

TACIT KNOWLEDGE SPILL OVER AND SUSTAINABILITY IN DESTINATION  
DEVELOPMENT

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**Abstract:** This study examines tacit knowledge spillovers among lodging firms within a tourism destination and how these tacit knowledge spillovers may result in destination transformation. Longitudinal data for this study were collected through in-depth interviews with lodging firms' managers and operators in a destination located in the south China. Findings suggested that locals are likely to follow the examples of successful pioneering businesses. They will learn from those examples and copy their business model. Tacit knowledge spillover in a region over an extended time period will result in successful development of tourism if it is managed carefully. Local government policies are likely to play a central role in tacit knowledge spillover. Effective interventions of the government have encouraged and facilitated tacit knowledge spillover through establishing knowledge transfer mechanisms in the community.

**Keywords:** tacit knowledge spillover; lodge clusters; tourism destination; innovation; transition.

## INTRODUCTION

Knowledge is defined as including all the factors that have the potential to influence human thought and behavior and that sometimes allow the explanation, prediction, and control of physical phenomena (Hall & Andriani, 2003). It includes a number of skills, know-how, capabilities and experiences. Knowledge generation is seen by many as the fundamental characteristic of contemporary competitive dynamics (Styhre, 2004). Furthermore, scholars argue that knowledge can be managed as an organizational resource and can be used to create a competitive advantage (Styhre, 2004). Therefore, the production, acquisition, absorption, reproduction, and dissemination of knowledge processes have received a great attention from economic geographers and those of management and business disciplines (Howells & Bessant, 2012). However, most of the studies that examine explicit or coded knowledge were conducted in manufacturing setting.

In recent years, knowledge management has started receiving an increasing attention from tourism researchers; mainly because of its significant impact on product development and management within destinations (Cooper, 2006; Cooper & Ruhanen, 2004; Hallin & Marnburg, 2008a; Scott & Laws, 2006). Knowledge transfer has been recognized as one of the most critical knowledge management topics in the field (Avdimiotis, 2012; Baggio & Cooper, 2010; Borges, Eusébio & Carvalho, 2012; Buckley & Ollenburg, 2013; Dutton & Eells, 2007; Johnson & Lyons, 2011; Panahi, Watson & Partridge, 2013; Shaw & Williams, 2009a; Weidenfeld, Williams & Butler, 2010a). However, only a very small number of studies examined how knowledge transfer occurs in tourism destinations because of its intangible, often covert, and sometimes questionable legality nature (Henry & Pinch, 2000;

Singh & Hu, 2008; Weidenfeld et al., 2010a).

Tacit knowledge refers to knowledge tied to physical experiences, senses, intuition, movement skills, or “implicit rules of thumb” (Nonaka & von Krogh, 2009, p. 635). Tacit knowledge is experiential and subjective, which includes ideals, ideas, mental models, perspective and beliefs (Nonaka, Toyama & Nagata, 2000). Tacit knowledge can be considered as subconscious knowledge that is not directly taught but learned and resulting in domain-specific knowledge (Wagner & Sternberg, 1985). For example, such knowledge can be acquired through on-the-job training, when a new intern learns how to provide the best service by observing and imitating experienced customer service agents, or by practicing a complicated task (Nonaka & Takeuchi, 1995). Researchers also argue that tacit knowledge can play a central role in the process of learning-through-interactions and knowledge transfer among small and medium sized local businesses (Gertler, 2003). However, understanding the mechanism to capture and transfer tacit knowledge, especially spillovers spatially or inter-firms, still remains as a major challenge in tourism field.

This study aims to examine how tacit knowledge spillover takes place in tourism destinations and how those knowledge spillovers influences destinations by investigating tourism development and firm agglomeration process on Nankun Shan and surrounding area, a well-known vacation destination, located in Southern China. Specifically, this study examines tacit knowledge spillovers among lodging firms on Nankun Shan and surrounding area and how these tacit knowledge spillovers transformed the Nankun Shan and surrounding area into a well-known vacation destination.

## LITERATURE REVIEW

### *Definition and characteristics of tacit knowledge*

Even though several classification of knowledge has been proposed in the knowledge management literature (Shaw & Williams, 2009), Polanyi's (1958) explicit and tacit knowledge classification has received the most attention. While explicit knowledge refers to the knowledge that has been captured in a code, or a language that facilitates communication (Hallin & Marnburg, 2008a), tacit knowledge refers to the knowledge that "we can know more than we can tell" knowledge, which entails information that is difficult to express, formalize, or share (Polyani, 1996, p.4). Tacit knowledge exists in the background of our consciousness, enabling us to focus our conscious attention on specific tasks and problems (Gertler, 2003). As argued by Roy (2001), tacit knowledge is unconsciously acquired from the experiences one has while immersed in an environment. It often allows people to perform at a higher level than that of explicit knowledge does.

Tacit knowledge is heavily dependent on its holder, attached to a person's mind, difficult to communicate, and deeply grounded in an individual's actions and experiences (Panahi et al., 2013). According to Haldin-Herrgard's (2000) study, 149 different synonyms (epitomes) were used in the literature when discussing tacit knowledge from 1958 to 2002; among them the most frequent ones were intuition, skills, values, behavior, insight, mental models, practical intelligence, and know-how. Tacit knowledge is, thus, difficult to measure and express, but is described as a critical asset for individual, group and organizational performance (Styhre, 2004). Tacit knowledge is difficult to express and it can only be acquired and transferred by means of internalization and socialization (Koskinen & Vanharanta, 2002). While

internalization usually happens in learning process, during which participants learn from each other by mutual support, advice and questioning, socialization usually happens in informal face-to-face interactions, which can take place through many channels (Daft & Weick, 1984).

