Airport roles: Pushing the boundaries at Singapore’s Changi Airport

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Abstract: This paper examines the various roles played by airports and the manner in which they have evolved from being a provider of air transport facilities to businesses. Income is increasingly derived from non-aeronautical sources and airports are sites for the consumption of a range of goods and services. They are also shown to be personal and social spaces and a type of attraction where culture and heritage are displayed. In addition, airports have a political dimension and are instruments of government policy, as well as representatives of the city and country in which they are located. The focus of this research is on the city state of Singapore and Changi Airport which is a leading Asian and global air traffic center. Its case is examined and illustrates these trends while reflecting Singapore’s unique characteristics. General insights are afforded into the multiple meanings and purposes of airports in the current era, alongside the existing and future challenges inherent in balancing roles to be performed and succeeding in a highly competitive market.

Keywords: airports, civil aviation, passenger experience, Singapore

Introduction

The primary purpose of airports is the provision of transport facilities and, as such, they are an essential component of the travel and tourism industry. However, the trend towards deregulation and privatization, or partial privatization, affecting civil aviation as a whole has led to a more commercial orientation with a higher priority attached to non-aeronautical activities and revenues. At the same time, airports are social spaces shared by ever-growing numbers of passengers and disparate groups. Flying has become more stressful for many, aggravated by security regimes which are a reminder that airports are terrorist targets. These social and psychological dimensions of airports affect how they are experienced and the influence of
design is increasingly emphasized. In addition, airports are sites of political significance and possible controversies when construction and enlargement are resisted, often on environmental grounds. The political and economic roles of airports are further evidenced by the part frequently played by them in government development strategies. Airports also represent the city and country in which they are located and communicate place images, acting as display venues for art and culture.

This paper explores the meanings of airports and the ways in which they are evolving within Asia in the modern era. It seeks to illuminate the various roles performed by airports, underlying dynamics and consequences by incorporating diverse airport-related themes and focusing on a particularly instructive illustration. Issues are discussed with specific reference to Singapore’s Changi Airport, which is an appropriate context because of its characteristics. The airport has progressed in parallel with air travel to become a leading regional and global center and a symbol of the young country’s attainments. Changi is a regular winner of best airport awards and its management is constantly adding to and upgrading the amenities and physical infrastructure. Plans encompassing substantial increases in capacity and a new facility which is intended to be a discrete tourist attraction are already being implemented, made possible by government support. Generating revenues and profitability is a priority, but so too is user comfort and meeting needs beyond the consumption of goods and services. Despite achievements, the airport confronts the challenges of maintaining its high standards and reputation while making profits in an intensely competitive market; this will necessitate balancing roles which can be complementary and sometimes contradictory.

The methodology of a case study appears the most suitable and is a recommended technique for certain types of qualitative research (Yin 2009), helping to understand and explain complex contemporary phenomena (Rowley 2002). Changi Airport might be judged an ‘extreme/deviant’ case (Flyvberg 2006, p. 230), but it possesses intrinsic and instrumental qualities which allow generalizations and yield lessons of wider applicability (Stake 2005). Information was derived from material in the public domain drawn from conventional print and online sources as advised for such an exercise (Beeton 2005; Woodside 2010). Reports by government agencies,
professional associations, consultancy firms, private corporations and news media were all consulted alongside the academic literature. Facts and figures were cross-checked where possible for verification. The content of the data was analyzed in alignment with the core theme and findings organized in accordance with the identified airport roles. The account is also informed by observations made by the author on a series of visits to the airport and numerous personal experiences as an arriving and departing passenger. Limitations of a lack of primary data are, nevertheless, acknowledged and avenues for further research are proposed in the conclusion.

Literature review

The transport function of airports is a long-standing area of enquiry for academics who have written about its numerous elements, from traffic patterns to safety and security matters (de Neufville and Odoni 2013). Critical topics are also reflected in industry conferences and professional publications (ACI 2012), one set of which pertains to the processing of passengers. The International Air Transport Association (IATA 2017) measures touchpoints of check-in, bag tag, bag drop, security, border control, boarding and bag collection in its surveys. Data collected in North America suggests that passengers appreciate readily available flight information, clear signage and short waits (ACRP 2011). Helpful staff and ease of access are additional considerations, albeit external and partly outside the control of the airport in the second instance. The burgeoning low cost carrier sector has ramifications for how airports operate and there are calls for adaptability to accommodate the demands of a changing industry (de Neufville 2008).

