Chinese Outbound Tourism and the Market in Singapore

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Abstract: This paper discusses selected aspects of the Mainland Chinese outbound travel market in general and with specific reference to Singapore. The market is shown to be expanding dramatically and there is great interest amongst destinations around the world in attracting Chinese visitors. Distinctive characteristics of international tourists from China are identified and their implications are considered. The city state of Singapore emerges as a popular choice by the Chinese, although it faces rising competition from rival destinations and especially its neighbouring countries. Competition has resulted in aggressive advertising and various marketing campaigns to sustain interest in Singapore amongst Chinese tourists. Seasonal travel patterns to Singapore are assessed using time series models and the Box-Jenkins approach to fit models to the data, with ARMA(2,1) and ARMA(3,2) selected as the two optimal models. The quantitative analysis of arrival statistics reveals that monthly seasonality is not a major factor affecting tourist flows from China into Singapore. Further research on tourism forecasting can be conducted to inform future marketing efforts and the overall topic of international tourism from China warrants attention.

Keywords: Chinese outbound travel; Destination marketing; Seasonality; ARMA models; Singapore

Introduction

International travel demand by Chinese nationals merits study because of its economic importance in tourism revenue generation for many destinations, not least Singapore which is the focus of this paper. China is already the third biggest spender on outbound tourism globally and Chinese tourists spent US$55 billion overseas in 2010. Destination marketers around the world are striving to entice Chinese visitors, keenly appreciative of the magnitude of their expenditure abroad. Chinese outbound tourism tends to exhibit seasonal patterns and peaks are often aligned with key holiday periods such as the Chinese New Year and summer school holiday in China; for instance, the March and December quarters are the most and least popular seasons, respectively, for the Chinese holiday market in Australia (Australian Bureau of Statistics 2000-2010). In contrast, the UK receives most of its Chinese tourists in the September quarter (VisitBritain 2010). Tourism authorities, planners, and managers must understand and respond to seasonal variation, as it affects all aspects of tourism supply and causes problems at both the destination and the individual business levels (Getz and Nilsson 2004; Vanhove, 2005).

China's outbound tourism in general is discussed in Section 2 which includes the literature review and Section 3 considers the particular circumstances and promotional efforts in Singapore. For Singapore to market itself successfully in China, it is imperative to understand Chinese tourist arrival and seasonal patterns over time. Section 4 explains the methodology used to examine such patterns and presents the findings of an analysis before the final conclusion. The term Chinese traveller is used to denote citizens of the People's Republic of Mainland China and excludes residents of the Special Administrative Regions (SARs) of Hong Kong and Macau as well as ethnic Chinese of diverse nationalities from around the world.

China's Outbound Tourism

China is a rapidly expanding and lucrative market for outbound international tourism. Chinese tourists abroad numbered 374,000 in 1993 and just over two million in 2003 (Gao et al. 2007), reaching a record 56 million in 2010 (China Travel Trends 2011). There has been a corresponding increase in expenditure on international tourism, the annual growth rate outranking that of other countries in the past decade (UNWTO 2010a). Spending power is indicated by the fact that Chinese travelling to Japan spent around US$1,300 per head in 2010 compared to US$790 for Taiwanese and US$280 for Americans (China Economic Review 2011). While international tourism expenditure suffered a 9.5% decrease in 2009 during the global financial crisis, the expenditure by outbound Chinese grew by 21%, demonstrating strong resilience to economic and other uncertainties (UNWTO 2010b). In 2011, an estimated 57 million Chinese will travel overseas and China's National Tourism Administration predicts that the
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figure will be 83 million in 2015 who will have a combined spending of 2.3 trillion yuan or US$361 billion (The Independent 2011a). The United Nations World Tourism Organisation forecasts that China will be the source of 100 million overseas tourists by 2020 (UNWTO 2010c), making it the world’s fourth largest market. Further growth is anticipated thereafter given the size of the population and economic progress (Li et al. 2010; Zhang and Heung 2002).