While tacit knowledge may offer competitive advantages for individuals or organizations, owners of (or innovators through) tacit knowledge tend to be reluctant to share or communicate it in order to maintain the competitive advantage generated by that knowledge (Chris, 2006). When owners apply their innovative knowledge to practice, they inevitably risk losing the right of knowledge mastery and acquiring its surplus, ascribing to the possibility that innovative knowledge could be imitated, learned and hijacked by others at low or even no cost. To resolve the phenomenon of externalities, Coase (1960) suggests that the most efficient resolution could be to establish explicit intellectual property policies and its corresponding pricing and exchange mechanism. This will provide effective protection for innovators when innovative knowledge becomes explicit such as patented technology. Nevertheless, while the patent system has encouraged innovators to protect their discoveries, its strong emphasis on the patent instrument could draw attention away from the many innovative ideas and concepts that will never be formally protected by patents (Hjalager, 2002). This is because this kind of innovative tacit knowledge is generally hard to define or codify, for which the current laws are unable to provide definite protection. The resultant risk of opportunism thus becomes the pivotal factor influencing innovators' decisions of whether to self-protect or to share their knowledge.

*Mechanism/channels of tacit knowledge spillover*

In knowledge management literature, knowledge spillovers are central to notions of economic growth, technological progress, and regional economic development (Henderson, 2007). Transferring knowledge requires channels that contain push and pull mechanisms (Hjalager, 2002). Studies identified a number of knowledge transfer channels/mechanisms including talents (or labor) mobility (Almeida & Kogut, 1999), cooperation between research and development (Audretsch & Feldman, 1996; Charlot & Duranton, 2004), entrepreneurship (Zucker, Darby & Brewer, 1998), and trade and investment.

In tourism literature, at least four channels/mechanisms of knowledge transfer have been discussed. These are “learning by observation/imitation/and demonstration”, “inter-firm exchanges”, “labor mobility” and “knowledge brokers” (Hall & Williams, 2008). Learning by observation/imitation/and demonstration suggests that the learner benefits from the information or knowledge via observation. Since it is hard to protect service knowledge by patents and conceal innovations in ‘front of house’ operations, learning by observation is a very common learning method utilized by tourism operators (Hall & Williams, 2008).

Inter-firm exchange refers to learning through suppliers or intermediaries about service practices of other companies that utilize the same suppliers or intermediaries. It also refers to knowledge gained through collaboration with companies that provide similar services. Labor mobility refers to knowledge gained from hiring employees who play key roles in competitors operations (Henry & Pinch, 2000). Knowledge brokers refer to influential individuals who work within and across different firms or knowledge communities (Tushman & Scanlan, 1981). Since they work at various levels and multinational chains, they play a key role in transferring unique knowledge (Hall & Williams, 2008). In addition to these knowledge

channels, Hjalager (2002, p. 471) summarized four types of knowledge transfers modes: trade (mainly through trade associations), technological service (through purchases or leases of technology), infrastructural (through public bodies as an ‘agent of knowledge transfer’) and the regulation (through undertaking various forms of mandatory actions, prohibitions and penalties) systems. But quality of knowledge transfers through these channels are sometimes criticized because knowledge transfer usually is blurred, shifting and multi-scalar, and thus complex, and they usually overlap.

Because of the difficulty of articulation or codification, tacit knowledge can only be shared effectively between two or more people who shares similar social background including, but not limited to, shared values, language and culture. It is difficult to exchange tacit knowledge over long distances because of its context-specific nature, which make it geographically bound (Gertler, 2003). Shaw & Williams, (2009b) also suggest that geographical proximity can play a key role in developing strong levels of trust and shared values which are critical for effective knowledge sharing. This general concept of geographical proximity leads to the more specific notions of clusters that provide positive and location-specific economic externalities (Ketels, 2003), endowing firms with competitive advantages (Nordin, 2003). However, considering innovation and clusters as intermediate variables to study the role of knowledge spillover in regional economic development presents challenges in identifying theoretical grounds for knowledge spillovers (or providing explanation for its mechanism), and identifying and measuring the spillovers (Audretsch & Feldman, 2004).

### *Tacit knowledge spillovers in tourism and hospitality*

Tourism organizations and the entrepreneurial community are rich in tacit sources due to the nature of the industry (Chris, 2006). The industry is characterized by its outputs of service products, which primarily developed to satisfy the demand for accommodation, food and beverage (Buttler, 1986). To deliver the final service products, companies collaborate with a variety of providers (e.g., convention centers, online travel agencies, tour operators, carriers, entertainment, shopping and local sightseeing agencies, and various suppliers) in which some compete and others collaborate with one another (Hallin & Marnburg, 2008b). Even though the service processes are becoming more and more knowledge-based or knowledge-intensive (Kahle, 2002), tourism innovations are difficult to develop and implement but at the same time relatively easy to imitate (Decelle, 2006; Hjalager, 2002), particularly when processes are highly visible and the level of technology is relatively unsophisticated (Hall & Williams, 2008). As a result, tourism innovations are likely to spread among companies that provide similar services and products within a region very rapidly; such a process is also identified as the spillover of tacit knowledge (Yuan & Liu, 2010).

