

# Geography and institutional change: insights from a container terminal operator

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**Abstract** The paper investigates the relationship between space and institutional change by studying the evolution and development of Hongkong International Terminals (HIT): a Hong Kong-based firm with a highly established institutional system, in the early 1990s. We investigate how HIT has made effective use of space to undertake organizational evolution, regional expansion, and finally establish itself as a global player in container terminal operations. Simultaneously, we illustrate how penetration across space has generated proactive forces that have fundamentally transformed HIT's institutional system. The study offers insights to the dynamic relationship between space and institutional change.

**Keywords** Port · Geography · Institutional change · Spatial outlet · Hong Kong · China

## Introduction

Technological revolution, globalization, and the embracing of neoliberal ideology have transformed ports in terms of operations, management, and governance. In the past few decades, many ports have undertaken reforms so as to enhance efficiency

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and competitiveness, notably the privatization of container terminal operations, the regional expansion of container terminal operators (CTOs), and the corporatization of public port authorities. This has stimulated considerable research undertaken by geography researchers (Ng 2013; Ng and Ducruet 2014).

However, the impacts of *institution*—understood as an established order (tangible or intangible) to stabilize expectations and predictability—on their process and outcomes remain understudied. This does not deny that research has been undertaken previously—there are even special issues in scholarly journals dedicated to this topic (e.g., Ng et al. 2013). However, much of earlier research focuses on how institutions create *locked-in*, or *path-dependent*, inertia that diverts ports from the originally intended development (sometimes spatial) processes, dynamics, and outcomes—how ports plan ‘at variance’ with the institution, only to be disappointed later when their plans do not materialize due to the institutional barriers, despite that the institution is usually known at the time of planning. Few (including existing institutional theories and studies) recognize that such institutional barriers (and, of course, ‘disappointments’) simultaneously create intangible forces pushing stakeholders to seek alternatives, especially when the situation reaches a critical juncture, in which they must quickly adapt for better survival in an uncertain external environment. In this case, geography can offer a ‘spatial outlet,’ as we term it, that enables them to escape from the established institutional system (e.g., the regional expansion of local operations or the participation (intended or not) from other hierarchical level(s) in planning and management). Here ‘spatial outlet’ is defined as *an opening that enables an organization to move from one particular area to another, which usually offers more freedom to live, think, and develop in a way that suits the stated organization within an interval of time*. In this case, ‘area’ can be physical (e.g., physical space) or nonphysical (e.g., a range of different activities, different institutional hierarchies).<sup>1</sup> Consequently, the inter-dynamics within this spatial outlet shape a new culture that facilitates an organization to evolve and fit into a new environment.

Against such background, the paper deduces this proposition through a historical case study, namely the evolution and development of Hongkong International Terminals (HIT); a Hong Kong-based firm with a highly established institutional system, in the early 1990s. During this period, HIT did not only restructure its operational and management approach as a CTO, but also evolved from a local-to a multinational CTO<sup>2</sup>. Here we admit that the topic of the regional expansion of CTOs has been studied extensively (see Ng and Ducruet 2014 for a detailed review). In fact, Airriess (2001), Wang (1998) and Wang and Slack (2000) have published papers dedicated to the geographical transformation of HPH and the Pearl River Delta (PRD) port system. Nevertheless, they did not touch upon the dynamics between the regional expansion of ports and the institutional change

<sup>1</sup> The term was defined with reference to the definitions of ‘area,’ ‘space,’ and ‘outlet’ in the Oxford Dictionary of English (2nd Edition) (2010).

<sup>2</sup> Hutchison Port Holdings (HPH) was formed in 1994, although HIT remained de facto decision-making institution of HPH.



of ports in terms of management, governance, and strategic decision-making. For instance, Airriess (2001) recognized that there was an ‘institutional medium of a territorially defined time–space governance embedded within the political economy of pre and post-1997 Hong Kong,’ and the way this prompted HPH to expand the geographical scope of its operations to southern China. However, he overlooked the fact that HIT/HPH, like most other large-sized firms, was a highly established institution with strongly embedded approach in operations and provision of services to clients. Also, he did not explain the reaction of such an institution in facing new challenges (domestic and international) to competitiveness and survival: how it managed to overcome its ‘locked-in’ dependency, and make a paradigm shift in its established decision-making approach. Finally, a great part of previous research did not explain how HIT has made effective use of the spatial outlet to overcome such institutional barriers when tackling (uncertain) external and internal challenges; how it enabled organizational evolution; and finally, how it reinvented itself into a global player. Hence, an important research question is yet to be answered satisfactorily: ‘how does HIT make use of geography to transform its established institutional system, as well as the nature of its business and operations?’

The paper generates theoretical contributions to ongoing port and geography research and discussions through a systematic illustration of how penetration across geography can create proactive forces and fundamentally transform an established institutional system (be it a private firm, community, or the public sector). Also, the paper illustrates how research in port geography contributes to the mainstream theoretical discussions in human geography, by bridging the latter discussions and other scholarly disciplines, through enhancing their theoretical frameworks and, in this case, by exposing the close relationship between space and institutional change. Finally, the paper can prove to be beneficial to industrial practitioners and policymakers by offering them a schematic exposition of an effective geographical approach in addressing challenges under an uncertain environment and institutional constraints, which they face every day.

The rest of the paper is structured as follows. The next section, “[Theoretical background: geography, space, and institutional change](#),” consists of the theoretical background concerning the challenges to the institutional system in the face of dynamic relationship between space and institutional change and the adaptations that are required to be made to address the challenges, followed by “[Methodology](#)” section, which includes data acquisition through documentary reviews and interactions with the stakeholders and decision-makers. “[The regional expansion of Hongkong International Terminals \(HIT\)](#)” section provides a historical account on the port of Hong Kong in the past decades and the development of HIT, notably how the evolution of the global and local political economies prompted changes within the firm, including its institutional system, and how it made use of the spatial outlet to achieve such purpose. Finally, the findings of this study are analyzed and discussed in “[Discussions](#),” which are followed by the relevant conclusions drawn from this study and suggestions on the scope for further research as elaborated in “[Conclusions and further research](#)” section.