The rapid expansion in Chinese outbound travel and its nature can be explained by a combination of political, economic and socio-cultural factors (Guo et al. 2007). Relaxation of government imposed constraints (Lim and Wang 2008; Qu and Lam 1997) has been accompanied by unprecedented economic development and shorter working hours and more holiday entitlement for many. While inequalities in wealth distribution should not be overlooked, a middle class of affluent consumers and smaller extremely rich elite have emerged. Rising incomes (NBSC 2009) have stimulated spending on travel which encompasses shopping, entertainment and gambling. Travelling independently remains complicated in certain instances, however, there is a preference for joining tour groups. Such trips often visit multiple countries (Guo et al. 2007) and some have been labelled ‘zero-dollar’ tours because they yield little or no profit. Money is made by organisers from commissions paid by the retailers and food and beverage outlets to which tourists are taken, sometimes unwillingly. These methods have been the subject of adverse publicity throughout the Asia Pacific region and there have been endeavours to curb the practice (The New York Times 2005).

The market’s size and excellent prospects have led to fierce competition for Chinese tourists amongst nearby destinations, including Hong Kong and Macau which are classified as overseas despite their SAR status. Table 1 shows the ranking of the top ten destinations for Chinese outbound tourists in selected years from 2000 to 2010.

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<td>Taiwan</td>
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also favouring Taiwan which recorded over 1.6 million Chinese tourists in 2010 (The Independent 2011b). South East Asian destinations are popular choices, amongst them Singapore, alongside Australia (Sparks and Pan 2009). Interest in the Chinese is not confined to the Asia Pacific region, but exists globally and is growing as the official Approved Destination Status (ADS) list lengthens. It encompassed 140 locations by the end of 2010 (Arthur 2010; People’s Daily Online 2011), including the U.S. and Taiwan which were listed in 2007 and 2008, respectively. Since many Mainland Chinese have long dreamed of travelling to these places, it is not surprising to see them gaining momentum to become the seventh and fifth most visited in 2010. These destinations and others have engaged in aggressive promotional campaigns in China, using assorted media outlets for intensive programmes of tourism commercials and advertisements (Zhang 2006). With another looming economic recession and weak currencies in the U.S. and Europe, more destinations are turning to Chinese tourists to counteract
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decline in their traditional markets, and thus intensifying competition.

China’s ascendency as a generator of international tourism and its potential were remarked upon in the 1990s (Wang and Sheldon 1995) and have attracted greater attention from academics internationally in the intervening years (Arlt 2006; Guo et al. 2007; Li et al. 2011; Ryan et al. 2008). Studies of outbound Chinese have increased accordingly, although Cai et al. (2007) maintain that these are still comparatively scarce. Distinctive features noted pertain to organisation of travel and traveller requirements, expectations, attitudes and satisfaction (Ryan and Mo 2001; Sparks and Pan 2009; Wang et al. 2008; Yu and Weiler 2001). These distinctions have been attributed to prevailing Chinese cultural values (Mok and Defranco 1999; Yao 1998), the enthusiastic adoption of a consumer culture (Wang 2004) and a tourism market in the early stages of development (Li et al. 2011).

The market is, however, evolving with evidence of Chinese travellers becoming more experienced, sophisticated, demanding and diverse. According to Aceves (2011), the Chinese outbound market is increasingly demonstrating characteristics of a two-tier market, comprising a mass tourism market of more than 100 million queuing for low price and low quality tour packages, and a more sophisticated Free Independent Travel (FIT) and Semi-FIT market interested in high end destinations and products. The younger generation appears to be seeking greater freedom and independence than their elders who generally choose guided tours (Loh 2011; Sparks and Pan 2009). Underlying motivations are linked to destinations and there may be contrasts between Western and Asian travel. Research suggests that visits by Chinese to the West are inspired by family related reasons and the desire to see new places, fulfil a long held wish to do so, gain interesting experiences, have contact with local people and boast about the trip. Asian centres are selected because they provide a modern, safe and familiar environment and are accessible and convenient without restrictive visa requirements (Johansen 2007). Shopping is important and the shifting of their focus to China by the world’s best known brands is indicative of the propensity to purchase luxury goods. Casino operators too are competing and concentrating on indirect sales and promotional activity directed at organisers of group tours and junkets (People’s Daily 2010).