Despite the fact that tourism industry is rich in tacit knowledge, these knowledge-based practices have not received much attention from researcher (Chris, 2006; Williams & Shaw, 2011; Xiao & Smith, 2007). Some researchers argue that hotels are among the earliest to utilize and benefit from tacit knowledge by means of imitating or copying services and products from multinational corporations. These, according to Jacob & Groizard (2007), are typical examples of gaining economic benefits from tacit knowledge spillovers. Recent studies also reveal that innovations in tourist attractions were found to be relatively easily



imitated by both neighboring and distant attractions, particularly those with similar product/service features (Decelle, 2006; Hall & Williams, 2008; Hjalager, 2002).

Although Athiyaman (1997) points out the lack of research in establishing tourism knowledge framework, scholars are paying more and more attention to service innovation and knowledge spillover in respect to tourism supply (Hjalager, 2010; Shaw & Williams, 2009b). Nevertheless, there is a lack of studies in examining both theoretical and empirical issues on spatial spillovers of tacit knowledge and its influence on regional economic development. This paper represents such an attempt to address the issue of tacit knowledge spillover through documenting the transition of an ecotourism mountain resort in Guangdong Province, China.

## METHODOLOGY

A longitudinal case study was designed to capture the sequential dynamics utilizing a multi-method approach. In-depth, semi-structured interviews with key individuals who experienced tacit knowledge spillover process were conducted. An on-site survey was taken to record the resorts distribution in the area and their characteristics. Based on this survey a specific map was drawn. Additional primary data were obtained through participant observation. One of the authors who has participated in the tourism planning and local government policy consulting process interviewed key individuals at various stages of the process. And also some secondary data such as archived documents, journalistic accounts and tourism planning documents were collected from local government and enterprises. Multiple data sources enabled us to conduct a triangulation of observation. Data source and uses are

summarized in Table 1.

INSERT TABLE 1 HERE

### *Data collection*

*On-site survey.* On-site survey was conducted by authors. Authors first drove around the mountain to identify the properties located on the mountain and surrounding area. Afterwards, authors contacted the managers/owners for permission to tour each property. During these visits, location, features and construction history of each property were recorded and a detailed map was drawn. Information such as the scale of the resort, building style and room decoration features were recorded in the map. Photos were taken while visiting each property.

*In-depth semi-structured interviews.* 27 key individuals such as key resorts managers, local administration officers (national forest park administration office, nature reserve administration office), different levels of government officials, different levels of tourism bureau officers, and tourism industry practitioners who are familiar with the history of Nankun Shan were selected for interview. Two individuals were interviewed multiple times: one is the manager who invested and ran the first luxury resort in Nankun Shan, the other is the officer of Nankun Nature Reserve Administration Office. Semi-structured face-to-face interviews, each lasting between 30 minutes and 2 hours were recorded. All individuals were asked to reflect and comment on the tourism development history of Nankun Shan, and to identify the key people and events that impacted the development process. They were asked to describe how and why Nankun Shan evolved from a forest sightseeing attraction into a summer resort destination, what events or forces they regarded as the main cause of this

transition. Other questions were tailored to each individual's specific role. All the interviews are transcribed into a 153 pages single-spaced document.

*Participant observation.* One of the authors was invited as an adviser for the Nankun Shan Cross Water Hotel (NSCWH) between 2001 and 2008. During this period, the author met with the managers of NSCWH every season to discuss the progress of the hotel development and the development strategy of the hotel. The author also participated in the Nankun Shan Ecotourism Destination Planning process during 2006-2008. All these participations enabled the author to meet all stakeholders of Nankun Shan tourism development, and carry out dozens of informal conversations that served as unstructured interviews. This also ensured that the author had unrestricted access to people and documents of Nankun Shan. Through these interactions, the author gathered very detailed data about the unfolding development of Nankun Shan.

*Archival data.* Extensive archival data were captured from the local government including tourism planning documents, government annual work plans and reports, year books, local chronicles, local tourism bureau annual work reports, and journal articles about Nankun Shan tourism development.

### *Methodology*

This study utilized a case study approach with an iterative and abductive methodology aiming to build and refine the theory of knowledge spillover and tourism destination transition. Applying grounded theory techniques, four cascading activities were performed first: tagging, theming, theorizing and timing. "Tagging" was focused on large sections of

various transcripts including semi-structured interviews, on-site survey notes, and consulting work notes about Nankun Shan. Grounded coding of key topics of conversation such as who, when, and why similar style hotel were built, who learnt from whom, etc. were performed.

“Theming” was utilized to identify abstract themes in the data that can explain why and how knowledge spillovers among the stakeholders occurred and the role of government.

“Theorizing” was used to develop visual maps of the development process of Nankun Shan to theoretically frame and organize collected data. During the theorizing process, authors went through several rounds of theoretical discussion sessions in order to clarify the meaning of each code. During these discussion sessions, authors also re-examined interpretative model of Nankun Shan development by critically examining and revising the conceptual network map that showed how codes were connected conceptually. The “timing” activity was performed to validate and refine the interpretative model by conducting temporal analyses of the text used to identify the codes and the conceptual relationships among the codes.

### *The development process of Nankun Mountain*

*The Early Stages of Tourism Development.* Located in Yonghan Town of Longmen County within Guangdong Province’s Huizhou Municipality, Nankun Mountain is 97 kilometers away from Guangzhou, 70 kilometers away from Dongguan, and 120 kilometers away from Shenzhen (Figure 1). It is a distinct ecotourism destination surrounded by major metropolitan cities in the Pearl River Delta (PRD) region. In the early 1980s, tourism started in Nankun Mountain with only a few small state-owned restaurants and hostels.