Studies of transport operational matters continue to be of importance, but there has been growing interest in more commercial aspects of airports in correspondence with a movement from public to private ownership (Graham 2014). Management strategies have altered accordingly and a market-driven approach has been adopted as airports pursue airline and individual customers, profits and cost savings. They compete for business and seek to differentiate themselves, especially those striving to be international hubs (Castro and Lohmann 2014), and the largest benefit from economies of scale (Fuerst and Gross 2017). Customers are not confined to the travelling public and those meeting and seeing them off, but other visitors are embraced and some airports present themselves as visitor destinations. However, it must be
noted that airlines and travelers often have no alternatives in their selection of airports and the destination is the determining factor. An exception might be the world’s major cities which have more than one airport from which to choose. Budget airline customers too may decide that inexpensive ticket prices compensate for the inconveniently located secondary airports preferred by companies on certain routes because of lower charges.

Commercialization has led to the exploitation of new sources of revenue alongside maximization of existing streams which have traditionally been from airline landing fees and other charges (Morrison 2009). Non-aeronautical services are acquiring prominence (Jarach 2001) such as shopping, dining and entertainment which are believed to please passengers and consequently predispose airlines to select the best equipped, especially as transit points. Earnings from sales unrelated directly to aviation have subsequently risen, notably from the leasing of commercial space (Fasone et al. 2016), with estimates that concessions now produce half of airport income (Euromonitor International 2015). Airport shopping in particular has become a highly lucrative trade which is predicted to grow by 73% between 2013 and 2019 and be worth US$90 billion by 2023 (Stores 2017). Cosmetics and perfumes have overtaken alcohol and tobacco as the most popular purchases, followed by fashion and accessories which are usually of luxury brands. The shift in spending to Asia and the Middle East, where sales already exceed those of Europe, is also set to accelerate (The Economist 2014).

Users of airports are therefore increasingly seen as consumers as much as travelers and a strand in the literature deals with satisfaction and service quality (Bezerra and Gomes 2015; Fodness and Murray 2007; Harrison et al. 2011; Wattanacharoensil et al. 2016; Wattanacharoensil et al. 2017). However, the airport passenger experience is agreed to involve more than the beginning and end of a journey and spending money on shopping and dining. It encompasses other attributes connected to the non-economic roles of airports. Airports are places of heightened emotional intensity for many and ambience has been shown to affect passenger feelings and actions. Positive responses can relieve the anxieties attendant on flying, promote loyalty (Bogicevic et al. 2016; Moon et al. 2017) and inculcate favorable opinions about destinations (Wattanacharoensil et al. 2017). Atmosphere is the outcome of physical and less tangible factors which, in turn, are linked to
design (Bogicevic et al. 2016). Heathcote (2014) bemoans the ‘ubiquitous architectural landscape’ of airports which ‘effectively disorients us, desensitizing us to where we are’, but several are lauded for their inner and outer forms. Indeed, a number are the work of well-known international firms and architects and hailed as exemplars of innovative design and architectural skills.

Art can be integral to or complement design, and artistic installations are a common feature of major airports. Airports are the sites of exhibitions, some of which showcase native artists and cultural practices (Spears 2011), illustrated by a Korean Cultural Museum in the transit lounge of Seoul’s Incheon Airport. They may be a cooperative initiative with museums and other institutions. Art enlivens the airport environment and can supply entertainment and education, distracting and calming harassed travelers (Szekely 2012). Artistic creations and airport buildings generally also communicate ideas of place (Architectural Digest 2014) and inform images of cities and countries. They disseminate a sense of local identity, culture and heritage unintentionally, although sometimes in adherence to a deliberate policy. It can be argued that airports have responsibilities to be good ambassadors (Arrifin and Yahaya 2013), particularly as they provide first and last impressions of a destination (Wattanacharoensil et al. 2017). Nevertheless, questions can be asked about awareness of and engagement with the art displayed and overall design which may not be noticed or go unappreciated. Length of time in the airport is a variable and passengers do not all have the same expectations and reactions to airport offerings as a whole (Harrison et al. 2015).