The Chinese market is likely to grow both quantitatively and qualitatively, given several recent developments. First, the Chinese government has indicated strong political support for tourism development, including a planned annual increase of nine percent of outbound tourists. Second, there is a greater interest in in-depth travel experiences, offering opportunities for niche and special interest tourism products. Third, bureaucratic problems are being removed by the government with all major destinations having signed the ADS agreement, easier access to passports and foreign currency, and independent travel visa agreements with some Asian and European countries (Aceves 2011). Destinations therefore must respond to the rising demand for high quality products by Chinese tourists. However, a regular comment of observers is that Chinese tourists possess features which are not always understood or appreciated by the international tourism industry and foreign destinations, particularly in the West. Suppliers have been called on to undertake research so that they can be better aware of and more prepared to meet the demands of the Chinese, especially in matters such as language and diet. It is argued that providers and places which adapt are set to thrive, satisfying visitors and prompting word of mouth recommendations (China Economic Review 2011), but the reverse also applies and could have damaging consequences for destinations which fail to cater adequately to any special needs.

The Market in Singapore

Inbound Chinese travellers to Singapore have grown in the past two decades, as shown in Figure 1, in response to the administrative reforms within China and other developments outlined above. Singapore benefited from being one of the first officially approved destinations, precipitating an influx of tour groups in the early 1990s (Cai et al. 1999). Subsequent expansion means that China has been its second major source of international tourists after Indonesia since 2005, reaching a peak of over 1.17 million in 2010 (STB 2011). While there has clearly been an upward trend in tourist arrivals from China, annual variations in volume reflect the vulnerability of tourism to events beyond the control of the industry. For example, demand fell in 2003 and 2009 because of the epidemic of the Severe Acute Respiratory Syndrome (SARS) virus and global financial crisis, respectively. Anxieties about an outbreak of swine bird flu in 2005 led to another dip in arrivals. The pace of growth has also slowed as...
destination choice has widened and Singapore now has to contend with a greater number of near and more distant rivals. Table 1 discloses how the city state dropped from third to tenth most popular destination for the Chinese between 2004 and 2010 whereas neighbouring Malaysia climbed to eighth place, highlighting the need for the former to strive to sustain its success.

Nevertheless, the Chinese remain a key market for the city state and have a particular profile. In 2009, the last year for which full details are available, their average age was 39 and length of stay averaged four days. Slightly over half were females and 38% were travelling alone while 31% travelled with a spouse and 21% with business associates (STB 2010a). Over the past six to seven years, there has been little change in average age and a slight increase in the proportion of females while repeat visitors rose from 30% in 2002 to 45% in 2009. STB annual statistics disclose that more visitors are coming to Singapore to visit friends and relatives, for business and to attend MICE events with the collective share expanding from 15% in 2002 to 45% in 2009. Group packages were the preferred mode of travel for 60% in 2000 when the average length of stay was just over three days (STB 2001). It appears now that more Chinese are opting for FIT trips, especially repeat visitors, as they become more familiar with Singapore (personal communication).