## INSERT FIGURE 1 ABOUT HERE

As the number of visitors increased, Zou Sheng (a local villager in pseudonym) built the first family inn (called Ji-An-Ju) to accommodate overnight visitors in 1995, at a time when local people still lived in half-timber houses. Ji-An-Ju, located by the main road at the town center of Nankun Mountain, was a concrete building equipped with a television, bathroom and standard beddings, appearing as a so-called modern family hotel. It had around 20 to 30 rooms with reasonable price and thus was favored by visitors at that time. Its success later attracted the attention of other residents; they started building family inns utilizing their homestead by imitating the concrete structures, standard beddings and their choice of locations close to traffic arteries. One hotel owner stated that by the year of 2000 family inns in the town center have reached to a remarkable scale of development as a result of interactive imitations by villagers. This heavy concentration of family inns also resulted in creation of a sightseeing destination image for Nankun Mountain in Chinese travelers mind who lived in Pearl River Delta.

*The Appearance and Development of Pioneer Enterprises.* Around the year of 2000, there was a growing intense competition among family inns, which were then not regulated by the government. Meanwhile, a new type of lodging facility appeared on the mountain. In 1994, Wu Ming, an overseas Chinese from Malaysia (in pseudonym), built a European style lodging facility incorporating the features of landform and landscape of Nankun Mountain (later known as Alpine Villa) at Zhongpingwei village, which is far away from the town center. The Alpine Villa was built in a remote site with intentionally difficult access rather than at the

town center with convenient transportation. Instead of using concrete, villas were built utilizing a timber structure designed to reflect local culture. Each villa had an outdoor pool. Furthermore, the property was managed by Mr. Wu as a family run business, proving a relaxed and cozy family atmosphere. During an interview, Mr. Wu, the owner of the Alpine Villa, attributed one fifth of its success to its “primitiveness” which helps bring about a rustic atmosphere, two fifths to its comfort resulting from the hospitality and passion of its warm-hearted hosts, and another two fifths to its management which is focused on quality, efficiency and profits. According to Mr. Wu, private and picturesque location, emphasizing “relaxation” rather than “lodging” was the main driver behind the property’s success. The property was also designed to highlight the combination of “European amorous feeling” and water landscape. Mr. Wu, thus, summarized its success factors as “the concept of holiday mountain resort”, “design in European style” and “utilization of water landscape”. Under the direction of Mr. Wu, the Alpine Villa expanded into three regions with about 40 guest rooms.

*Rapid Development through Imitation.* Stimulated by the success of Alpine Villa, the local government started encouraging development of lodging facilities for domestic vacationers around 2001. Local villagers turned their eyes to Alpine Villa for development inspirations. They visited and learned from Alpine Villa, and through imitation they built their own lodging facilities. The major characteristics of these new “Alpine Villas” could be summarized as follows: located in remote mountains, timber built cabins, surrounded with peaceful environment. Such imitating activities reached its peak during the years of 2000 to 2004. As a result, various properties were built in Nankun Mountain such as the timber-structured “Diao-Yu Island Resorts” invested by local villagers; the “Yun-Tian-Hai

Holiday Hotel” that targeted middle to high end markets and funded by external investors; the Tao-Yuan Villa that featured small water falls, forest, alp and garden bridges; the Dan-Feng Village designed around the themes of peacefulness, wilderness, business and fitness, etc.. Since then, Nankun Mountain has entered the stage of rapid development stage.

*Formation of Resort Image and Transition to Tourism Economy.* Based on the concept of “Rustic Luxury Hotel” derived from the success of the “Alpine Villa”, the “Crosswaters Ecolodge and Spa” was opened in 2006, which marked the start of a new stage of hotel development in Nankun Mountain. The former manager of the Crosswaters Ecolodge and Spa stated that

*“Alpine Villa has given us the investment confidence; actually it has tested the market for us. However, we are unable to survive unless we surpass the Alpine Villa. Therefore, in addition to learning from Alpine Villa and other holiday hotels in Nankun Mountain, we have also visited most typical holiday hotels throughout the world. We have not only absorbed their experience, but have also employed world-class designer for our hotel”.* (Based on interview with hotel manager, 25 Jan, 2010)

The hotel was designed by a well-known design team; fully presenting the style of both rusticity and luxury. Thus, raising the concept of mountain holiday resort concept to the acme. The Crosswaters Ecolodge and Spa then became the first domestic resort to gain the certification of “Green Globe 21 Standards for Sustainable Travel and Tourism” and the “Award of Global Landscape Design”. Consequently, the local government regarded

Crosswaters Ecolodge and Spa as a local brand for vacationers and began to actively promote the hotel. Soon the Crosswaters became a widely known resort brand in the Pearl River Delta Region. Gradually, Nankun Mountain became a mountain vacation destination of choice for weekenders, holidaymakers, and tourists from the Pearl River Delta Region.

As stated by the secretary of the Guangdong Tourism Association, Nankun Mountain became the cradle and representative of Guangdong mountain holiday resorts. Overtime, cluster of hotels near main attractions and individual hotels in more distant, more private locations were developed in Nankun Mountain. These developments have increased tourists' average length of stay from 0.8 day to 2.3 days, which has fundamentally changed the situation of over-reliance on admission to maintain the resort's operation and management.