Social scientists recognize the psychological and socio-cultural significance of airports and have tended to be critical in their stance, conceiving of them as liminal zones or non-places (Urry et al. 2016). More now seem to be writing about airports as places, albeit of an exceptional sort, inhabited largely by transient populations where the public and private and local and global meet (Jung and Shin 2016). They are symbolic of modern mobilities and shed light on individual and group behaviors and social processes (Cwerner et al. 2009). Design is interpreted by some as a tool for manipulating human movements and emotions in furtherance of commercial agendas (Adey 2008), hinting at tensions in airport roles.
Finally, airports can be conceptualized as conduits for the assertion of political power and Wilkinson (2017) describes them as the ‘front line of the paranoiac security state’ where the infringement of rights is sanctioned for purported reasons of safety. Nevertheless, heightened security is justified by the risks of attacks by terrorists and the worldwide publicity attendant on incidents, and immediate adverse repercussions account, in part, for the targeting of airports by such groups. Governments additionally see airports as a tool in endeavors to ensure territories are part of the global network, thereby bolstering economies and regimes. Formal views may be contested (Addie 2014) and airports have become arenas of conflict, exemplified by Narita Airport in Japan. Its erection was fiercely opposed by local farmers and the scene of violent protests in which six died and many were injured or arrested (Brasor 2014). Objections frequently focus on damaging physical impacts (Suau-Sanchez et al. 2011) and airports have been targets of environmental activists. They are therefore politically sensitive and airport development can be both a vote winner and loser for elected officials.

Airports emerge from a review of the literature as complex entities which have many different purposes and stakeholders including government and its agencies, airlines, passengers, shareholders, staff, tenants and local communities. They have evolved from suppliers of transport to commercial enterprises which are sites for the consumption of assorted goods and services. The parts played are not limited to the functional and economic and extend to socio-cultural and political domains whereby airports are settings for experiences beyond the transactional and transmitters of notions of societies and cultures to domestic and global audiences. Multiple functions are inter-connected and sometimes overlap with scope for both synergy and antagonism in their relationships. Roles are now discussed with reference to Changi Airport in sections covering the functional, commercial, socio-cultural and political spheres.

**Functional: Changi as a transport supplier**

Changi Airport began operating in 1981, replacing Paya Lebar which had received its first passenger flight in 1959 and was under pressure because of air travel growth in the subsequent decades. Changi was built on reclaimed land in the south east of the island and was then one of the largest airports in Asia (Singapore Infopedia 2017). Passenger numbers surpassed 10 million in
1986 and a second terminal and budget terminal of basic design and services opened in 1991 and 2006 respectively. Terminal 3 was added in 2008, lifting overall annual capacity to 66 million passengers (Changi Airport 2017a). The budget terminal closed in 2012 to make way for the building of a fourth terminal which opened in 2017 at a cost of S$985 (US$733) million and provided for an extra 16 million passengers; so the airport’s total capacity is now 82 million. The airport has had its own Mass Rapid Transport (MRT) station since 2002, joining it to the island’s comprehensive urban railway system, and is approximately 20 minutes by taxi from the city center.

There has been considerable investment in technological innovations with a view of increasing efficiency. The FAST (fast and seamless travel) programme is an example which seeks to simplify and automate the four steps of checking in, depositing baggage, clearing immigration and boarding. It is being implemented in stages in cooperation with airlines and around 40% of passengers utilize at least one of the self-service options, 90% of whom are satisfied. Ground handlers have been issued with augmented reality smart glasses to speed up operations and new technologies are also being applied in trolley management, security and housekeeping (Channel News Asia 2017a). Technology and design enable Terminal 4 to process about two thirds of the passenger traffic of Terminal 3, despite being less than a half of its size. Steps from checking in to boarding are all automated and security screening has been shifted from the boarding gates to a central point, making use of facial recognition techniques (Kaur 2017).