![Figure 1: Chinese Visitors to Singapore, 1991-2010](Image)

Source: STB 2011, 2010a, 2001

The small offshore island of Sentosa, dedicated to leisure and recreation, was the most popular paid attraction amongst the Chinese in 2009 and mentioned by 38% in an official survey; 44%, 29% and 27% respectively visited the sites of Orchard Road, Chinatown and Merlion Park. Per capita expenditure of S$1,124 (US$888) exceeded the average of S$951 (US$751) and compares with S$741 (US$585) in 2005. Visitors from China were leading spenders on shopping and contributed S$601 million in total, second to Indonesians with a figure of S$645 million (US$509 million). The Chinese spent S$249 (US$197) on accommodation, less than the average of S$294 (US$232), and S$642 (US$507) on shopping which was more than the average of S$340 (US$268) and represented 57% of total expenditure (STB 2010a). Almost one third of shopping spending was devoted to fashion and accessories and 23% to watches and clocks. Fashion and accessories were the pre-eminent shopping items and purchased by 41%, followed by cosmetics/healthcare products (33%), confectionary and food (28%) and souvenirs and gifts (20%).

It would be misleading to conclude that all Chinese tourists have high incomes despite above average spending, although data about personal finances is not collected officially. According to a newspaper report, certain Chinese visitors to Singapore are the 'newly rich from big cities like Beijing and Shanghai and they stay in five-star hotels'. Many, however, are from the 'new middle class in China's provincial cities' taking advantage of an enlarged network of direct air connections. The latter typically have an annual average income of less than US$2,000 and buy inexpensive organised tours which incorporate a series of countries (The New York Times 2005). Representatives of tourism businesses quoted in the Singapore media have also spoken of a marked tendency for some Chinese to travel in large groups and stay in three star hotels.

**Singapore as a favoured destination for Chinese travellers**

Singapore hosts more tourists from China than many of its larger South East Asian neighbours which are better endowed with natural and cultural heritage assets and one of its several strengths as a destination is that approximately 75% of Singaporeans are ethnic Chinese. There is thus a sizeable Mandarin speaking population and degree of cultural affinity. A reputation for safety, security and cleanliness are additional positive
attributes (Teng 2005), the first being a prime concern for many Chinese when overseas. Visa rules are less rigid than in many other countries and closer economic and political ties between China and Singapore have further encouraged travel for both leisure and non-leisure purposes. It seems that Singapore is particularly appealing as a destination for China's wealthiest citizens who ranked it sixth in the world and behind Japan in Asia in one survey. Companies associated with superior quality such as Singapore Airlines and Banyan Tree Hotels and Resorts, headquartered in Singapore, are reportedly admired by prosperous Chinese, many of whom send their children to the island for a bilingual and bicultural education (The Straits Times 2011a).

A recent study based on a questionnaire survey proposes that 'pull' factors are more powerful than 'push' regarding Chinese visits to Singapore (Hui et al. 2008). Cultural and linguistic similarities, food choices and accommodation standards were key considerations for respondents. Influences at work in shaping motivation included gender, age, income and travel frequency. Most participants were first time visitors and the authors advise that marketing efforts target this category and promote an experience which is uniquely South East Asian. Other researchers (Kau and Lim 2005) also advocate emphasising the uniqueness of Singapore as well as packaging it with neighbouring countries, streamlining entry procedures and the more active selling of business travel, education and healthcare to affluent Chinese. They class visitors into the four segments of 'family/relaxation, novelty, adventure/pleasure and prestige/knowledge seekers' (Kau and Lim 2005: 244) who have different characteristics. The family/relaxation seekers are deemed to have the most potential because of their higher satisfaction ratings and willingness to communicate positive word of mouth ideas about Singapore. Weaknesses to address are low satisfaction as a whole, unlikelihood of recommending Singapore to others and a feeling that there is nothing much to see or do.