In 2008, Nankun Mountain was designated (re-positioned) as a Holiday Mountain Resort by the Overall Tourism Planning of Guangdong Longmen Nankun Mountain Ecotourism Area, indicating its successful transition into a tourism-oriented economy. Meanwhile, such a transition has also brought about the development of its surrounding holiday mountain resorts, with the appearance of many timber-structured hotels that are designed to reflect local culture. This has collectively led to the development of tourism-oriented economic structure in Guangdong's Pearl River Delta Region.

#### *Tacit knowledge spillovers process*

Explicit knowledge is relatively easily codified in documents and written forms (Hallin & Marnburg, 2008b) as well as patented (Hjalager, 2002). Thus, it is possible to disseminate explicit knowledge across broad spatial/geographical scales indirectly. In contrast, tacit



knowledge is difficult to be formalized, interpreted and/or transferred (Shaw & Williams, 2009b) unless by means of face-to-face communication and continuous interactions. Studies report that tacit knowledge spillover could take place by talents mobility, social capitals and networks (Cockburn & Henderson, 1998), and innovative practices of entrepreneurs (Zhao & Bai, 2009). The case of Nankun Mountain, however, shows a different mechanism of tacit knowledge spillover from the perspective of pioneering enterprises.

*The Learning between/amongst Business Professionals.* Thomas (2011) examined the process of knowledge acquisition among British business elites, and found that business elites not only operate within communities of practice (Wenger, 1998; Wenger & Snyder, 2000), but also tend to learn from their own communities of practice. Thomas (2011) reported that all business elites he interviewed emphasized “the importance of external sources of knowledge for their own learning” (p.5), and that his interviews revealed a clear pattern of learning through tacit knowledge spillover which “is characterized by informality” (p.5). In the case of Nankun Mountain, at the prime of Alpine Villa’s prosperity, the villa and its owners (the Wu brothers) have been the focus of conversations among the local business professionals. Wu recollected,

*“We are almost busy with receiving business professionals every day and to introduce our experience in operating the villa”; “most of the newly built villas have learnt from us”; “even the owner of Crosswaters Ecolodge and Spa has lodged in our hotel for days, specifically to seek our advice in building the hotel”.*

(Based on interview with Wu, 25 Jan, 2010)

The former general manager of the Crosswaters Ecolodge and Spa also said that:

*“In the early times of Crosswaters, personages from similar industry, officials and those from cultural circles are our major guests, they came to visit and learn our design, environment and notions”; “most of the domestic captains of the real estate as well as the managers from famous holiday hotels have visited us.”* (Based on interview with hotel manager, 25 Jan, 2010)

Most of those learning-through-visiting activities were reported later or shared in personal blogs with photos and narratives, which in turn helped popularize those pioneers in Nankun Mountain’s hotel development, and at the same time attracted more visitors to their hotels. Notably, diffusion of experience and spillover of tacit knowledge occurred continuously through such experiential learning visits and interactions with pioneer industry professionals.

*Publicity and Promotion Activities by the Local Government.* With the operation and subsequently successful experience of Ji-An-Ju as a family-run resort hotel, the local government began to regulate those small-scale family businesses in the Nankun Mountain area. At the same time, the government got involved in actively publicizing and promoting new accommodation facilities similar to the Alpine Villa and the Crosswaters Ecolodge and Spa. Amongst these publicity and promotional activities, the latter (the Crosswaters) was even positioned as the symbol of Nankun Mountain; it stood out as the top choice of venue for all kinds of government meetings and place to stay for government inspection groups. After 2005, the local government began to use Alpine and Crosswaters as classic models or case study

examples in conducting their training courses and/or in the actual construction of new family hotels. In 2009, Nankun Mountain was designated as a “demonstration site” of eco-/mountain tourism in Guangdong Province. In the same year, the Crosswaters Ecolodge and Spa was rated as one of the “Global Top 50 Ecotourism Resorts” by *National Geographic*, all of which brought about fame and reputation as well as tourists to these pioneering enterprises. More importantly, the engagement of government has stimulated more learners and imitators, and has further advanced the diffusion (spillover) of experiential knowledge created by these innovators.

## DISCUSSION

In the process of tourism development in Nankun Mountain, there have been two waves of learning and imitating activities. The first pertained to the tacit knowledge spillover from the family inn of Ji-An-Ju’s strategy of “targeting overnight tourists”, “locating near traffic arteries”, “providing standard rooms of star hotels”, and “operating as a family business with low investment and at low cost”. The large scale learning and imitating activities thus led to the geographical agglomeration of family hotels in the town center of Nankun Mountain, the cluster of which largely involved local participation and aimed at receiving traditional sightseeing tourists.

In the second wave, the spillover originated from the Alpine Villa resort hotel, from which imitation and learning encompassed “the concept of resource dependent mountain resort”, “choosing a site with unspoiled natural resources and privacy”, “European style of design with backyard and idyllic landscape”, “the employment of famous designers”,

“utilizing local building materials”, “luxury yet organic decoration”, “reliance on advertising, web-based marketing and public relations”, etc.. The large scale of imitation also brought about the cluster of high quality facilities in Nankun Mountain aiming to generate target high end tourists.

### *Impact clustering of tacit knowledge*

The spatial spillover of knowledge tends to take place within a region rapidly. While the geographical clustering of economic activities effectively influence the spillover, the knowledge spillover is also likely to influence the dynamics of clusters. There thus exists an endogenous interactive relationship between knowledge spillover and clusters. Zhao and Bai (2009) note that different economic structures shaped by clusters would place different emphases on innovation, and that the spatial impacts of knowledge spillover on innovation will decrease with the increase of distance. Research also suggests that spatial proximity and product similarity are closely related, but product similarity is generally more positively related to knowledge transfer and diffusion of innovations than is spatial proximity at a geographic scale (Weidenfeld et al., 2010b).

