2000). Under such global economy, a firm's competitive position was dependent on two major attributes: (i) operational effectiveness (sought for the best operation practice); and (ii) strategies (sought to answer 'how to compete') (Porter, 2000). To enhance (and sustain) competitiveness, a firm should, on the one hand, ensure operational effectiveness while, on the other hand, create strategies which could self-distinguish from other (existing or potential) competitors.

The core components of CD included: (i) factor condition; (ii) demand condition; (iii) related and supporting industries; and (iv) firm strategy, structure and rivalry. For factor condition, although basic economic factors, i.e., labour, land natural resources and capital, could provide initial advantages, the existence of competition could exert pressures, and thus CD emphasized on creating advanced and specialized factors of production, e.g., technology, professional personnel, specialized facilities dedicated for the industry concerned, etc. Advanced factors were not only more critical in a global economy, but also more difficult to create and retain. Indeed, CD stressed that selective disadvantages in basic economic factors could pressurize firms to create new competitive edges because they needed to innovate so as to compensate their basic/inherited disadvantages. For example, the geographical

disadvantage of a port could be compensated by higher cargo-handling facilities and more customer-oriented strategies.

For demand condition, it could be multi-folded, in terms of local, regional, national foreign and global. When the market for a particular product was larger locally than in foreign markets, local firms would devote more attention to that product than do foreign firms, leading to a competitive advantage when local firms began exporting the products (Porter, 1990). Demand characteristics played a highly important role, as sophisticated buyers might force the firm to meet higher standards, while special local circumstances might also complicate the demand characteristics. Indeed, this point was especially relevant for the transport sector, where the demand for transportation, especially freight, was largely derived in nature, thus demand characteristics was highly related to the demand of the surrounding regions, even the global economy, given the trend of gradual global division of labours (Dickens, 1998). Also, a strong and growing local market would offer a strong base for a firm when going global and, in case of maturity, local demand might also added incentives to firms to expand into foreign markets. On the other hand, related and supporting industries were critical to ensure that goods and services could be produced and offered effectively. It comprised of complementary products of which an organization could use and coordinate particular activities in the value chain together. In such case, dry port in India served as an excellent example being a supporting industry to the supply chain, especially given its role as an extension of the gateway seaports, and its performance would directly affect the competitive structures of Indian seaports, or even the Indian manufacturing industry.

Finally, for firm strategy, structure and rivalry, CD argued that there was no single common strategy which could explain all the behaviours of firms because different management ideologies existed. Rather than static, a firm was an evolutionary creature where past experience and personnel would direct impact strategies and development. In tackling competition, strategic decisions could be multi-faceted, e.g., revolutionary vs. conservative, expansionary vs. *status quo*, market consolidation vs. specialisation, etc. As argued by Porter (2000), in a competitive global economy, a firm should develop creative but effective strategies, including cross-border investments, cooperation between competitors so as to achieve win-win situation (Song, 2002), intensive marketing, etc. The market environment was not the only element in deciding strategies and competitiveness of a company, where competitiveness also depended on whether a firm could bent the market environments towards its favour, whether the management hierarchy preferred stability or adventures, or whether it accepted that change is necessary, as well as the availability and quality of resources available to the firm (Grant, 1991). Clearly, CD had included elements from the resource-based theory, where a firm could participate in deciding its own fate³. When facing threats (or, in other words, any 'imbalance' within CD of the industry concerned), existing firms could either drop out, or undertaking new strategies (including restructuring) in tackling the upcoming challenges, of which such decisions would be affected by the firm's culture, characteristics of decisions makers, the market environment, as well as the business objectives.

Empirical evidence suggested that the core factors as mentioned above were not the only attributes which could manipulate the direction of CD fully, and this had not unnoticed by Porter himself. Indeed, even within a market economy, the competitive structure could often be influenced by chances (i.e., random and/or unexpected factors) and, perhaps more importantly, the government. Rather than a core player, however, Porter argued that government should only take up a catalytic role, through creating a favourable economic environment for firms to compete at a fair platform, e.g., enforcing standards in service quality, encouraging competition, introducing and enforcing antitrust policies, providing necessary aid, etc., and would (and should) not participate in company's management and strategies because direct participation of government would lead to ineffectiveness and bureaucracy (Porter, 1990). According to Juhel (2001), in the port sector, government, with an established public sector with well-defined roles, should achieve three core missions, namely: (i) catalyst mission (like financing