The importance of Changi’s transport role is confirmed by the statistics for 2016, when international passengers reached a record 58.7 million and it was the sixth busiest airport globally (ACI 2017). There is no domestic traffic because of Singapore’s small size. Weekly flight arrivals and departures at the airport currently average 7,000, operated by more than 100 airlines flying to 380 cities in over 90 countries around the world. It is home to Singapore Airlines and its regional (Silkair) and no-frills (Scoot) subsidiaries collectively known as SIA Group, which supplies about half of all airport scheduled service seats (OAG 2016). The main carrier is renowned for its service and Changi too is the recipient of numerous accolades, named the world’s best airport by 29 organizations and publications in 2016. It won the well-known Skytrax award for the fifth consecutive occasion that year.
(Skytrax 2016) and was given an unprecedented score of 4.974 out of 5 in the Airport Service Quality survey undertaken by Airports Council International.

The airport positions itself as the premier gateway to Asia (Changi Airport Group 2016) and ensures the international connectivity which is vital to Singapore’s global city standing (Cities Research Center and JLL 2016). Tourism is a major industry in Singapore and also relies on the airport. Around 77% of the country’s 16.4 million overseas visitors in 2016 travelled by air (STB 2017a) which also accounted for 82% of the 9.5 million outbound departures by Singaporean residents (Department of Statistics 2017). An estimated third of passengers are in transit. Cargo business is beyond the remit of this commentary, but should not be forgotten and the airport handled almost 1.9 million tons of airfreight in 2015-2016 (Changi Airport Group 2016). The airport cooperates with the Singapore Tourism Board (STB) which is the National Tourism Organization, SIA Group and other industry parties in marketing campaigns. Promotion is directed especially at the key markets of Australia, China, India and Indonesia as well as stopover and Meetings, Incentives and Conference (MICE) trade.

In terms of the future, Changi East is a major multi-billion dollar long-term development, occupying 1,080 hectares which is scheduled to be ready at the end of the next decade. It incorporates Terminal 5, a three runway system, cargo facilities and associated transport infrastructure. Upon completion and alongside other expansion works, annual passenger airport capacity will be 135 million. The airport hopes to take advantage of mounting demand for air travel with passengers expected to double globally by 2035. Predicted growth rates are highest within Asia Pacific, stimulated by economic advances and expanding middle classes (IATA 2016). China and Indonesia, in particular, are both agreed to have great untapped potential with plans for new routes to secondary cities.

**Commercial: Changi as a business**

The Civil Aviation Authority of Singapore (CAAS) was formerly in charge of Changi, but the government agency was restructured in 2009. The airport assumed corporation status while CAAS still exists and handles regulatory matters. Changi Airport Group is responsible for airport operations and management, air hub development, commercial activities and emergency
services. It employs around 1,800 people and has been judged one of the city state’s most preferred employers. The corporate mission is to be the ‘world’s leading airport company, growing a vibrant air hub in Singapore and enhancing the communities we serve worldwide’ with a vision of ‘exceptional people, connecting lives’ (Changi Airport Group 2016, p. 14). Changi Airport International was set up in 2004 as a wholly owned subsidiary of the group to invest in and manage overseas airports and engage in consultancy. CAI has current interests in China, India, the Middle East, South America and Europe, which include a 20% stake in a Rio de Janeiro airport and joint venture with four Russian airports.

Operating revenue and expenses for the corporation were S$2.2 (US$1.6) billion and S$1.3 (US$1) billion respectively for the financial year 2015-2016. Earnings before interest, taxes, depreciation and amortization were S$1.2 billion (US$900 million) and net profit after tax was S$784 (US$583) million with shareholder equity of S$6.6 (US$4.9) billion. Efforts are made to entice airline business by keeping prices competitive and through selected rebates on landing, parking and aerobridge fees. Reduced service charges for transfer and transit passengers are also available. However, the contribution of non-aeronautical revenue to financial performance has become more significant over recent years. Money thus accrued can be invested to make the airport more attractive to airlines, including funding incentives, so the two revenue streams are believed to be complementary.