## Theoretical background: geography, space, and institutional change

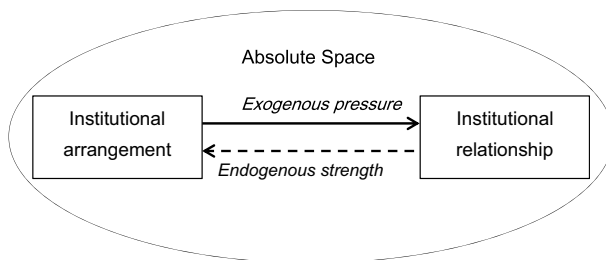
### The study of institutions: from inertia to change

Institutions pose significant impacts on human activities. New Economic Geography theorists, like Krugman (1991) and Fujita and Mori (2005), argue that ‘bounded rationality’ influences policymakers to advocate generic solutions in solving social problems irrespective of regional differences. Their stance invokes calls by decision-makers to adopt more scientific knowledge and develop so-called ‘international best practices’ to address problems around the world. Being the rules, procedures of compliance and standard practices that structure relationships among agents, an institutional system imposes preceding constraints on policy choices and pushes policymakers towards particular strategic directions (March and Olsen 1989; Hall and Taylor 1998). The institution thus countervails dramatic changes, restricts alternatives and diminishes the rationalities of decision-making to predictable paths according to norms and practices based on culture and hegemonic values of the time (Fuchs and Scharmanski 2009; Glassman 2004), even when they may have become less effective under new circumstances (North 1990; Hodgson 1993)—the so-called locked-in or path-dependence (Hall 1986; Young 1989; Williamson 2000). An important objective here is to solidify generally accepted value into predictable practices strengthened by bureaucratization (Weber 1922). By doing so, institutions deter undesirable social outcomes due to individual actions, which can be spontaneous, negotiated or imposed (Young 1989). In this case, Harvey (2005) provides a detailed account of the role of neoliberal ideology in economic policies, ultimately institutionalized, in the 1980s. This leaves their successors few alternatives but to persist with this direction even with the existence of diversified value and rather mixed results (Harvey 2006).

The influence of institutional systems on port management has been extensively researched (Buitelaar et al. 2007; Ng and Pallis 2010; Notteboom et al. 2013). These authors largely follow the new institutional economic and neo-institutional approaches, investigating how established institutions structure cognition and guide the decision-making process (where institutional systems do matter).<sup>3</sup> On one side, Hodgson (1993) and Jessop and Oosterlynck (2008) suggest that de-contextualizing the restructuring of human activities is perilous as policymakers can manipulate power to secure outcomes based on the existing institutional system. On the other side, Strambach (2010) and Notteboom et al. (2013) note that institutional systems can ‘stretch’ so as to enhance efficacy to deal with changing circumstances. In this case, Gutmann and Thompson (2012) argue that, for any reform to be practically conceivable, a paradigm shift within the institutional system is not a choice but a necessity, and organizations should persistently undertake internal reorganization so as to complement the constantly changing situation in the contemporary world (Harvey 2005). This diversity, however, leads to doubt on whether an institutional

<sup>3</sup> For further details on neo-institutional theory and new institutional economics, see North (1990) and Williamson (2000), respectively.





**Fig. 1** The two components of an absolute space. *Source* Authors

perspective can offer a simple and unified logic or it just remains an analytic tool pointing to different, even conflicting suggestions for various port cases.

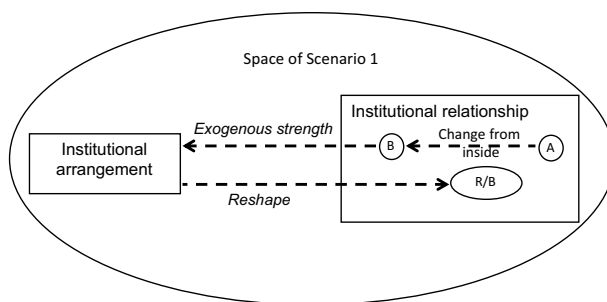
We argue that, within an institution, inertia and change are two sides of the same coin. In examining the process of cases described in previous research, two main components—*institutional arrangement* and *institutional relation*—are to be embedded into the process of institutionalization (Notteboom et al. 2013). An institutional arrangement refers to agreements and organizational structures between agents so as to achieve certain objectives or programs. Such an institutional arrangement is governed by an institutional relation that involves informal conventions, customs, and norms of which organizations, being parts of a given community, should conform so as to gain legitimacy and general support—sometimes made compulsory through legally binding rules and regulations (Martin 2000), such as firms, bureaucracy, policies, and cooperative networks. Also, an institutional arrangement includes the mindsets of individuals and elites, forming the basis for compromise (Gutmann and Thompson 2012), operational characteristics and perception to new knowledge (Boxer 1991), strengthened by collective ideologies, culture, and experience. Through the process of institutionalization, institutional arrangement and relation form the ‘absolute space’ so as to guide and constrain the actions of decision-makers and other stakeholders. In Harvey’s words,

‘Absolute space is fixed and we record and plan events within its frame...it is usually represented as a preexisting and immovable grid amenable to standardized measurement and open to calculation...all uncertainties and ambiguities could in principle be banished and in which human calculation could uninhibitedly flourish...’ (Harvey 2006, p. 121)

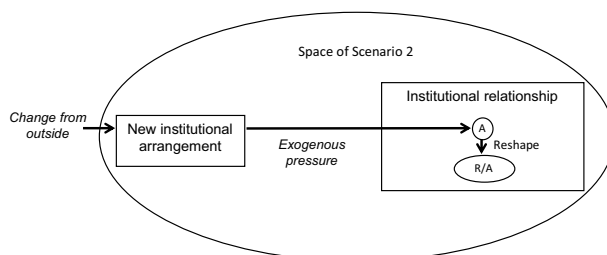
Figure 1 illustrates the two components for institutionalization.