³ Resource-based theory argued that the best performing firm could make use of its best available resources into producing high quality products/services. The selection of competitive strategies should be based on sensible evaluation of available resources and strategic decisions which were constrained by past resource deployments, resulting in further reinforcement of the firm's profile. While Five Forces Model emphasised on industrial environment, resource-based theory focused on individual characteristics and believed that the competitive position of a firm mainly lied within its own hands. See Conner (1991) and Grant (1991).

transport assets which are unlikely to get access to private or alternative financing sources and creating regulatory enabling environment); (ii) statutory mission (like ensuring navigation safety and coastal management); and (iii) facilitation mission (like public governance, facilitating trade and initiating trade integration). His view was supported by Ng (2002) and Wang *et al.* (2004) who noted that public presence still mattered in affecting port efficiency. Indeed, governmental influence within port operation could still be widely found either in regional or national scales (World Bank, 2001). For example, state aids existed in many European ports (European Commission, 2005) while the public sector was also often involved in port projects, e.g., dredging, widening of river channels, etc. In North Europe, for example, the role of government in ports differed considerably even between countries within the European Union, where the Benelux countries, France, Germany and the UK all implemented diversified port policies. As a consequence, while CD had largely explained the competitive structure of an industry, with the roles of firms and market environment being clearly defined, its emphasis on the complementary role of the government/public sector within the market was an issue which was highly debatable. As will be discussed in the case of Indian dry ports in this paper, the role of government is not only being restricted to the backseat, but a pivotal role in deciding the ‘balancing point’ within the CD.

3. Methodology

Given the nature of the study, apart from desk research, the authors had conducted in-depth interviews with 26 companies which had invested, operated and/or managed dry ports in India⁴. Interviewees were chosen carefully by the authors, where all interviewees were assured to be the key persons in making strategic decisions for their respective dry ports when the interviews were conducted. Out of the 26 companies, 21 and 4 were state-owned and foreign companies respectively, while GTI Terminals was a joint venture between Maersk and CONCOR. The affiliations and positions of the interviewees can be found in Table 1.

Table 1: Positions and affiliations of interviewees during the interview period

Company	Position of interviewee	Nature of company
Ameya Logistics	Manager	Local
APL India	Director	Foreign
BML	General Manager	Local
CONCOR	Director	Local
Continental	CEO	Local
CWC Distripark	General Manager	Local
CWC Impex Park	Manager	Local
DRT CONCOR	General Manager	Local
Forbes	General Manager	Local
GDL	Vice-President	Foreign
GTI Terminals	CEO	Joint venture
HIND	Manager	Local
JNPT	Chief Manager	Local
JWC Logistics	General Manager	Local
Kalamboli CFS	Manager	Local
Maersk	Manager	Foreign
MICT	CEO	Foreign
MSWC	Manager	Local
Preeti Logistics	General Manager	Local
Punjab Conware	Manager	Local
SCI	Director	Local
Seabird	Vice-President	Local
South India Corp.	Managing Director	Local

⁴ Interviews were conducted between October and December 2007.

Speedy	Manager	Local
TransIndia	General Manager	Local
ULA	Manager	Local

In this paper, data, information and opinions obtained from these interviewees are referred as ‘anecdotal information’.

4. Indian Dry Ports: Dilemmas and the Rationale for Dualism

By 2006, 177 dry ports had been set up at several locations within India, of which 40 of them were proximate to the major gateway seaports, e.g., JNPT, Mundra, Chennai, etc., where 58% and 42% of the container traffic between the dry and gateway ports were handled by roads and rail respectively (Hariharan, 2004). Until recently, all of the major dry ports were under the public entity of the Indian government, i.e., state-owned corporations. However, the uneven distribution of dry ports within the country, with about 40%, 30% and 20% being located within the southern, western and northern regions respectively (the central and eastern regions are conspicuous by the almost negligible presence of dry ports) (Dayal, 2006) had led to congestion of facilities and breakdown of infrastructure on one hand, while capacity underutilisation on the other. Also, according to anecdotal information, given the scarcity in financial resources, technological and management know-how, dry ports in India had never been innovative, where long term efficiency-enhancing investments, research and development, e.g., RFID, GPS Systems, etc., were never considered, not helped by the Indian government’s labour protective policies. Indeed, the almost complete monopoly of state-owned corporations, notably CONCOR and Central Warehousing Corporation (CWC), had contributed to the problems as mentioned above especially since, as government-approved monopolies, different dry ports often provided generic solutions to non-standardized demands between different regions, raising the question on whether dry port services were really customer-oriented (UNESCAP, 2005; Dayal, 2006).