In this regard, the tacit knowledge spillover in Nankun Mountain exhibits two major spatial characteristics. First, agglomeration is based on spatial proximity and declines with the increase of distance; as the distance increases, number of followers or imitators tend to decrease. In the first round of tourism construction in Nankun Mountain, followers built their own family inns mainly through imitating the pioneer (Ji-An-Ju) located in the highly accessible main roads (Figure 2). In the second round, despite the spatial distance between

followers and pioneers, clustering took place within the region (Figure 2). Generally, the geographical/locational spread of hotels from the center to the periphery followed the law of diminishing distance.

INSERT FIGURE 2 ABOUT HERE

Second, clustering is based on resource availability with a diffusion pattern corresponding to resource distribution. Specifically, the development of holiday/resort hotels calls for (and often rely on) tourism resources. During the second round of hotel development, high end resort hotels like Alpine Villa were located in places that offered both “isolation and privacy” and “convenient access.” However, good locations as such are hard to find within the region. Consequently, spatial distributions of hotels generally resulted in clusters around tourism resources. Examination of hotels within the same cluster indicated that the greater the spatial proximity of a follower hotel to the pioneering property, the larger the similarities in structure/architecture and management style suggesting a strong tacit knowledge spillover within clusters. In contrast, high-end/high-rank hotels that are located further from the pioneering hotels tend to bear less similarity in building style and design.

#### *Role of local government*

Local government played a significant role in the tacit knowledge generation and transformation process in the Nankun Mountain region. Through the local government’s mediation and coordination efforts, the mode of tacit knowledge spillover has evolved from a

“mononuclear model” (single innovator with lots of followers) in the initial stage of innovation, to a “hub-pole model” (with one coordinator and multiple innovators and imitators or learners) in the secondary stage of innovation when all the participants were both imitators and innovators. This has, thus, helped form the regional pricing and business mechanism on the usufruct of tacit knowledge.

The most prominent evidence that marks the formation of the “hub-pole model” is the cluster behavior of “secondary innovation” by new competitors. Coordinated by the local government, the new competitors admitted to Nankun Mountain (e.g., Yun-Hai-Tian Holiday Hotel, Tao-Yuan Villa, and Crosswaters Ecolodge and Spa) did not simply copy the Alpine Villa model, but further improved it by adding features based on their expertise and knowledge. This has increased the total amount of knowledge hotel clusters possess. At the same time, the network of tacit knowledge spillover was formed resulting in “more innovation and greater learning from each other”. This also resulted in creation of resorts that focus on specialized niche markets. As the general principle of regional development and transformation suggest, when the scale of cluster of innovators within a particular industry reaches the ideal level of “q<sup>\*</sup>”, not only the “imitators, but the original traditional enterprises would fail to survive due to heavy competition, which forces players in the market to become more focused niche players.

Results of this study suggest that tacit knowledge spillover is likely to start by imitating the business practices of successful businesses. However, once the business environment reaches the maturity level, businesses will need to create their own knowledge and expertise in order to survive. This will result in creation of more knowledge. The ultimate transfer and

spillover effects of this knowledge is likely to have significant impact on the formation of economic structure and the industry, which in return will continue to promote regional development transition. However, this may not always be the case as indicated in Table 2. If the knowledge spillover mechanism does not exist and the process is not regulated, rapid development may result in fierce competition among businesses, which may slow down or even negatively influence the reputation of the area as a tourist destination.

INSERT TABLE 2 HERE

Findings indicated that local government policies played a central role in tacit knowledge spillover in Nankun Mountain. Szulanski's (1996) research on tacit knowledge in organizational learning suggest that transferring best practices from other firms is an important practice that improves a firm's learning and enables a firm to create competitive advantage. In Nankun Mountain, local government set Alpine Villa and Crosswaters Ecolodge as best practice examples and provided mechanisms and tools for effective knowledge transfer. These effective interventions of the government have encouraged and facilitated tacit knowledge spillover through establishing knowledge transfer mechanisms in the community (Wenger, 1998; Wenger & Snyder, 2000). Generally, pioneers would continue their innovation efforts as long as it gives them a competitive edge in the market place. Once the cost of innovation efforts exceeds the expected benefits, they are likely to lower their innovation efforts. As presented in Table 2, in the case of Nankun Mountain, however, the intervention of government at the right time with proper measures has pushed both the pioneers (innovators)

and followers (late-comers and imitators) to continue to engage themselves in innovation. If the conditions and mechanisms exist in a destination for tacit knowledge spillover, the efforts of those pioneers are likely to fuel regional development and transform the destination into a successful destination.

## CONCLUSION

A few studies have attempted to explain the micro decision-making processes at different stages of tourism development (Pavlovich, 2003; Plog, 1974; Plog, 2001) . However, examination of micro-level decision making and the impacts of knowledge spillover on regional economic transition have not received much attention from researchers (Yang, 1998, 2003). Drawing upon the examples of a mountain resort, this study presented a qualitative examination of the developmental path taken for regional destination transition.