Changi is one of the top three airports worldwide for concession sales which totaled S$2.2 (US$1.6) billion in 2015-2016 when retail growth exceeded that of air traffic. There is over 76,000 square meters of concession space tenanted by 360 retail and services outlets and 140 dining establishments spread across the four terminals. These are located primarily in the transit areas and retailers span convenience stores through to shops selling affordable Asian clothing to those trading in luxury international branded goods. Some in Terminal 4 are unique to the terminal and are two-storied. New brands and products are frequently introduced, supplemented by a Shopping Concierge service and an online portal. Foodservice provision is equally diverse from fast food chains to fine dining restaurants. Common early check-in desks are shared by 23 airlines and a further 25 carriers have their own such counters (Changi Airport Group 2016). Travelers are thereby
encouraged to arrive early which maximizes chances of airport purchasing. Other business partners are spas and hotels. An airport hotel judged to be the best worldwide in the previously mentioned Skytrax (2016) survey is a short walk from the arrivals hall of Terminal 3 which has a transit hotel, as do Terminals 1 and 2. The Terminal 1 property has a rooftop swimming pool and jacuzzi which non-guests can pay to use.

Changi possesses several advantages as a business and airport, not least its reputation, but there is a keen awareness of existing and future challenges. Other international airports in the region such as Hong Kong, Suvarnabhumi (Bangkok), Kuala Lumpur and Incheon are rivals alongside Dubai and Doha in the Middle East. All have undergone investment and enlargement, particularly in the Gulf States where home-based airlines have been pursuing ambitious programmes of fleet and route network expansion. Dubai has surpassed London’s Heathrow as the world’s busiest airport for international passengers with an estimated 83.1 million in 2016 (ACI 2017). Changi is thus exposed to competition and frequent references are made to the imperatives of avoiding complacency by constantly innovating and upgrading.

Looking ahead, the Jewel Changi Airport is a S$1.7 (US$1.3) billion joint development by Changi Airport Group and a prominent Singapore property company which is due to be finished in early 2019. It is a mixed-use complex of leisure amenities, shopping, dining and a hotel combined with airport services such as lounges for fly-cruise and fly-coach passengers and early check-in facilities (Changi Airport Group 2016). Indoor gardens and attractions and retail fill 21,700 and 90,000 square meters respectively compared to 18,500 square meters for airport operations and 5,600 square meters for the hotel. Publicity materials highlight a five-story Forest Valley garden and what is purported to be the world’s tallest indoor waterfall. The striking steel and glass dome is the creation of architect Moshe Safdie and aspires to be an iconic landmark where ‘Singapore meets the world … the island’s next destination’ (Jewel Changi Airport 2017).

**Socio-cultural: Changi as a provider of experiences**

The Changi Experience is the corporate phrase for the time spent at the airport by travelers and there is a commitment to making them ‘feel at home with facilities and services that go beyond the ordinary’ (Changi Airport 2017b).
Management claims to be focusing ‘not just on the concrete and steel’ and being a ‘model of functionality’, but on ‘pushing the boundaries of what an airport can be’. The goal is for Changi to be a place where ‘memories linger long after one’s travels’ and which delivers ‘positively surprising moments’ (Changi Airport Group 2016, p. 4) to customers who are not only passengers and those greeting and parting from them. According to the airport, it is a ‘favorite haunt for Singapore residents, especially families’, and a ‘destination on its own’ (Changi Airport Group 2016, p. 15 and p. 46). The idea is conveyed in aforementioned advance publicity about the Jewel project and promotion by the STB which lists numerous ‘things to do in Changi’ on its website (STB 2017b).

The retail and dining options made reference to earlier are clearly an essential part of what the airport offers, but components which are not directly commercial are crucial. Amongst free facilities for passengers are entertainment decks, family zones, movie theatres and large television screens. The airport is host to events and activities such as taking photographs with the Changi mascot, origami folding sessions, storytelling for children, distribution of local snacks, and competitions. Travelers in transit with at least five and a half hours between flights can book a complimentary two-and-a-half-hour daytime heritage or evening city sights coach tour. Common amenities in all terminals are public viewing galleries, baggage storage, business centers, baby care rooms, children’s playgrounds, clinics and pharmacies, free-to-use rest areas, internet connections, money changers, prayer rooms, post offices, porter services, showers, and information and customer service counters (Changi Airport Group 2017b). Clearly these are not exclusive to Changi and travelers would expect them in most major airports, but they are perhaps distinguished by their quality. Basic services are also augmented by extras such as roving staff who proffer assistance, smaller trolleys for hand luggage after immigration, free access to internet terminals, massage chairs, and spacious taxi ranks supervised by attendants. The cleanliness of the airport and its good maintenance are striking, the touchscreen feedback panels in every washroom indicative of the attention to detail.