The price of such problem was dismal performance, as typified by over regulation, poor quality service levels, under-investments in infrastructure development and under-utilization, which in turn affected the competitiveness of Indian manufactured products in the international market. According to the World Bank’s Logistics Performance Index (LPI), of which ranking was based on the ability of the country/region concerned in transporting freight in a cost effective and reliable manner (including customs procedures, physical infrastructure, logistic competence, tracking and tracing of international shipments), India was ranked 39th and 46th in terms of overall performance and logistics costs. While the country performed better than most developing countries, such result was well below developed and major newly-industrializing countries, e.g., China, Malaysia, Thailand, etc. (World Bank, 2007). Such inefficiency had often resulted in the reluctance of dry port operators to offer time bound commitment to cargo owners and shipping lines, resulting in the inability of the latter in planning connection of the hinterland containers to specific ships. Indeed, these factors had also led to poor perception of dry ports (and logistics industry) by the general public. According to anecdotal information, working in the logistics industry, including dry ports, was often perceived in India as ‘backward’ and ‘bleak’, and thus the sector often found it difficult to attract necessary talents, nor has it been able to impart the necessary skills and vision, leading to sloth and inefficiency.

To address this problem, the Indian government had embarked upon a massive capacity enhancement program, as well as loosening the grip of its control on dry port operation through private participation (Ministry of Shipping, 2008), mainly through the sale and/or leasing of facilities, joint venture and/or Build-Operate-Transfer (BOT) arrangements. In other words, the process was actually duplicating the landlord concept of the gateway seaports in India where the government only sustained its regulatory functions while leaving the operational and management aspects to private operators (Haralambides and Behrens, 2000). Also, an inter-ministerial committee for approval of applications for dry ports had been established so as to facilitate single window mandatory clearances, payments, incentives, certifications, customs presence, etc. Responding to this initiative, together with the projected container trade growth of 15% per annum within the next decade in India (Investment Commission, 2006), a number of dry port users, including multinational logistics service providers (like Schenkers, Kuhne & Nagel and Prologis) and several major liner shipping companies (like APL and Maersk), had entered the Indian

dry port sector⁵. Apart from enhancing the efficiency of the intermodal supply chain, increasing foreign incomes (like land rents and tax), the transfer of technology and know-how, the Indian government also anticipated that the participation of foreign firms in the operation and management of dry ports would alter the abysmal condition of India's transport infrastructure, as poor communication and transportation infrastructure could tarnish the country's image for potential investors (including different sectors) in a very tangible way (Sachs *et al.*, 2000a). The Indian dry ports and their operators can be found in Table 2, where state-owned corporations and CONCOR were still operating 61% and 31% of the country's dry ports respectively.

Table 2: Indian dry ports and their operators, 2006

Operator	No. of dry ports operating
Container Corporation of India Ltd. (CONCOR)	55
All other state-owned corporations	53
Total state-owned corporations	108
Private corporations	69
Total	177

Source: Dayal (2006)

Refer back to CD. The lack of competition within the dry port industry had inserted little pressure to improve the factor conditions, leading to mediocre performance. Nevertheless, given the close relation between transport and economic development, poor performance had affected the competitiveness Indian products overseas due to higher costs, causing a change in the demand conditions of the port industry's CD, causing an imbalance within the CD and thus creating a platform for changes. Indeed, the encouragement of private, especially foreign, investments was address such imbalance through enhancing the quality of the dry port industry's CD, so as to boost the quality of India's supply chain, and thus boosting the competitiveness of Indian manufactured products in the global market. On the other hand, however, foreign participation, often with superior technology, marketing strategies, management know-how and, more importantly, willingness to provide time-bounded guarantee to cargo owners and shipping lines, would pose significant threats to the survival of local, state-owned and operated, dry ports, especially if they had lost the advantages of government protection umbrella. Moreover, foreign investors which had entered the dry port industry usually have captive cargoes, and by controlling dry ports and cargo's inland transportation, these firms could potentially generate synergetic benefits leading to significant competitive advantages (enhancing factor conditions in the dry port industry's CD) of which local, state-owned, dry port operators could find it very difficult to match. Also, given the massive number of such dry ports established within the country (and the number of employees being employed), it would potentially be a political tragedy to the Indian government if their dry ports were knocked out of the industry by these new competitors. Indeed, being the world's largest democracy (in terms of population), the Indian government was often trapped in a dilemma, where they would like foreign investors to assist the country's development, especially improving transport infrastructure and efficiency, but at the same time protecting local interests from being exploited by these investors through abusing market power (Sachs *et al.*, 2000a). The need for dualism was, in fact, strictly following India's traditional socialist policy direction since gaining independence in 1947 in fighting poverty, inequality and deterring the exploitation of the non-privileged groups (Haralambides and Behrens, 2000).