Inside an absolute space, *institutional arrangement* is dedicated to implement particular tasks, often with highly specific objective(s) within a particular framework of hierarchy and time. On the other hand, the establishment of an absolute space involves a clear definition, implementation of power, authorities, and





**Fig. 2** Scenario 1 of institutional change. *Source* Authors



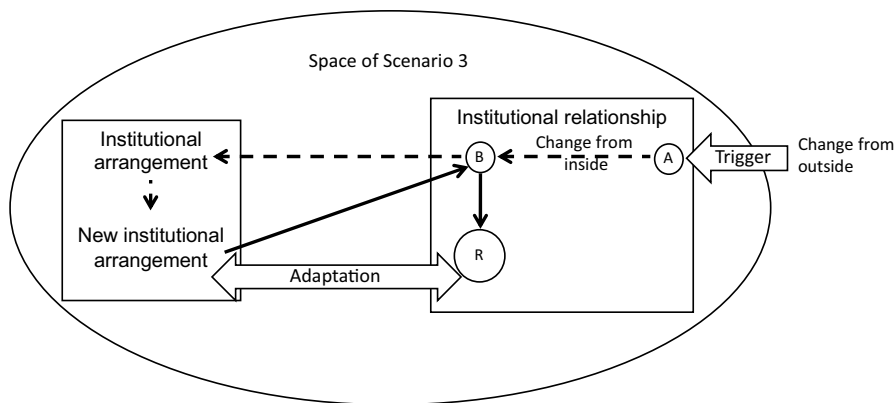
**Fig. 3** Scenario 2 of institutional change. *Source* Authors

responsibilities between different stakeholders, hierarchies and regions<sup>4</sup> (i.e., institutional relationship). Usually, an absolute space remains relatively stable until such a space–time temporality (Harvey 2006) is seriously challenged, for instance by a global economic crisis, the rise of new, major competitors, and the decline of certain types of productions and thus industrial regions. According to Ng and Pallis (2010), the stated exogenous pressure creates unsustainable settings within the well-established absolute space. Institutional agents take spontaneous initiatives to stabilize established absolute space by restructuring the institutional arrangement, as exemplified by the massive waves of (largely) neoliberal structural reforms within ports<sup>5</sup> (e.g., privatization of terminal operations, corporatization of port authorities, etc.). In other cases, the forces are generated endogenously, such as accumulation of experience, knowledge, and skills. Either or both force(s) can produce a new absolute space if affected by drastic outside pressure, known as ‘institutional change’ (Figs. 2, 3).

<sup>4</sup> Although Harvey explained space, including absolute space, in great detail, he focused on the physical components (e.g., housing, urban space) and did not explicitly mention institution as a non-physical absolute space.

<sup>5</sup> Neoliberal policy-driven management and institutional reforms took place in many ports during the 1990s and 2000s. For further details, see Ng and Pallis (2010) and Sager (2011).





**Fig. 4** Proactivity of relationship development in institutional change. *Source* Authors

Very often, challenges (no matter if created by endogenous or exogenous forces) lead to a change in institutional relationships (from A to R), but sometimes change from outside may not reshape institutional relationships (something referred to as inertia/hysteresis in earlier research). In reality, change from inside in scenario 1 (Fig. 2) can be the appointment of new decision-maker(s) who possess(es) different business concepts and/or ideas than those of their predecessor(s). An obvious example of change from outside in scenario 2 (Fig. 3) is port reform which, however, may not always reshape institutional relationships, as illustrated by the port of Tian-jin's (China) failure to comprehensively reform its governance structure in the early 2000s (see Tongzon et al. 2015).

### Explanation by institutional adaptation

As mentioned, institutional inertia and change are not necessarily in conflict with each other. The vital component to distinguish the two sides of an institution depends on whether the institutional relationship has been reshaped. In this case, Bathelt and Glückler (2014) introduce *institutional adaptation* as a sort of a *guidance* which is inherited from evolutionary economic theory. Indeed, inertia is not necessarily inefficient because relationship (that is developed endogenously) may enhance efficiency. Simultaneously, change does not necessarily lead to a 'matched' relationship, at least in the short term. In reality, inertia may sometimes even be a form of efficiency.

### Conceptual framework and propositions in current research

Previous research has focused on distinguishing forces (originating from inside or outside) that describe changes in institutional relationships as passive (i.e., reactive to forces of change). However, they often neglect the initiatives of actors in building/developing institutional relationship. Nevertheless, we argue that external changes



can (indirectly) trigger the change in relationship inside and force the formation of a ‘new’ space (by either expanding or replacing the ‘old’ space) with a new set of institutional arrangement and relationship (Fig. 4). This is especially true when outside conditions become favorable for transformation. In our case (see “[The regional expansion of Hongkong International Terminals \(HIT\)](#)” section), China’s Open Door Policy since the 1980s and Deng Xiaopeng’s ‘southern tour’ in 1992 certainly created more favorable external conditions that encouraged HIT to invest on port infrastructures outside its original turf.

From the above analysis, we hereby put forth the following propositions:

**Proposition 1a** *Because of inertia, institutional change occurs as a passive result.*

**Proposition 1b** *An organization can seek active change on its institutional relationship.*

We use the evolvement of HIT, from a local to a multinational player in terminal operations, to test the two propositions.

## Methodology

The topic’s nature required qualitative and unpublished information. Procedural dynamics were studied through interacting with decision-makers (Ng and Pallis 2010). Also, information acquisition involved numerous unpublished, written or oral, materials, understanding that multiple stakeholders are involved in ports and their development (Lam et al. 2013) and many of them play significant roles in expanding HIT’s business into Mainland China.

Hence, following the logic of *inductive reasoning*, we triangulated data collection with documentary reviews (e.g., government documents, official statistical yearbooks, archival records, or company internal reports). In addition, semistructured, in-depth interviews with 24 relevant personnel were conducted in Hong Kong, between 2014 and 2016. The choice of interviewees followed a *snowball sampling* technique starting from the HIT directors. The interviewees represented nearly all those who were actively involved in the HIT/HPH’s development in the 1980s and 1990s. These included directors, senior managers, managers, and senior staff mainly in marketing and operations functions. As a longitudinal study, and in view of the period in question (25–30 years ago), we realize that available interviewees, familiar with (and involved in) the process, were rather limited. They were chosen for the interviews not only because of their seniority (number of years working in HIT/HPH), but also because of their pivotal roles in decision-making during the study period. Some had already held senior positions in the prestige, while others were in middle-level management, assisting their senior counterparts in the decision-making process. Hence, all of them had significant impacts on shaping terminal competencies and were aware of the rationale behind specific strategies made in the terminals.