Greenery is a noticeable characteristic of the airport with over half a million species of plants and flowers on display which are intended to exercise a
softening and soothing effect. Terminal 1 has a Water Lily Garden, a rooftop Cactus Garden and Piazza Garden devoted to seasonal and thematic plants. The Sculptural Tree Garden has three tall tree-like structures covered in foliage which can be viewed more closely from elevated walkways. In Terminal 2, motion sensors trigger the sounds and sights of nature in the Enchanted Garden and over 700 blooms in the Orchid Garden are arranged to denote air, water, fire and earth. There is a Sunflower Garden on the terminal roof which is specially lit at night. Terminal 3 boasts a Butterfly Garden which has over 1,000 butterflies, flowering plants and a six-meter grotto waterfall. Terminal 4 contains 186 large trees, 160 of which form a boulevard along the boarding corridor, and a line of 10-metre-tall trees in the arrivals hall (Changi Airport Group 2017b).

Art works are located in public and transit zones of the airport and serve to decorate, entertain and stimulate thought. Two Kinetic Rain sculptures, measuring 9.8 by four meters and suspended from the ceiling in the departure area of Terminal 1, are hard to overlook. A computer programme controls 1,216 polished copper raindrops which mutate into a sequence of shapes related to flight, a theme echoed in Terminal 3’s Birds in Flight which comprises a flock of colored stainless steel birds. Going Home is a 7.5-metre-high metal sculpture in the immigration hall of a family surrounded by a group of colorful birds. Amongst travel-themed works in Terminal 4 are large sculptures entitled Travelling Family and Les Oiseaux made up of three birds. Nature is the subject of Terminal 3’s Floral Inspirations, Daisy, and a giant Saga Seed. A 200-metre-wide orchid-inspired kinetic sculpture in the middle of the terminal consists of six structures, the movement of which is synchronized with animated lighting and music. Elsewhere in Terminal 3, Pygmies is made up of small metallic shapes hiding behind squares when exposed to noise and emerging slowly as silence returns. Overlapping photographic panels and painted glass comprise the Memory of Lived Space. In contrast is a 70-metre LED ‘immersive wall’ at security in Terminal 4 which broadcasts miscellaneous video clips while the nine-meter-high Social Tree in Terminal 1 is the airport’s largest interactive installation. Travelers can post their photographs and video memories on screens which circle the ‘tree’ top (Changi Airport 2017b).
Socio-cultural: Changi as a representation of place

Society’s attitudes towards the airport and the manner in which it represents the nation additionally demonstrate socio-cultural meanings. Changi is familiar to most Singaporeans, even if they are infrequent flyers, and stories about it are widely reported in the media. For some young people, it is a spot where they can study alone or with friends in air-conditioned comfort away from the distractions of home, evident by their presence in cafes and public areas. More generally, the airport is highly regarded and something of which citizens can feel proud. The control tower is a national icon (Singapore Infopedia 2017) and, akin to Singapore Airlines (Raguraman 1997), the airport is an embodiment of the country’s attainments. Statements by government and airport authorities stress that Changi joins Singapore to the world and facilitates the openness on which the economy depends. It epitomizes traits such as order, efficiency and modernity so is a microcosm of how Singapore sees itself and wishes to be seen. However, there is now an appreciation that it can be a stage for showcasing other facets of life and identity. Terminal 4, for example, is said to have been designed to ‘bring in elements of Singapore culture, tradition and heritage to intrigue and engage our passengers to a deeper level’ (Channel News Asia 2017b).