The rest of this paper will review and analyze how the Indian government attempts to resolve this

⁵ Another incentive for the participation of dry port users in dry port operation was related to the common practice in this trade, where most dry ports operators would charge their fees in advance from the users, mostly comprising of shipping lines and NVOCC operators. It was not uncommon for users to keep certain amounts of money with the operators and replenished the deposits at regular intervals. On the other hand, the dry port operators employed vendors for transportation and handling of cargoes and paid them at a later date. The surplus cash was often used by the operators as seed capital for expansion and servicing of debts. This served a reason why many users would like to enter into the business of inland logistics even though the profit margin was thin as cash flow would be steady and rather low risk.

contradictory issue through dualistic approach. Indeed, the core dilemma of the Indian government lied on how it could balance the dry port's CD, enhancing its efficiency on the one hand, while at the same time maintaining the survival of local non-foreign-invested dry ports before any fundamental but long term solutions could take place. The three major initiatives, both monetary and non-monetary, that the Indian government had taken in helping state-owned corporations in resisting the challenges posed from foreign dry port operators are: (i) land pricing and distribution; (ii) dry port operation; and (iii) dry port's connectivity. The details of these three initiatives will be discussed in the next section.

5. Dualistic Policies in Dry Port Development

5.1. Land pricing and distribution

The major component of the capital costs involved in the construction of a dry port was the cost of land and land pricing and distribution was probably the Indian government's most important policy in dry port development. State-owned corporations, notably CONCOR, were nearly always given preferential treatments so as to ensure that their new terminals could develop with minimum financial difficulties. According to anecdotal information, a dry port locating inside and outside the limits of major cities required a minimum of one and three acre(s) respectively (Revankar, 2006), while a typical dry port in India (with an annual throughput of 120 000 TEUs) would require a land area of about 30 acres. Although land cost varied based on several factors, e.g., geographical location, availability of usable land⁶, economic environment, competition with other potential land users, proximity to market place or gateway ports, close affinity to road/rail network, etc., taking the above factors into consideration, by 2007, the land price would vary between US\$ 25 000 to US\$ 100 000 per acre, and thus a dry port with an annual throughput of 120 000 TEUs of throughput would typically need to spend US\$ 1-3 million just only for the sake of acquiring the required land for building the terminals and installing the infra- and superstructures.

Being the biggest landowner within the country, the Indian government also had a major presence in the land's sale and lease. While charging market prices to foreign investors, Except areas around JNPT, lands had been leased out to state-owned corporations, especially CONCOR, for very long periods, usually 99 years, at very favourable rates significantly under market values. Rather than dictated by market forces, the Indian government itself was actually a price setter and implemented dual pricing on land sales or leases, despite that such actions were directly violating its own Competition Act (2002), Article 3, No. 1 (a), stating that no persons/associations should undertake actions which could determine prices (Government of India, 2003). According to the anecdotal information, in some cases, the US\$ 1 – 3 million of investments on land could even be waived completely, as long as government officials were compromising alternative arrangements to ensure that their economic interests and policy objectives could be maintained. Such substantial differences in the costs of purchasing land had placed the foreign investors in a seriously disadvantaged position against state-owned corporations. In this way, the Indian government had actually been subsidising state-owned corporations through substantially reducing its initial capital costs when setting up dry ports, but *vice versa* for foreign operators.