Complaints about limited leisure and entertainment offerings may be less appropriate in light of recent endeavours to broaden Singapore's attractions base, enhancing its appeal for business and leisure travellers. The strategy is exemplified by two large scale integrated resort complexes in which casinos, previously illegal, are core components. These opened in 2010 and the operators have acknowledged the importance of Chinese guests, a spokesperson for one resort stating that it 'consciously caters' to their needs (People's Daily 2010). While in contention as a gambling destination with the longer established Macau which is also physically closer to Mainland China, Singapore has some advantages. The Chinese are only allowed to visit Macau once every two months and government officials are not permitted to gamble there. Singapore's gaming taxes are lower than those of Macau, at 12% to 22% in contrast to 39%, and the integrated resorts offer novelty and the chance to combine business and leisure. Some analysts maintain that Singapore will be one of the world's principal earners of gambling revenue in a few years, close behind Macau (PricewaterhouseCoopers 2010), provided it can maintain the initial momentum.

Marketing Singapore

Greater China is recognised by the Singapore Tourism Board (STB), the official agency in charge of tourism promotion and development, as one of its eight world markets. There are regional offices in Beijing, Shanghai, Chengdu and Guangzhou as well as Hong Kong. The Board's promotional web site has a Chinese language option and traditional print materials are published in Mandarin. Promoting Singapore to China has intensified in recent years as the market has evolved. The STB targets certain segments, highlights new tourism developments and works with local businesses to market Singapore as an attractive destination. Communications stress the ease of travel to Singapore and the lack of language barriers and visa restrictions (personal communication). The message to China in 2010, hailed as a milestone year because of the integrated resorts, was that Singapore is 'now an exciting city offering a multitude of experiences waiting to be discovered' (STB 2010b).

The development of technology has changed the way people receive information through better customer interaction. As part of the STB marketing mix, the current YourSingapore brand and advertising campaign was introduced to China in March 2010. It is designed to be an 'energetic and fresh proposition, providing travellers with a brand new perspective on visiting Singapore, emphasising the city's unique selling points and acknowledging today's modern media environment where travellers want personalised itineraries and self-discovery' (STB 2010b). The brand succeeds and builds on that of Uniquely Singapore, focusing on the
country's unique attributes and "positions the destination as one that is future-facing and inspiring; one where visitors are invited to conceptualise, customise and plan their own Singapore travel itinerary based on their needs and preferences" (personal communication). A complementary move was the appointment of the Singapore pop singer, Stefanie Sun, as Tourism Ambassador for Greater China. Her role is to help visitors enjoy "Singapore as a business-friendly city; a destination offering unique nature and cultural experiences; as well as a lifestyle city for family and friends" (STB 2010b).

The STB claims to be constantly searching for new ideas and channels, within the constraints of its budget, through which to market Singapore in China. YourSingapore represents the latest strategy which attempts to make full use of the web portal and web applications to reach out to FIT travellers who plan their journeys online. Social media is also recognised as an important space in which to communicate with potential visitors and the STB has expanded its presence with tools such as Facebook and Twitter. One key area of attention is mobile applications and smartphone technologies which have the capability to provide visitors with information on dining, shopping, events and other activities when they are on the move (personal communication).

Quantitative Analysis of Chinese Tourist Arrivals to Singapore

While it is important to understand the aforementioned various aspects of the Mainland Chinese outbound market in Singapore, a related issue which also needs some investigation is the seasonal and tourist arrival patterns of this market over time. In this regard, it is essential for us to analyse tourist arrival data by applying some standard time series analytical tools. On average, 46,258 Chinese tourists arrived per month during the period 1991 to 2010. The median and standard deviation for this market are 36,133 and 33,240 arrivals, respectively.

Seasonality in tourism or intra-year movement of tourists is a reality that has been faced by almost all destinations in varying degree of acuteness. It is often related to the climatic conditions at the destination and/or institutional factors (such as school and calendar/public holidays) in the origin countries. We can examine this phenomenon using the ratio-to-moving average technique and the average monthly seasonal indices can be estimated to show the tourism high and low seasons. The peak season is in February, followed by August, and June is the lowest month (see Figure 2).

The peaking of travel in the January-February Spring Festival Golden Week and July-August school holiday periods often result in a shortage of suitable accommodation during these months (The Straits Times 2011b).