Findings suggested that locals are likely to follow the examples of successful pioneering business. Locals will learn from those examples and they will try to imitate their business model. Tacit knowledge spillover in a region over an extended time period will result in successful development of tourism if it is managed carefully. During this process, policy makers in the region are likely to play a vital role in making sure that knowledge spillover and imitation results in collaboration among businesses involved in the process rather than in fierce competition. In order to transform a region into a successful tourism region, policy makers are expected to develop and implement policies that will foster collaboration and develop proper mechanisms to engage both pioneers and followers in future innovative practices.



It is important to note that this study and the findings reported here should be interpreted in the political context of regional economic development of a socialist market economy. Potential limitations and drawbacks inherent in a case study approach should also be considered when interpreting the findings. Findings may be case specific and some of the approaches utilized in this case such as the government intervention may not be applicable to other economies. Nonetheless, China's socialist market economy and its differences from the western free market economies offer unique examples of tourism development practices and approaches. Since China has become a major player in international tourism arena, it is important to understand Chinese perspectives and practices on development.

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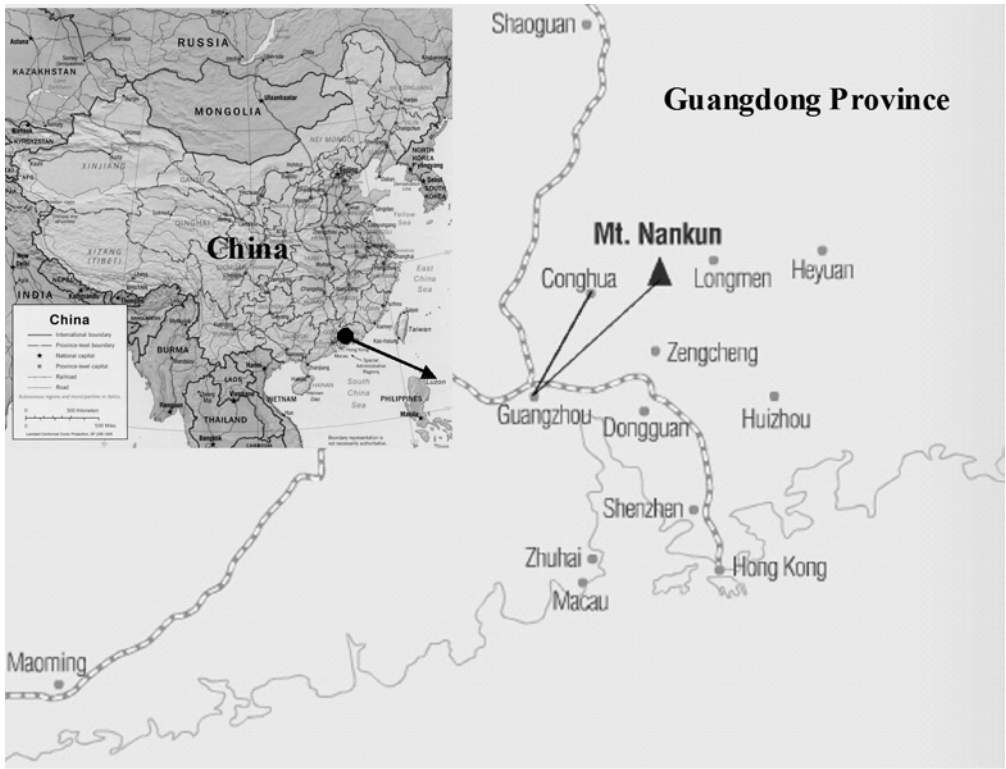


Figure 1 Geographical Location of Nankun Mountain

Table 1 Description of Data

<b>Data Types(Dates)</b>	<b>Amount (location)</b>	<b>Use in Analysis</b>
<b>Primary data</b>		
<i>On-site survey</i>	Nankun Shan and surrounding area	To identify the specific spatial distribution of different style hotels and resorts, and to develop a detailed description of each hotel and resort.
<i>Participant-Observation</i>	Frequent meeting with key individuals involved in Nankun Shan tourism development, normally once a season, last for 7 years.	To keep track of development process of Nankun Shan, and to identify the events, key stakeholders' relationship
<i>Semi-structured interviews</i>	27 key individuals were interviewed	To examine their perception of the process of Nankun Shan mountain's transition into a nature tourist destination and to identify the story behind development of each hotel. To identify key people who influence Nankun Shan development
<b>Secondary data</b>		
<i>Tourism planning documents</i>	4 types of planning documents, including ecotourism plan, national forest park plan, nature reserve area plan and local area tourism master plan	Every plan provides specific information about Nankun Shan development, including market information, stakeholder conflicts and development policy or strategies.
<i>Local government Annual work plan and report</i>	Last ten years work plans and reports	To identify what the local government planned to do and what they did every year for Nankun Shan tourism development.
<i>Year book</i>	15 years	To keep track of the holistic tourism development process
<i>Journalistic</i>	105 various news reports about Nankun Shan mountain tourism development.	To analyze the public media's understanding about Nankun Shan's development and transition
<i>Local chronicles</i>	3	To track the history of Nankun Shan.
<i>Tourism bureau annual work reports</i>	10 years	To identify the key events and policies of local tourism administration.

\* Nankun Shan shares the brand of National Forest Park, Provincial Nature Reserve Area and Ecotourism District authorized by local government; some of the borders are overlapped.