Apart from financial factor, acquiring land for the construction of dry port, especially green-field projects, was subject to governmental permission in changing the land use purpose (as almost in all cases, the land was initially used for agricultural purposes), and land distribution policy was clearly offering preferential treatment to state-owned corporations which often enjoyed the privilege of obtaining the required land against other private operators. For example, in Mumbai, while most of the 17 dry ports surrounding JNPT were privately owned and operated, until now, the government had only granted land to the dry port operated by CONCOR in the construction of railhead, whereas leaving all others transporting their containers by trucks. Given that the typical cargo transportation rate between dry and gateway ports cost about US\$0.15 per km US\$ 0.25 per km by trains and trucks respectively (Ng and Gujar, 2008), it was clear that the government had imposed preferential policy so as to trigger

⁶ For example, marshy land was not suitable for dry port construction, and would require substantial engineering expenditures to address such problem, e.g., filling, levelling, etc.

the attractiveness of state-owned corporation against its competitors.

Last but not least, the acquirement of land was complicated by the non-availability of proper land records, which often led to wastage of time and litigation. To resolve such problems, the Indian government, through local bodies like City Industrial Development Corporation (CIDCO) or other similar bodies, acquired land from users and developed it after which it was sold or leased to the interested parties. However this process was often riddled with corruption. According to anecdotal information, it was common practice that the promised road electricity, telecom infrastructures were never delivered or delayed due to the fact that government officials, especially local ones, were often waiting for extra 'credits' before taking the initiative in acquiring the required land. In this aspect, as mentioned earlier, the Indian government was the largest landowner within the country, with the Ministries of Railways and Defence and port trusts owning huge tracts of land across the country, thus possessing considerable strength in manipulating land distribution and its use.

5.2. Policies on dry port operation

Apart from land policy, the Indian government also carried out policies which allowed dry ports operated by state-owned corporation to grow, mature and compete. For example, state-owned dry ports were allowed to suffer a financial loss in the initial period of two years. During this period, on the one hand, the operator was expected to make every effort to keep its overheads low, while on the other hand canvassing for more businesses. Such scenario had largely benefited such state-owned corporations as it implied that a guarantee was offered by the government in absorbing any losses which had incurred during this period. In fact, even if the objective of balancing the books failed after the initial two years, the operator was able to cut its loss through selling off its equity holding, either partially or fully. Also, apart from such breathing space, the Indian government would also take the responsibility to partially cover revenue costs⁷.

Given such substantial assistance in both capital and operational costs, state-owned dry ports were often able to make extensive use of discounts, preferential and predatory pricings to attract customers. For example, according to anecdotal information, users would often enjoy nearly 50% discounts in fuel costs in using state-owned dry ports. Such assistance had significantly enhanced its competitive positions, especially given the currently substantial increase in oil prices⁸, while subsidizing policy simply implies that rail transportation can be employed, even if the minimum threshold had not been fulfilled⁹. For example, even though CONCOR had a published tariff on their official website (CONCOR, 2008), published information was merely for window-dressing purpose. According to anecdotal information, even CONCOR officials admitted that, except during the congested seasons, the actual prices was always flexible and usually significantly lower than what had been stated publicly, especially towards the major customers, where bulk discounts, extended credit periods and storage offered at subsidized rates were common. Indeed, the Indian government had so far *de facto* acknowledged such strategy. Despite the enactment of the Competition Act (2002), it had deliberately implemented measures to preserve the dominant position of state-owned corporations, especially CONCOR, within the industry. Finally, in certain cases where the cargoes involved was time sensitive or prone to pilferage, e.g., perishable products, garments and accessories, household products, leather products, pharmaceuticals, etc., the operators often demanded a premium above the published tariff simply for being extra diligent whilst handling such cargoes. Indeed, it was also not uncommon for the operator to rent out partially or sometimes entirely the storage space to a single customer for certain time periods against payment in advance which relieved its cash flow burden.

5.3. Policies on dry port's connectivity

⁷ The revenue component mainly comprises of costs of transportation from the dry port to the gateway port and back.

⁸ For example, between Jan 07 and Jan 08, oil prices have been doubled, while such figure had increased more than quadrupled since 2002 (BBC, 2008).

⁹ In India, it is generally agreed that a minimum of 90 TEUs of containers is required for rail service to become economically feasible at the indicated rate of US\$0.15 per km. See Ng and Gujar (2008).