A heritage zone has been designated in the terminal where a set of recreated shop-houses portray the evolving style of this form of South East Asian vernacular architecture. Although tower blocks dominate the urban landscape, some low-rise shop-houses survive in Singapore and particularly in the historic ethnic enclaves. A 6-minute ‘mini-theatre musical show’ by a local composer is projected onto two of the shop-houses, telling a love story set in 1930s Singapore. Exhibits from the National Heritage Gallery relevant to the unique Peranakan culture, originating in marriages between the Chinese and Malay communities during the fifteenth century, are housed in a Peranakan Gallery. A selection of branches of long established Singaporean retailers and foodservice businesses ‘invoke a sense of nostalgia’ and there is a ‘colonial-design inspired food court that carries a wide range of local favorites’ (Channel News Asia 2017b) elsewhere in the terminal. It should be recalled that eating is a common passion amongst Singaporeans and diverse cuisines mirror the country’s history, multi-cultural ancestral heritages and contemporary cosmopolitanism (Henderson 2016) with regular references to a food paradise in destination marketing.
Garden city and city in a garden are also images constantly invoked in promotion and an outcome of a city beautification campaign which began in the 1970s with the widespread planting of trees and shrubs (Tan et al. 2013). The results of the continued implementation of greening programmes are manifest across the island and the Botanic Gardens was inscribed as a World Heritage Site by UNESCO in 2015. Greenness is central to conceptions of national identity and this is apparent in the integration of greenery and other natural elements into the airport as outlined earlier. Even the approach road is lined with trees and bougainvillea in a fashion typical of the highway network as a whole. Terminal 1’s recent refurbishment was influenced by the garden city vision and a repeated motif in Terminal 4 is the petal of an orchid, Singapore’s national flower, which is incorporated into the carpets and dustbins as well as art work. Art is another means of celebrating the country’s culture and Singaporeans have been commissioned by the airport to make original pieces; for example, Hey Ah Chek! The figurative bronze sculpture in Terminal 4 of a mother and son hailing a trishaw seeks to evoke the atmosphere of 1950s Singapore. However, contributing artists and their ideas come from around the world in alignment with official aspirations to be a global city where both creativity and business flourish.

Political: Changi as a government instrument

The above mentioned ability to generate national pride is indicative of the airport’s political significance. It is a sign of progress made by the republic after it gained full independence from British colonial rule in 1965, when there were uncertainties about survival, and has been harnessed to nation building. Cultivating a sense of nationhood has been a preoccupation and priority for the government of the People’s Action Party (PAP) which has been in power since 1965. Patriotic sentiments are perceived to be vital in unifying the ethnically mixed population of Chinese, Malays, Indians and others. Loyalty to the state also serves the hegemonic agenda of the PAP by reinforcing its authority. Originally led by Lee Kwan Yew who is considered the founding father of the modern city state, the party has been credited with the transformation of the island from third world to first (Henderson 2012). The administration is lauded for its competence and citizens have one of the highest standards of living in Asia, of which they are generally appreciative.
Long term physical and economic planning has been a key strategy and a Concept Plan plots the country’s desired direction over a 40 to 50-year period. Access by air is agreed to be critical to Singapore’s effectiveness as a center of trade, finance and tourism which includes business and conference travel. Plans give due regard to the demands of the air transport industry and the objective is to ‘anchor Changi Airport’s hub status for years to come’ (URA 2013), recognizing its importance to the economy. Realization of this goal, together with connecting Singaporeans to more cities worldwide and creating job opportunities for them, are described by the Ministry of Transport (2017) as the benefits of airport expansion to Singapore. Proposals overall have not been publically questioned and there has been no discussion about damaging physical impacts. The latter may be partly because of the highly urbanized and industrialized character of Singapore, where very little of the natural environment remains, as well as social and political circumstances.

Singapore is a parliamentary democracy in name, but there is little room for civil society or dissent of any sort. Feedback invited through formal mechanisms is not necessarily heeded and the approach remains top-down. Changi might not anyway have been subject to the debates which can impede airport growth in some cities, exemplified by the protracted discussion about a new runway at London’s Heathrow Airport lasting almost 50 years (BBC 2016), but wider conditions render any such disputes highly unlikely. The airport does, however, have a political dimension as a symbol of development and tool for the implementation of government policies which do not all pertain directly to civil aviation.