Table 2 Innovations in Regional Development and Destination Transition: Observations from the Nankun Mountain Experience

DECISION ON INNOVATION	INITIAL STAGE OF INNOVATION (Node 1)	SECONDARY STAGE OF INNOVATION (Node 2)	TRANSITION STAGE (Node 3)
CONTINUE INNOVATION	<p>1. The leakage of the usufruct of profits caused by externalities of tacit knowledge spillover of pioneers is effectively recovered by the growth of market revenue.</p> <p>2. The “hitchhike” strategy of imitators succeeds and the cluster begins to appear.</p> <p>3. Pioneers adopt the strategies of sharing tacit knowledge and continuing innovation, and become the new industrial leader.</p>	<p>1. The industry clusters have reached to level where the market revenue alone cannot make up the leakage caused by spillover.</p> <p>2. Government participates in the network of tacit knowledge spillover as a mediator and intercessor, to charge imitators to pay for the innovation cost of pioneers.</p> <p>3. Pioneers continue to innovate and build specific social networks; advantages of their being the industry leader are enhanced.</p>	<p><b>(Situation One)</b></p> <p>1. The industrial clusters have reached a saturated level when there is no definite boundary between pioneers and imitators, and have entered into a new stage of clustering for new innovation, with leakages balanced off amongst innovators and followers.</p> <p>2. The government, as the founder and vindicator of new industrial order, begins to govern traditional enterprises.</p> <p>3. Traditional enterprises are comprehensively transformed and transition is achieved.</p>
DISCONTINUE INNOVATION	<p><b>(Situation Two)</b></p> <p>1. The leakage of the usufruct of profits caused by externalities is not recovered and pioneers lose their first strike of advantages.</p> <p>2. Pioneers turn to self-protection, terminate innovation, and finally become a new imitator.</p>	<p><b>(Situation Three)</b></p> <p>1. Government enforces indistinctive policies, minimizing the chances for pioneers to recover their losses caused by the leakage.</p> <p>2. Pioneers turn to self-protection, terminate innovation, and finally become the perfect competitor losing the advantage in pricing.</p>	<p><b>(Situation Four)</b></p> <p>1. The government fails to deal with unfair competitions amongst the traditional enterprises, which results in new “hitchhike” behavior amongst the traditional enterprises.</p> <p>2. Pioneers terminate innovation and become a traditional enterprise in order to maintain market share.</p>

Source: Integrated data summarized by the author

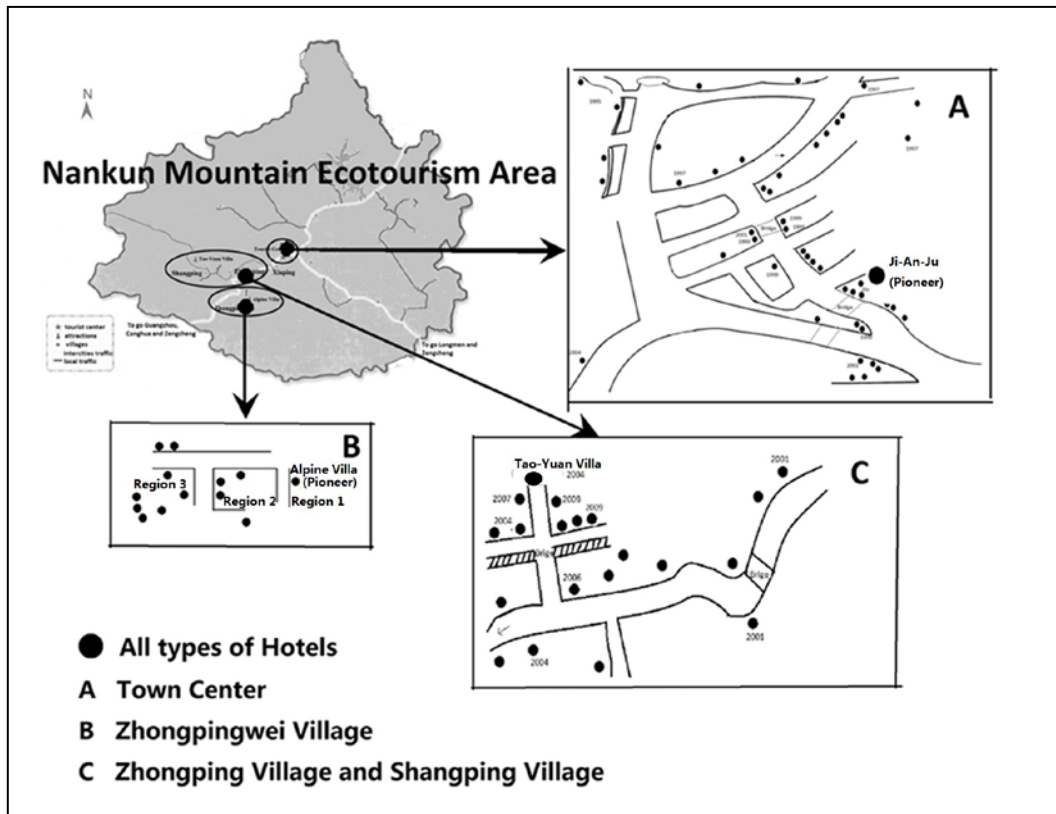


Figure 2 The Hotel Geographical Distribution Maps of Nankun Mountain

Note: Map A presents the location distribution of concrete-structure hotels/family inns. Map B and C present the hotel distribution of peripheral areas in the second round of tourism construction in Nankun Mountain. Map “B” shows the three regions of Alpine Villas. Map C shows the location of imitators/followers. Map B and C together illustrate that despite the spatial distance between followers and pioneers, clustering took place within the region.

Source: Maps are drawn based on field investigation.