On the other hand, interventionist policies also existed in affecting the connectivity to/from the dry ports and, in this aspect, the influence on rail operation served as the most important example reflecting the preferential policy of the Indian government. Until 2006, domestic container transport business was completely reserved to CONCOR, but the government decided to invite private participation into the container rail sector, after the publication of World Bank's report on India's future transport development (World Bank, 2002), for two main reasons. Firstly, the rapid annual growth rate in container trade in the next decade, as indicated earlier, implying an additional container transportation of almost 1 million TEUs, and it is perceived that CONCOR alone would not be able to handle. Also, the Indian government would also like to ease the stress on road by transferring some of the burden on the rail sector, of which currently nearly 60% of the containers throughout the country are transported by trucks. The result was the granting of licenses to 14 foreign private companies to operate container trains between dry ports and the gateway seaports through concession agreements envisaging two categories, namely: (i) pan-India basis, costing US\$ 1 million (chosen by 10 operators); and (ii) the more expensive (but more lucrative) route-specific basis, costing US\$ 2.5 million (chosen by 4 operators). Through the same agreement, private operators would deploy their own containers, wagons and handling equipment, building their own terminals, and marketing for customers. Under such arrangement, the participation of the private sector is expected not only to attract traffic from the road sector but is also expected to enhance rail transport capacity without burdening the government.

But after acquiring expensive licenses from the government, foreign operators often found it difficult to sustain operation as this had adversely affected their initial pricing structure, not to mention the substantial capital costs of purchasing land for building of terminals as discussed before. To make things worse, these operators also grudged the absence of service level guarantees in the model concession agreement which inhibited their ability to attract cargo from the road sector, given that the private operators often lacked their own terminals and shortage of container wagons¹⁰ and that they often needed to pay CONCOR, the corporate limb of the Indian government, to use their terminals and container wagons, which put themselves in further disadvantageous competitive positions, as their supply of services was prone to government's manipulation. Finally, transport costs were also highly subsidized by the Indian government, usually in terms of fuel subsidies, as well as rail and road haulage between state-owned dry ports and the gateway seaports and production plants, as exemplified by the fact that the construction of CONCOR's railheads were heavily funded by public money. Under such situation, the private operators soon found that the carrot which attracted the private operators to this sector in the first place, i.e., the projected substantial container trade growth within the country, had soon evaporated, mainly due to the preferential policies of the Indian government to CONCOR.

6. Discussion and Conclusion

The case study in this paper served as a typical example illustrating the Indian government's dualism in tackling globalization while at the same time maintaining the *status quo*, i.e., the dominating control of dry ports (and their market shares) by the Indian government through their commercial limbs – the state-owned corporations. On the one hand, the Indian government would like to take advantages of globalization in assisting the country's economic and thus enhancing its global status and competitiveness (Dickens, 1998), while at the same time needed to absorb the shocks and minimized negative consequences posed by foreign direct investments (FDIs), especially potential market concentration and the abuse of market power, where it would be in direct loggerheads with the Indian Constitution (Article 39/b) stating that ownership and control of material resources of the community should be so distributed as to best sub serve common good and the operation of the economic system should not result in the concentration of wealth and means of production (Government of India, 1994).

¹⁰ This problem was slightly relieved by the Indian government in permitting leasing companies to import container wagons increasing the capacity of wheel and axle plants. Nevertheless, the capital intensive nature of rail transport and the dominant position of CONCOR have ensured that this problem is unlikely to be completely addressed in the foreseeable future. Indeed, this has also reflected the dualistic nature of Indian policies in ensuring the survival of foreign investors, while at the same time restricting them to peripheral, rather than dominating, players.

Indeed, the competitive structure of the Indian dry port industry did not only have an economic perspective, but also a political perspective. Similar to port reform and governance, local/regional interests and political culture, were equally, if not more, important (Kingdon, 1995; Ng and Pallis, 2007), in deciding the competitive structure of Indian dry ports, especially where reservations to changes and foreign participation were still prevalent. While here is not trying to argue that the Indian government did nothing to assist foreign companies in establishing themselves in the industry¹¹, nor local dry port operators did nothing to enhance its competitiveness, as witnessed by CONCOR's attempts in providing value added services, e.g., packaging, container repairs, storage, etc., and even acting as 3PL service provider and handled cargo charges on behalf of the shippers by delivering it to the eventual consumers (Sahay and Mohan, 2003)¹², it was the Indian government which tolerated FDIs in dry ports in order to exert pressure to improve the industry's factor conditions so as to boost industrial competition while, at the same time, it was also the same government which intervened in order to slow down the need for state-owned corporations to improve their factor conditions, while also ensuring their (especially CONCOR's) dominant position in the foreseeable future, so that foreign investors would not be given any opportunities to create and abuse any market concentration power.