**Summary and conclusion**

Changi Airport thus demonstrates the multiple purposes of larger airports in the 21st century and its analysis affords insights into current trends. It is one of the world’s busiest airports and generates a growing percentage of revenue from commercial activities besides aeronautical business with an emphasis on retailing and dining. The promised Changi experience is not focused solely on shopping and eating and incorporates non-essential amenities and services of an exceptionally high standard, a number of which are uncommon at airports. Many of these are free and offerings include manifestations of culture, heritage and nature which also contribute to a pleasing ambience, as does architectural and interior design. Indeed, the airport is increasingly
presented as a visitor attraction in its own right. Financial rewards of relaxed customers willing to spend time and money at the airport and choosing airlines serving Changi is a key consideration, but the intention is also to create personal and social spaces users will enjoy and which reflect well on Singapore. It conveys a sense of place and is a means of instilling favorable impressions of the city state, communicating official messages to audiences of both foreigners and Singaporeans in accordance with political and economic dictates.

This study also illuminates determinants of successful airport performance by outlining some of the positive attributes which help explain Changi’s progress to date and its reputation for efficiency, service quality and comfort. There are lessons to be learned from the case, yet the distinctive and defining characteristics of Singapore and their effects cannot be ignored. The city state’s prosperity has permitted costly investment in the requisite civil aviation industry and supporting infrastructures by a capable and visionary administration whose decisions are rarely opposed. Not all city or state governments have such resources and can engage in strategic planning over a period of decades, constraining what they can accomplish. An open and thriving economy has stimulated travel for business and Singapore’s geographic location has been used to advantage by positioning its airport as a stopping point on flights between the West and Asia-Pacific and as a regional hub. However, Changi does face the possibility of problems which are particular to its situation and others of more general relevance.

The past ten years have seen annual passenger rises at the airport of 5.5%, but there are signs of a slowing down in the growth rate (OAG 2016). Given Singapore’s size and comparatively limited stock of attractions, its airport depends heavily on transit trade which might not continue expanding and especially on long-haul journeys where advances in aircraft technology are making stops redundant. The SIA Group is a critical partner in boosting traffic, but the airline has to contend with rivalry on longer routes from established carriers and from low cost operators within the region (Kaur 2015). Some air travelers and airlines may be less enthusiastic about the overall Changi experience and more influenced by practical matters of costs, processing speeds and safety and security. Concerns have been expressed about the future when Changi East is completed and capacity will reach 135
Market conditions highlight the need for airports to be aware of and try to meet the demands of air travelers, many of whom are tourists. At the same time, they must be equally mindful of the requirements of the airlines on which they rely and government policies and regulations. The interests of the local community and environment should also be acknowledged. The various roles which airports have been shown to enact differ in significance depending on the stakeholder and specific site and can be complementary and sometimes contradictory. That of transport provider is fundamental and must remain primary, although the business narrative is increasingly prominent. There are potential tensions between profit maximization on the one hand and provision of safe and reliable air transport services and a superior passenger experience composed of tangible and intangible ingredients on the other. The exercise of responsibilities associated with transport, commercial, socio-cultural and political functions must therefore be balanced to optimize operations and outcomes.

Securing such an equilibrium is a formidable task and the attempts of Changi to retain its position in the years ahead merit monitoring with a view to better understand the multi-functionality of airports and their development, underlying causes and implications. Other research avenues include airport evolution from the perspective of the different interested parties and longitudinal studies charting the various phases in the roles of airports through time. Management of future changes is an additional topic of great importance in Asia and beyond, taking into account the predicted expansion in air travel which poses challenges as well as new opportunities.

Notes

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References


Skytrax (2016). *Changi Airport Singapore is named World’s Best Airport for the 5th consecutive year*. Media Release, 14 March.


Woodside, A. G. (2010). Bridging the chasm between survey and case study research; Research methods for achieving generalisation, accuracy and complexity. *Industrial Marketing Management, 39*(1), pp. 64-75. doi: 10.1016/j.indmarman.2009.03.017