The interviews were undertaken in three stages. In the first stage, we interviewed those who had already held senior (decision-making) positions in the prestage. Based on the information obtained from documental reviews and the perspectives of the ‘decision-makers’ during the transition from pre to post-stage, the ‘main storyline’ was reconstructed. The second stage focused on interviewees who were in middle-level management positions during the prestage. The objective was to strengthen and/or verify the validity of the ‘main storyline.’ More importantly, by looking from a non-decision-making perspective (when the transition took place), we managed to look at the same story from different angles. This allowed us to capture missing components, such as how HIT/HPH staff tackled challenges during the implementation process or how such challenges shaped and reshaped decisions (and thus development directions) by decision-makers. By doing so, we also managed to develop the case from multidimensions, thus enhancing the validity of the ‘main storyline’ constructed by us. In the third stage, informal discussions took place with a number of prominent scholars who excelled in institutional, transport, and port research. The objective was to verify the linkage between the theory and the empirical case, thus helping us to construct and strengthen our theoretical discussions on geography and institutional change.

All the discussion questions were designed according to interviewees’ backgrounds so as to obtain maximum relevant information. Generally speaking, questions involved the decision-making process and the operational approach of HIT/HPH before and after its regional expansion in the late 1980s and early 1990s, including (but not restricted to): the traditional way of operations and approaches in dealing with clients; the major factors in forcing HIT to undergo fundamental changes, and the major challenges; how the regional expansion of HIT impacted the institutional system of HIT, including the decision-making process, planning, marketing, management, and its approach in dealing with its clients. Extensive interview scripts, including summaries and post-meeting comments, were prepared within 24 h after each interview. Also, a confidentiality guarantee was strictly followed with all the interviewees. Their identities, and any linkage between comments and identities, remained anonymous throughout the research process; in the rest of the paper they are thus referred to just as ‘interviewee(s).’

## **The regional expansion of Hongkong International Terminals (HIT)**

### **Background**

Before containerization, Hong Kong was already a major loading port and the city was prospering on the growth of light industries after the Cold War. As a British colony, at a time when China was governed by the Maoist communist system, Hong Kong was largely cut off from its Guangdong province and China’s entrepôt trade.

The port-city development pattern became clear when Kwai Chung was proposed to be the area dedicated to the construction of the city’s container terminals. Three terminals were constructed in 1970, and HIT was established under the custody of Hutchison Whampoa Ltd. (HWL) as one of the CTOs. It was between 1979



and 1994 that the Hong Kong terminals achieved high-speed growth, and, unsurprisingly, the stimulus was the promulgation of China's Open Door Policy. Foreign direct investments (FDIs) flooded into the Pearl River Delta (PRD) for manufacturing activities that boosted export volumes. Due to its proximity to the PRD and its own high connectivity to the world, the port of Hong Kong formed a 'front store-backyard factory' relationship with the PRD (Wang 1998). In this regard, PRD gradually developed into one of the world's largest export production bases at a very rapid pace; on the Hong Kong port side, container traffic between Hong Kong and Mainland China occupied the largest share of the port's cargo throughput (GHK 2004). Moreover, during this period, no other ports in the region were deemed suitable for regional or international container movements. Enjoying such a monopolistic position, Hong Kong consolidated itself as an international shipping hub, characterized by continuous double-digit growth of container throughput between 1986 and 1996 (Loughlin and Pannell 2010).

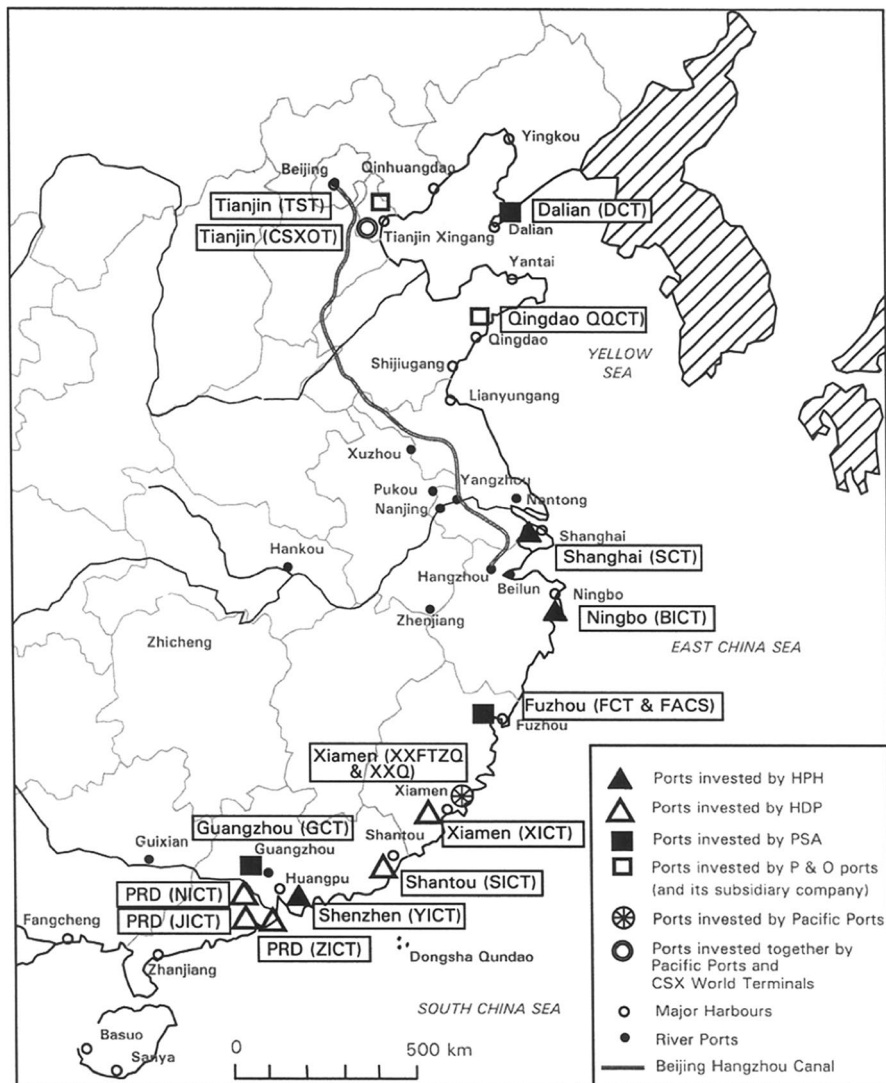
However, the port's monopolistic position ended in 1995 when the Global Alliance started to call Shenzhen's Yantian port directly for Far East-Europe and Far East-US services (Wang 1998). Although the port of Hong Kong continued to dominate the PRD's booming exports, it struggled to stop the rise of its rivals, notably Shenzhen and later Guangzhou ports (Loughlin and Pannell 2010). During the early 1990s, three container terminals started operations in Shenzhen, namely Yantian International Container Terminals Ltd. (YICT), Shekou Container Terminal (SCT), and Chiwan Container Terminal (CCT) (Fig. 5). Located along the eastern coast of Shenzhen, YICT's favourable physical position posed serious competition to Hong Kong for transcontinental traffic, while SCT and CCT, strategically located along the Pearl River estuary, competed directly with Hong Kong for transshipment cargo. The consequence was a sharp decline of Hong Kong port's container market share originating from Mainland China: from 93% in 1997 to 62% in 2003 (GHK 2004).