However, the Indian government's dualistic policies, with the objective of 'rebalancing' an 'imbalanced' CD through interventionism, has restricted the development of factor conditions (notably relieving the pressure of state-owned corporations in improving its efficiency and services) and limiting the strategic options of foreign investors. Similar to seaport reforms, the Indian government's rigid policy was clearly not following the rules of the global game (Haralambides and Behrens, 2000). Indeed, dry port operation is an excellent showcase illustrating the sustained policy direction of the Indian government to preserve India as a socialist democracy with 'mixed economy', as characterized its continuous desire to tolerate foreign investors while trying its best not overlook multiple political interests, and such attitude had not changed even after two decades of the 1991-92 major economic reforms, where it vowed to dismantle central economic control which had lasted for more than four decades (Sachs *et al.*, 2000b). According to anecdotal information, the main reason for foreign firms to continue their dry port operation, despite often operating at a loss due to Indian government's dualistic policies¹³ was to reduce the risk posed by unreliable performance along the supply chain (as mentioned before, state-owned dry ports had been inefficient and unreliable), which was not dissimilar to these firms' strategy of acquiring dedicated seaport terminals (Heaver, 2002; Meersman *et al.*, 2005) and to ensure that they would not to be left out in reaping long term benefits from the country's projected rapid cargo growth (especially export). While looked okay in the short term, such approach would be unsustainable in the long term development of India, as such policy also backfired as it had implicitly affected the demand conditions of the CD, where foreign investors, in many cases, felt that the Indian government's interventionist approach had given an impression that foreign investors tried to take something away from India, despite the possibility of the other way round. As suggested by Sachs *et al.* (2000a), the FDI regime in India seemed to be restrictive where foreign investors were tolerated rather than welcomed, while its protective umbrella provided to state-owned corporations would prevent/slow down the overall quality of the dry port, and thus transportation and supply chain systems throughout the country.

Furthermore, analysis from this paper had posed a big question mark on the complementary nature of governmental influence on the competitive structure of an industry. Porter (1990) argued that the role of government was limited other than providing a favourable competitive platform for firms to compete.

¹¹ The Indian government would sometimes support foreign operators by providing aids similar to what had been provided to state-owned corporations. However, according the anecdotal information, the amount of such aids were by no means comparable to state-owned corporations. This policy had further reflected the dualistic nature of the Indian policy, where foreign investors would be tolerated (or even supported), but at the same time being suppressed from increasing market power.

¹² Apart from that, CONCOR had also developed its own gateway terminals in its dry port near JNCT in offering a single vendor service to meet the logistics requirements of customers and they are currently exploring the possibilities of entering into freight contracts with cargo interests directly to meet all the logistics needs of their customers.

¹³ While unable to release concrete performance data here due to confidentiality issue, according to most interviewees, until now, few foreign-based dry port operators are making any real profits since starting dry port operations in India.

However, in the case of Indian dry ports, although a competitive platform had been created, rather than favouring all players, the platform was favouring those operated by state-owned corporations, of which the government also had significant interests in, and the market was severely influenced by (both explicit and implicit) subsidies, preferential policies and protection umbrella. Despite the enactment of various competition laws, including the Competition Act (2002) and its precursor, the Monopolies Restrictive and Trade Practices (MRTP) Act (1969), of which the Indian government should be responsible to eliminate practices which have adverse effect on fair competition, protecting consumer interests and ensuring freedom of trade by all participants within the Indian market (Government of India, 2003), in dry port operations, the government ironically took up the roles of both referee and player and actually employing its own market concentration power to halt the rise of alternative concentration, and thus ensuring that the balance point of Indian dry port's CD would be manipulated in line with the government's political objectives and economic interests, not helped by the continuing presence of relations and corruption, which further increased the government's rather contradictory policies in attracting foreign investments on the one hand, while continuing its reluctance in allowing the industry to decide its competitive structure freely.

Last but not least, the authors are confident this paper has provided some insight not only on the development of dry ports in India, but also shedding some light on how governmental influence could shape an industry's competitive structure in developing countries.

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