**Figure 2**: Monthly Seasonal Patterns of Tourist Arrivals in Singapore, 1991-2010

Seasonal dummy variables are often used in time series regressions to capture deterministic monthly seasonal effects on tourism demand. The influence of deterministic seasonality can be obtained by regressing the first difference of the logarithm of tourist arrivals on seasonal dummy variables as follows:

\[ \Delta \log y_t = \sum_{s=1}^{12} \delta_s D_{st} = \delta_1 D_{1t} + \delta_2 D_{2t} + \ldots + \delta_{12} D_{12t} + \varepsilon_t \]  

where

- \( y_t \) = monthly tourist arrivals at time \( t \);
- \( D_{st} \) = dummy variable for season \( s \);
- \( \delta_s \) = coefficient of the seasonal dummy variable, which measures the monthly growth rate of tourist arrivals in season \( s \);
- \( \varepsilon_t \) = independently and identically distributed stationary error term.
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The dummy variable for season $s$ is equal to 1 for observations in that season and 0 otherwise. As monthly time series data are used, the total number of seasons is equal to 12. Using the Ordinary Least Squares (OLS) estimation method, the empirical results obtained are only significant for five months. Moreover, the log growth rates in equation (1) indicate that deterministic seasonal fluctuations account for only 23% of the variation in the growth in tourist arrivals from China ($R^2$ = 0.234). The findings show that the seasonal range is small and monthly seasonality is not a major factor affecting tourist flows from China into Singapore.

The Box-Jenkins (1970) approach can be used to quantify tourist arrivals in the past. Specifically, the approach is used to determine the most appropriate autoregressive moving average (ARMA) model to describe the quarterly tourist arrival series from China to Singapore for the period 1991(1) to 2010(4). The ARMA$(p,q)$ model of orders $p$ and $q$ is given by:

$$y_t = C + \beta_1 y_{t-1} + \beta_2 y_{t-2} + \ldots + \beta_p y_{t-p} + \theta_1 u_{t-1} + \theta_2 u_{t-2} + \ldots + \theta_q u_{t-q}$$

where $C$ is the intercept or constant term, $y_t, y_{t-1}, \ldots, y_{t-p}$ represent the current and lagged tourist arrivals, $p$ is the lag length of the autoregressive error term, and $q$ is the lag length of the moving average error term.

The theory behind the autoregressive moving average (ARMA) model is based on stationary time series processes. A tourist arrival series is said to be stationary if the mean, variance and covariance of the series remain constant over time. As the quarterly tourist arrivals (in logit series) given in Figure 3, appears to be non-stationary, the Phillips and Perron (1988) (PP) test procedure is used to test for unit roots. The procedure involves estimating the following regression using OLS:

$$\Delta y_t = \alpha + \beta y_{t-1} + \gamma t + \varepsilon_t$$

and test for:

$$H_0 : \beta = 0$$

$$H_1 : \beta < 0$$

where $y_t$ is the logarithm of tourist arrivals to Singapore from China at time $t$, $\gamma t$ is a deterministic trend, $\varepsilon_t$ is a disturbance term of the regression which is independent and normally distributed with zero mean and constant variance. If the null cannot be rejected, then $y_t$ is likely to contain a unit root which implies $y_t$ is non-stationary. The null hypothesis of a unit root is based on the t-statistic (which has non-standard distribution) using simulated critical values. EViews 7 (2009) software package is used to perform the estimation.

Figure 3: Logarithm of Tourist Arrivals from China to Australia, 1991(1)-2010(4)

The PP statistic for is -4.65 which is less than the 5% critical value of -3.48 and the trend coefficient is statistically significant at the 5% level. This implies follows a trend stationary process and the logarithm of tourist follows an I(0) process, or is integrated of order zero. Hence, this series is used to estimate the appropriate Box-Jenkins models for tourist arrivals from China to Singapore.