Founded in 1969 as a dedicated CTO, HIT was established largely as a result of the Hong Kong British Colonial Government's (hereinafter called the 'Hong Kong Government') decision to identify Kwai Chung as the site for container terminals. To catch this opportunity, HWL formed HIT as an independent business unit in the operation of Container Terminal 4 (CT4) in 1976 and left the legacy of its port operating activity by merging its dock company, Hongkong & Whampoa Dock Company Limited (HWD), into HWL, the HIT's parent company at the time. Container Terminals 6 and 7 (CT6 and CT7) were added to HIT's operations in 1989 and 1990, respectively, while a joint venture was established with COSCO for the operation of Container Terminal 8 (CT8) in 1993. With such experience, HIT became one of the leaders in container stevedoring and accounted for half of Hong Kong port's total container throughput in 1987 (HIT website, last accessed in 2017).

In the early 1990s, local expansion of HIT slowed down<sup>6</sup> largely thanks to the Hong Kong Government's tightened control on land for terminal construction, specifically the process of granting permission to construct Container Terminal 9 (CT9)

<sup>6</sup> The next local expansion of HIT took place in 2003 when Container Terminal 9 (North) (CT9N) was added to its operation.





**Fig. 5** Major foreign investments in China's container ports by 2001. *Source:* Authors

(Airriess 2001).<sup>7</sup> One should note the expansion limitation within Hong Kong by and large, HWL, the parent company of HIT and a multinational conglomerate,

<sup>7</sup> With more than a decade of the Open Door Policy and the clock ticking to 1997 (when Hong Kong would return to China), one would not deny the possibility of HIT's desire to benefit from the increasingly close relationship formed between Hong Kong and Mainland China as a reason for its geographical expansion to Mainland China. However, in this study, we could not verify this point and thus it is subject to further research.



decided to set up Hutchison Port Holdings (HPH) in 1994, in order to undertake overseas expansion and manage its growing international network. Currently, HPH is one of the world's leading port terminal investors, developers, and operators with a network of 318 berths in 53 ports, spanning 25 countries throughout Asia, the Middle East, Africa, Europe, the Americas, and Australasia.

Ironically, an early expansion project of HIT was YICT in Shenzhen. The industrial shift from Hong Kong to PRD created the demands for port stevedoring in Shenzhen. Such an increase in freight exports from PRD drew Hong Kong CTOs' attention to directly serve the hinterland in Mainland China, rather than just expanding facilities within Hong Kong's city limit. In parallel, the intensified land situation in Hong Kong pushed CTOs, including HIT, to seek alternatives for expansion.

### **Strategic perspective: from product-driven to customer-centric**

At the beginning, HIT emphasized the provision of standardized services to its clients. The flexibility of operations was undermined when HIT strictly followed the contracts with its clients, regardless of any requirements occasionally raised by clients. Quoting an interviewee who was a former senior manager of HIT:

...HIT targeted standardized operation...cannot adapt liners' requirements on flexibility of operation...we would ask our clients to raise their requirements when negotiating contract details, which we would strictly implement during our operations, but we would not make promises to offer flexibility on services to customers...we would not provide services outside of contracts.

The low flexibility in operations, however, allowed HIT to sustain a very predictable process that enabled its operations to be streamlined and highly efficient<sup>8</sup>. Such an emphasis on fairly inflexible operational processes even affected the contents of service contracts: indeed, the company charged a rather high price to any requests that would divert it from its normal practices, thus, unsurprisingly, discouraging clients to raise any ad hoc requirements. This tells us that HIT performed a product-driven strategy during this period. Under such a strategy, the company allocates virtually all its resources to fulfil the operational requirements, and it is against any actions that might jeopardize standardized efficiency.

Nevertheless, the success (in terms of implementation) of such a product-driven strategy (that maximized HIT's profit margins) was closely related to carriers: From their perspective, although specific requirements might not be fully satisfied, they continued to regard HIT as first choice due to the highly limited alternatives of similarly efficient services. As mentioned, throughout the 1980s and early 1990s, Hong Kong was the only gateway to southern China, and carriers did not have a choice but to deliver cargoes by truck or barge to and from the port of Hong Kong.

<sup>8</sup> For example, according to the Marine Department of the Hong Kong SAR Government (2006), world-wide crane productivity ranged between 23 and 40 moves per hour (MPH), while the average crane rate of Hong Kong's container terminals (including HIT) was persistent at around 36 MPH with peak rate at 40 MPH.



However, entering the 1990s, such a strategy was gradually replaced by a more customer-centric one. In 1997, the customer service team (CST) was established in HIT under the Commercial Department. CST was tasked with substantial marketing responsibilities to build and strengthen communications between HIT and its clients. As per interviewees, before its formation, the performance of departments and individuals was assessed by their contribution to the efficiency of operation, and clients' specific requirements 'would not be listened to,' let alone 'be followed.' After the formation of CST, the Commercial Department was not only responsible for preparing service contracts with clients but was also tasked with the management of contract fulfilments in other departments within HIT. As an interviewee pointed out, CST could 'perform a one-stop service to clients' which, in turn, reduced transaction costs that might arise without such a channel. Such a customer-centric awareness across the firm pinpointed HIT's institutional transition. Through tailoring solutions to specific problems that clients expressed, a customer-centric strategy was aimed specifically to secure and develop customers as HIT's profit base while the product was nearly undifferentiated from competitors (Friedman and Langlinais 1999).

The reason for such an institutional transition in the 1990s (rather than, say, the 1970s and 1980s), was due to the external competitive pressure from rising alternatives along the PRD. As mentioned earlier, ports in the PRD became 'threats' to Hong Kong, such as Shenzhen's western ports targeting barge transshipment, while its eastern port targeted transcontinental business. No matter which market these rivals targeted, it was obvious that efficiency itself could no longer be the only prerequisite for sustaining HIT's competitiveness. As per interviewees, most 'newcomers' (i.e., PRD ports) identified the port of Hong Kong, including HIT, as the exemplary model in terminal operations. With these challenges, to maintain its leadership or even survival, HIT urgently needed to introduce a new approach so as to create new competitive edges.

In practice, the customer-centric strategy was much more complex than the product-driven one. For instance, HPH established Hutchison Logistics (HL) to provide alternative logistical services to customers. Similar to HL, other multimodal services were established during the same period. An example was the Lego Co. that operated feeder services between HIT, YICT, and several ports along the western PRD. Another subsidiary, Hutchison Ports SHICD, operated a bonded warehouse for imports and exports within the PRD. Such new capabilities allowed HPH to transit from being just a CTO to a (more spatially diversified) logistical and supply chain solution provider in southern China. The benefits to HIT under such a transition were the strengthened relationship with its major clients who used its (core) terminal services in Hong Kong. The enhancement of customer relationship formed the new competitive edge of port terminals in tackling rapidly intensive regional inter-port/terminal competition.

Still, even with such a shift in strategic focus, operational efficiency remained an important parameter within HIT, as efficiency was still a core consideration of carriers due to the deployment of megasized containerships. Although the trend of mega-ships did not necessarily lift the periodic throughput of a port, to say the least, it certainly raised operational complexity. To handle such ships efficiently, more resources (e.g., ship-to-shore cranes) are required, so as to shorten the time



staying along berths. Here one should note that terminals, including HIT, have always wanted to despatch mega-sized ships, as they would often occupy more than a conventional berth, no matter how much volume (call size) the ships would bring to the port. For the sake of reducing bunkering costs, mega-ships often reduce speed at sea. The result is a substantial reduction of available time for stevedoring activities along the berth (the so-called berth windows). Facing ever-increasing ship sizes, sustaining and improving efficiency has remained an important factor in deciding port terminals' competitiveness, including HIT's.

### From local to multinational CTO

Although HIT diverted its strategic focus from internal operations to client relationship, it was soon clear that traditional marketing was not a direct solution in terms of gaining competitive edge within the port terminal sector. Taking competition between Hong Kong and Shenzhen as an example, the two ports nearly served the same hinterland and built communicative channels with the same groups of clients (Wang and Slack 2000). It thus became virtually impossible for any of them to dominate market information. Thus, customer-centric strategy was deemed not instructive enough for HIT to build competitive advantage and something more than traditional marketing was urgently required. In this study, we found that 'space' could be an effective solution to fill in the gap, which emerged with the rise of the PRD competitors.

In this case, apart from the stated customer-driven strategy, on a regional scale, HIT ambitiously transformed itself from a local- to a multinational CTO. It started to expand overseas (outside Hong Kong) in the early 1990s with YICT as one of the key projects. A holding company, HPH, was established to manage the port terminal-related properties of HWL, which included both HIT and YICT. The structural reorganization indicated that HIT would no longer be a local operator but a regional one. The pulling force was the development of the southern Chinese hinterland, driven by the Open Door Policy that escalated the demands for stevedoring services (Ng and Tam 2012). In spite of this, the development of HIT, to match growing demands, was constrained by the lack of land within Hong Kong's city limit. As a result, YICT was developed to cater for the demands of HIT customers. The reason for the expansion of HIT and its transfer to HPH was the strong client demands for cargo handling capacity. Although HIT and YICT were operated in different locations, they had virtually the same hinterland and were highly similar in terms of operations, planning, and management. Inheriting the experience and customer base of HIT, YICT grew rapidly in the 1990s and became an important gateway of PRD and southern China itself by the turn of the century.

During the early 1990s, a regional role was adequate for HPH to satisfy customer demand for handling capacity. However, the emergence of shipping alliances and the establishment of *trunk-and-feeder* shipping networks (Ng and Liu 2014) upset such a balance. Since 1994, major container carriers began to form strategic alliances for multiple purposes, e.g., for sharing risks and resources, accessing new markets, enhancing capacity utilization of mega-containerships, etc. (Dacin et al.



1997). Even before the emergence of alliances, major container carriers already penetrated different locations and HIT/HPH coped with their expectations on cargo handling in southern China. The establishment of shipping alliances allowed carriers to further access markets outside southern China and, indeed, East Asia. By following the ‘globalization of its clients’ through geographical expansion, HPH actively constructed and/or acquired container ports and terminals from the East to the West. By the turn of the century, it has established itself as one of the world’s leading multinational CTOs that we know nowadays.

One should note that their locational choice was not at random but following the footsteps of major carriers (i.e., its main clients). This is pivotal, as the success of deploying mega-containerships nowadays relies heavily on the ability of terminals to handle them along the major liner shipping routes. Before ordering their mega-sized ships (> 18,000 TEUs), Maersk, the world’s largest shipping line in terms of capacity, contacted the major CTOs along the Far East/Europe routes, inquiring on their capacity to handle such ships. Among the seven Asian ports that the first 18,000 TEU ship called at, four of them belonged to HPH’s network, namely Yantian, Hong Kong, Shanghai (all in China), and Kwangyang (in South Korea). Without the spatial expansion of terminals, including HIT, duly supported by efficient operations, it would be difficult for carriers to realize the economies of scale of mega-containerships (Ng and Liu 2014). Consultation with the major CTOs, such as HPH, PSA, and APMT, also helped carriers to proceed with the process more smoothly.