Various ARMA models have been estimated using OLS to determine whether the tourist arrivals data for 1991(1)-2010(4) can be described by an AR, MA or ARMA process. The models selected yield significant t-statistics at the 5% level of significance for the AR and MA coefficients, with no serial correlation at the 5% level, using the Lagrange multiplier test for serial correlation. Based on these criteria, twenty-five appropriate ARMA models have been selected for the logarithms of tourist arrivals from China to Singapore. The optimal models selected are ARMA(3,2) as it has the lowest Akaike Information Criterion (AIC) and ARMA (2,1) with the lowest Schwarz...
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Bayesian Criterion (SBC), as shown in Tables 2 and 3. Using the Breusch-Godfrey
Lagrange multiplier or LM(SC) diagnostic checks, the residuals of the models are
found to be serially uncorrelated (see Table 4).

Table 2: Estimates of Selected ARMA(3,2) Model for Chinese Tourist Arrivals, 1991(1)-2010(4)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistic</th>
<th>AIC/SBC</th>
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<tr>
<td>Constant</td>
<td>13.70</td>
<td>15.43</td>
<td>AIC = 0.30</td>
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<tr>
<td>AR(1)</td>
<td>0.415</td>
<td>4.04</td>
<td>SBC = 0.45</td>
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<td>AR(2)</td>
<td>1.034</td>
<td>52.09</td>
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<tr>
<td>AR(3)</td>
<td>-0.468</td>
<td>-4.43</td>
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<tr>
<td>MA(2)</td>
<td>-0.994</td>
<td>-29.54</td>
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</table>

Note: AIC and SBC are the Akaike Information Criterion and Schwarz Bayesian Criterion, respectively.

Table 3: Estimates of Selected ARMA(2,1) Model for Chinese Tourist Arrivals, 1991(1)-2010(4)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
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<tr>
<td>Constant</td>
<td>13.02</td>
<td>37.34</td>
<td>AIC = 0.32</td>
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<tr>
<td>AR(1)</td>
<td>1.45</td>
<td>13.93</td>
<td>SBC = 0.44</td>
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<tr>
<td>AR(2)</td>
<td>-0.465</td>
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<tr>
<td>MA(1)</td>
<td>-0.997</td>
<td>-30.77</td>
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Note: AIC and SBC are the Akaike Information Criterion and Schwarz Bayesian, respectively.

Table 4: Lagrange Multiplier Test for Serial Correlation

<table>
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<tr>
<th>Diagnostics</th>
<th>ARMA(2,2)</th>
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<tr>
<td>FLM(SC)</td>
<td>0.65 [0.52]</td>
<td>1.16 [0.32]</td>
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Note: Figures in parentheses denote probability values.

The results suggest that the optimal models identified comprise a mixed
of autoregressive (AR) and moving average (MA) models. After selecting
the optimal models, a natural extension is to use them for forecasting tourist
arrivals which will help in the formulation of future tourism marketing
strategies to attract more Chinese tourists to Singapore.

Conclusion

Tourist destinations around the world cannot afford to ignore the
outbound Mainland Chinese market because of its current and prospective
volume and value. However, international tourists from China have
defining and distinctive features which marketers and the tourism industry
as a whole must strive to understand so that they can better satisfy
requirements. Singapore possesses a number of strengths as a Chinese
destination, including socio-cultural and geographical proximity as well as
economic and political ties. Official marketing reflects an appreciation of
the profile of visitors from China and any special needs, evolving in line
with the market. Nevertheless, the authorities in Singapore must not be
complacent and face marketing challenges as the Chinese gain access to
more destinations worldwide which are becoming better prepared to
welcome them. Issues of Chinese international travel would thus seem to
warrant continued study in an effort to enhance knowledge of an
increasingly complex and diverse market and assist in maximising new
commercial opportunities while ensuring visitor satisfaction. Tourism
forecasting is a valuable tool in the pursuit of such objectives, helping to
inform strategic decision making, and also justifies further research.
Acknowledgement

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