## Discussions

An effective way of HIT to transform its product-driven to customer-centric approach to its operations was to ‘lubricate’ its own institutional system through the effective use of the spatial outlet. HIT did not only transform its strategy from product-driven to customer-focus, but also expand its regional scope of operations from a local to a multinational CTO. By doing so, HIT redefined the nature of its business and, reciprocally, transformed the roles and initiatives of its own institutional agents that included decision-making, planning, and management. The regional expansion of HIT created the spatial outlets for decision-makers to create a ‘new’ absolute space and pushed them to reevaluate its business and operations from a different spatial dimension. This process expanded the original ‘absolute space’ of HIT’s decision-makers, notably in perceiving the nature of the stevedoring business in Hong Kong. This created the ingredients to undertake new initiatives, to redefine goals, reprioritize adaptation strategies, and reestablish new standards. Also, the changing perception of space among decision-makers prompted HIT to undertake initiatives to expand the well-established absolute space within HIT. Although core decision-making still took place inside their own offices, HIT’s decision-makers have already evolved and become ‘network managers’; they promoted consensus-building between terminals (i.e., the institutional agents within HPH) from different spatial levels and developed strategies that could realistically achieve both short- and long-term benefits (from product-driven to customer-centric strategy). Also, they played pivotal roles in disseminating knowledge and experience between different





spatial dimensions (hierarchy and regions) within the firm. Such a process facilitated HIT/HPH to become one of the world's leading CTOs.

## Conclusions and further research

Through a detailed investigation on HIT, the paper contributes to the research on the dynamic relationship between geography and institutional change. We confirm the proposition that space can be used as an effective tool in catalyzing the transformation of institutions and unlock their dependence from past practices and experiences. Although HIT only served us here as one schematic exposition (albeit highly significant), it highlights important principles of the relationship between space and institutions that can lead to paradigm shifts in the operation and management of both public authorities and private businesses. Facing a fast, ever-changing world, characterized by incessant capital accumulation and structural reforms (Harvey 2006), continuous research, germane to reduce uncertainty in decision-making and facilitate institutional change, is not optional.

Further research is required to analyze the effects of space and spatial outlets on institutional change. The paper has only highlighted that space can cause institutional changes, while the exact impacts of such changes (positive or negative) have yet been systematically investigated. Institutional change implies a redistribution of power and responsibilities between stakeholders from different spatial dimensions. Inevitably, major political battles may take place as a result, especially when financial obligations come to the forefront. Also, one should note that, since the turn of the century, the relationship between the ports in Hong Kong and PRD has evolved further and become more substitutable and complementary. This may pose strategic impacts on HIT's investments across borders and associated institutional changes, while port authorities, including that in Shenzhen, might have incentives to maintain intra/interport competition when choosing to cooperate with CTOs (Yip et al. 2014). Although earlier research has addressed such an evolution (e.g., Notteboom 2009; Lam and Yap 2011; Wang et al. 2012; Notteboom et al. 2017), hitherto, few (if any) have linked this discussion with the geography of institutional change. In our view, this is a major gap, and we offer the necessary ingredients for further research so as to induce the theoretical foundation being laid down here.

Last but not least, the study gives an illustrative example of how port geography research contributes to the theoretical discussions on human geography and other disciplines, particularly how space interacts with institutional systems and their development. Although HIT's story hints that space positively affects institutional development, this is not necessarily always the case. For example, in contrast to this paper's case, Ng et al. (forthcoming) conclude that the attempt of spatial movement (relying on informal institutions with more and diversified stakeholders and levels of authority) has 'eroded' the institutional system (termed by them as 'institutional erosion') and stagnated ports' effectiveness in adapting to the potential impacts posed by climate change. Such contradictions reveal the kaleidoscopic relationship between space and institutional change that can go either way. This highlights the criticality to further investigate the right conditions under which ports can use space





for the betterment of institutional development and adopt an effective approach [or even a Leibniz-style framework comprising the best of all possible compromises; see Gottlieb (2016)] for such purpose. It is our strong belief that the paper opens the floodgate in addressing an overlooked issue, of which the need for more attention has long become overdue.

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## References

- Airriess, C.A. 2001. The regionalization of Hutchison Port Holdings in Mainland China. *Journal of Transport Geography* 9 (4): 267–278.
- Bathelt, H., and J. Glückler. 2014. Institutional Change in Economic Geography. *Progress in Human Geography* 38 (3): 340–363.
- Boxer, B. 1991. Societal Contexts of Ocean Pollution Science: Cross-National Comparisons. *Global Environmental Change* 1 (2): 139–156.
- Buitelaar, E., A. Lagendijk, and W. Jacobs. 2007. A Theory of Institutional Change: Illustrated by Dutch City-Provinces and Dutch Land Policy. *Environment and Planning A* 39: 891–908.
- Dacin, M.T., M.A. Hitt, and E. Levitas. 1997. Selecting Partners for Successful International Alliances: Examination of U.S. and Korean Firms. *Journal of World Business* 32 (1): 3–16.
- Friedman, J.P., and T.C. Langlinais. 1999. Best Intentions: A Business Model for the eEconomy. *Outlook* 1: 34–41.
- Fuchs, M., and A. Scharmanski. 2009. Counteracting Path Dependencies: Rational Investment Decisions in the Globalizing Commercial Property Market. *Environment and Planning A* 41 (11): 2724–2740.
- Fujita, M. and Mori, T. 2005. Frontiers of the new economic geography, discussion paper, the Academic Research Repository at the Institute of Developing Economies, IDE-JETRO (no. 27).
- GHK. 2004. Hong Kong Port Master Plan 2020. Paper prepared for the Government of the Hong Kong Special Administrative Region (HKSAR) (Legislative Council paper no. CB(1)230/05-05(04)). <http://www.legco.gov.hk/yr04-05/english/panels/es/papers/es1122cb1-230-4e.pdf>.
- Glassman, J. 2004. Transnational Hegemony and US Labor Foreign Policy: Towards a Gramscian International Labour Geography. *Environment and Planning D: Society and Space* 22 (4): 573–593.
- Gottlieb, A. 2016. *The Dream of Enlightenment: The Rise of Modern Philosophy*. New York, NY: Liveright.
- Gutmann, A., and D. Thompson. 2012. *The Spirit of Compromise*. Princeton, NJ: Princeton University Press.
- Hall, P.A. 1986. *Governing the Economy: The Politics of State Intervention in Britain and France*. Cambridge: Polity.
- Hall, P.A., and R.C.R. Taylor. 1998. Political Science and the Three New Institutionalisms. In *Institutions and Social Order*, ed. K. Soltan, E. Soltan, and E.M. Usaner, 14–44. Ann Arbor, MI: University of Michigan Press.
- Harvey, D. 2005. *A Brief History of Neoliberalism*. Oxford: Oxford University Press.
- Harvey, D. 2006. *Spaces of Global Capitalism: Towards a Theory of Uneven Geographical Development*. London: Verso.
- HIT website: <https://www.hit.com.hk>. Accessed Dec 2017.
- Hodgson, G. 1993. *Economics and Evolution: Bringing Life Back in Economics*. Cambridge: Polity.
- Jessop, B., and S. Oosterlynck. 2008. Cultural Political Economy: On Making the Cultural Turn Without Falling Into Soft Economic Sociology. *Geoforum* 39 (3): 1155–1169.
- Krugman, P.R. 1991. Increasing Returns and Economic Geography. *Journal of Political Economy* 99: 483–499.



- Lam, J., A.K.Y. Ng, and X. Fu. 2013. Stakeholder Management for Establishing Sustainable Regional Port Governance. *Research in Transportation Business and Management* 8: 30–38.
- Lam, J.S.L., and W.Y. Yap. 2011. Container Port Competition and Complementarity in Supply Chain Systems: Evidence from the Pearl River Delta. *Maritime Economics and Logistics* 13 (2): 102–120.
- Loughlin, P.H., and C.W. Pannell. 2010. The Port of Hong Kong: Past Successes, New Realities and Emerging Challenges. *Focus on Geography* 53 (2): 50–58.
- March, J.G., and J.P. Olsen. 1989. *Rediscovering Institutions: The Organizational Basis of Politics*. New York: The Free Press.
- Marine Department of the Hong Kong SAR Government. 2006. *Port Benchmarking for Assessing Hong Kong's Maritime Services and Associated Costs with other Major International Ports*. Planning, Development and Port Security Branch, Marine Department, Hong Kong SAR Government, Hong Kong.
- Martin, R. 2000. Institutional Approaches in Economic Geography. In *A Companion to Economic Geography*, ed. E. Sheppard, and T. Barnes, 77–94. Oxford: Blackwell.
- Ng, A.K.Y. 2013. The Evolution and Trends of Port Geography. *The Professional Geographer* 65 (1): 65–86.
- Ng, A.K.Y., and C. Ducruet. 2014. The Changing Tides of Port Geography (1950-2012). *Progress in Human Geography* 38 (6): 785–823.
- Ng, A.K.Y., and J.J. Liu. 2014. *Port-Focal Logistics and Global Supply Chains*. New York, NY: Palgrave Macmillan.
- Ng, A.K.Y., P.V. Hall, and A.A. Pallis. 2013. Institutions and the Transformation of Transport Nodes. *Journal of Transport Geography* 27: 1–82.
- Ng, A.K.Y., Monios, J. and Zhang, H. (forthcoming) Climate adaptation management and institutional erosion: insights from a major Canadian port. *Journal of Environmental Planning and Management* (in press). <https://doi.org/10.1080/09640568.2018.1435410>.
- Ng, A.K.Y., and A.A. Pallis. 2010. Port Governance Reforms in Diversified Institutional Frameworks: Generic Solutions, Implementation Asymmetries. *Environment and Planning A* 42 (9): 2147–2167.
- Ng, A.K.Y., and K.C. Tam. 2012. China's Seaport Development During the Early Open-Door Policy Period, 1978-2002. In *World's Key Industry: History and Economics of International Shipping*, ed. G. Harlafti, S. Tenold, and J.M. Valdaliso, 180–199. New York, NY: Palgrave Macmillan.
- Notteboom, T. 2009. Complementarity and Substitutability Among Adjacent Gateway Ports. *Environment and Planning A* 41: 743–762.
- Notteboom, T., P. de Langen, and W. Jacobs. 2013. Institutional Plasticity and Path Dependence in Seaports: Interactions Between Institutions, Port Governance Reforms and Port Authority Routines. *Journal of Transport Geography* 27: 26–35.
- Notteboom, T.E., F. Parola, G. Satta, and A.A. Pallis. 2017. The Relationship Between Port Choice and Terminal Involvement of Alliance Members in Container Shipping. *Journal of Transport Geography* 64: 158–173.
- North, D.C. 1990. *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge.
- Oxford Dictionaries (Edited by Soanes, C. and Stevenson, A.). 2010. *Oxford Dictionaries of English (2nd Edition)*. Oxford University Press, Oxford.
- Sager, T. 2011. Neo-liberal Urban Planning Policies: A Literature Survey 1990-2010. *Progress in Planning* 76: 147–199.
- Strambach, S. 2010. Path Dependency, Path Plasticity-the Co-evolution of Institutions and Innovation: The German Business Software Industry. In *Handbook for Evolutionary Economic Geography*, ed. R.A. Boschma, and R. Martin, 406–431. Cheltenham: Edward Elgar.
- Tongzon, J.L., A.K.Y. Ng, and E.C. Shou. 2015. Institutions, Transport Infrastructure Governance and Planning: Lessons from the Corporatization of Port Authorities in East Asia. *Environment and Planning C: Government and Policy* 33 (6): 1467–1483.
- Wang, K., A.K.Y. Ng, J. Lam, and X. Fu. 2012. Cooperation or Competition? Factors and Conditions Affecting Regional Port Governance in South China. *Maritime Economics & Logistics* 14 (3): 386–408.
- Wang, J.J. 1998. A Container Load Center with a Developing Hinterland: A Case Study of Hong Kong. *Journal of Transport Geography* 6 (3): 187–201.
- Wang, J.J., and B. Slack. 2000. The Evolution of a Regional Container Port System: The Pearl River Delta. *Journal of Transport Geography* 8 (4): 263–275.



- Weber, M. 1922. *Economy and Society* (edited version by G. Roth and C. Wittich in 1978). University of California Press, Berkeley, CA.
- Williamson, O.E. 2000. The New Institutional Economics: Taking Stock, Looking Ahead. *Journal of Economic Literature* 38: 595–613.
- Yip, T.L., J. Liu, X. Fu, and J. Feng. 2014. Modeling the Effects of Competition on Seaport Terminal Awarding. *Transport Policy* 35: 341–349.
- Young, O.R. 1989. *International Cooperation: Building Regimes for Natural Resources and the Environment*. Ithaca, NY: Cornell University Press.



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