Anticipating Chinese tourists arrivals in Australia: A time series analysis

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ABSTRACT

Given the growing importance of the Chinese tourist market to Australia, an understanding of Chinese tourists' arrival patterns is essential to accurate forecasting of future arrivals. Drawing on 25 years of records (1991–2015), this study developed a time-series model of monthly arrivals of Chinese tourists in Australia. The model reflects the exponentially increasing trend and strong seasonality of arrivals. Excellent results from validation of the model's forecasts endorsed this time-series model's potential in the policy prescription and management practice of Australian tourism industries.

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1. Introduction

With its unique climate and beautiful environment, Australia is one of the world's most attractive tourism destinations. The tourism industry in Australia generates a total of US $31.5 billion revenue, which makes Australia the world's tenth largest tourism earner (UNWTO, 2013). Tourism has been a key driver of economic growth in Australia, and tourism's contribution to the nation's economy is estimated at $91 billion, equivalent to 6% of Australia's GDP (Tourism Research Australia, 2014). Particularly since the decline of the mining industry, the government has promoted tourism as a key source of future economic growth (McLennan, 2015).

In 2014, 859,500 Chinese visitors visited Australia, making China the second largest source market and the top expenditure market (Tourism Australia, 2015). Australia's interesting attractions, world-class beauty and nature, safe environment, good food and wine, and diversified cultures place it at the top of Chinese travelers' wish list (Tourism Australia, 2015). With China's strong economic growth and the lowered value of Australian dollars, the Australian government is confident this market will continue to boom (Tourism Australia, 2015).

Given the growing importance of Chinese tourist market, the ability to anticipate the growth pattern and arrival trends of Chinese tourists is essential in helping the Australian tourism industry prepare for opportunities and challenges that might accompany increased tourist numbers. Although over the past three decades many popular destinations in the Asia-Pacific regions have experienced a boom in Chinese travelers, only recently have researchers and destinations realized the importance of modeling tourist arrivals (e.g., Song & Li, 2008). While forecasting tourist arrivals has economic significance, it also carries a number of social and cultural implications. Without proper forecasting and strategic planning, a large in-flow of tourists could place a destination's hospitality and industry under strong pressure and disturb local residents (Doxey, 1975; Hsu, 2000). For example, in Hong Kong, residents' attitude toward Mainland Chinese travelers has changed from welcoming, to tolerance, to publicly expressed negativity toward the growing numbers of visitors from Mainland China. Since 2012, a number of "anti-locust"[1] protests have occurred in Hong Kong, which have badly hurt the tourism industry (Zuo, 2015).

Forecasting tourist arrivals is of critical importance, as forecasting not only benefits economic development and strategic planning but also takes into account the social and cultural impacts of tourism on the local destination and communities. This study has three major objectives: to identify the major characteristics of Chinese tourist arrivals in Australia for the past 25 years (1991–2015), to identify the patterns of Chinese tourist arrivals, and to develop and validate a model that can be used to forecast Chinese tourist arrivals in Australia.

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[1] "Locusts" is a pejorative term adopted by Hong Kong residents to describe mainland tourists after an account referred to crowds of passengers who left the subway in a messy state as a "locust invasion" (http://shanghaiist.com/2014/02/17/anti-locust-protestors-march-through-hk.php).

2. Literature

2.1. Chinese outbound travel market

The Chinese have valued travel since ancient times—a Chinese saying is that "traveling one thousand miles equals reading ten thousand books." However, until recently, only a few pioneer voyagers traveled beyond Chinese cultural borders. During the twentieth century, political turmoil, wars, and the resulting isolation of China during the 1960s and 1970s impeded the development of both domestic and outbound tourism in China (China Outbound Tourism Research Institute, 2015). Before the economic reform and the beginning of the open-door policy in 1978, outbound travel was limited to government officials and diplomats (Wen & Tisdell, 2001). However, recognizing tourism as an important economic activity, the Chinese government started to support the development of tourism in the early 1980s, leading to the development of outbound tourism. Researchers in general agree that the growth of outbound tourism in China has occurred in three stages. Stage one, which began in 1983, comprised visiting relatives and friends in Hong Kong via package tours. The travel scope was small and overseas relatives or friends had to cover the Chinese travelers' expenses. Stage two encompassed package tours to Singapore, Malaysia, and Thailand during the 1990s. In Stage three, which began after 2000, outbound travel extended to visiting approved destinations beyond Asia (Chon, Pine, Lam, & Zhang, 2005). Chinese travelers' outbound destinations expanded quickly, and by 2013, the Chinese government had granted 146 countries approved destination status (ADS) (Ma, Zhang, & Qu, 2014).

Several factors contributed to the development of Chinese outbound tourism, the most important being China's strong economic growth and people's increased leisure time (Ryan, 2003). Since 2000, Chinese outbound travel has maintained a two-digit growth rate (Travel China Guide, 2015). A recent report by the World Tourism Organization noted that China has become the largest tourism source market in the world, with more than 22 billion outbound travelers (UNWTO, 2014a). China has also become the top source market for many tourism destinations. For example, China is Thailand's most important source market (Thailand Department of Tourism, 2014).

China is Australia's second largest inbound market in terms of visitor arrivals. In 2015, China became the leading source of inbound tourism to Australia, accounting for 18% of total international tourist spending (Terlato, 2015). Chinese tourists are regarded as the "world's biggest travelers" (Asia Raising, 2014). Nearly 100 million Chinese tourists visited foreign countries in 2013, earning them the distinction of being the "world's biggest-spending" travelers.

2.2. Chinese Visitors to Australia

Australia, which gained Approved Destination Status in 1999, is one of the first countries outside Asia to hold that standing (Australia Embassy, China, 2015). Chinese visitors to Australia started to boom after 2000, and constituted about 2% of Australia's tourist arrivals (Australia Bureau of Statistics, 2015). By 2014, Chinese visitors represented about 12% of total tourist arrivals in Australia. Importantly, Chinese visitors to Australia are strong spenders. In 2014, Chinese visitors were responsible for $6.4 billion, or almost 20%, of the total spending by Australia's international visitors (Wilkinson, 2015), which is more than the combined spending by the UK (12%) and Japan (5%). The strong performance of the Chinese market in Australia can be attributed to the rising income of the Chinese middle class, improved living standards, strong currency, and open visa policies, all of which contributed to the growth in Chinese tourists to Australia (Terlato, 2015).

Over 50% of Chinese tourists visited Australia for holiday (Tourism Research Australia, 2014), followed by visiting family and friends, educational tourism, and business travel. About one-third of the tourists belong to the age group of 45–59, followed by the age groups of 15–29 and 30–44. Chinese visitors like the safety and security of Australia as a destination, the friendliness of local people, and attractions, as well as high quality food and wines, although satisfaction with shopping facilities and experiences was low. Severe pollution in China also motivated people to visit Australia as Australia is known for its good environment, clean air and water, and food safety.

3. Tourist arrival forecasting

Tourist arrival forecasting depends on two elements: "tourist arrivals" and "forecasting." In the context of tourism, an arrival is a statistical unit measuring the volume (number) of tourists or visitors (Statistics Finland, 2014). A tourist is defined as a visitor whose trip includes an overnight stay (UNWTO, 2014b). Thus, the term "tourist arrivals" refers to the number of overnight visitors who arrive at a tourism destination. Tourist arrivals are generally measured as annual or monthly arrivals or as the average daily census (Sheldon, 1993). Forecasting is a process of predicting a future performance (in tourist arrival) mainly relying on existing data (Hadavandi, Ghanbari, Shahanaghi, & Abbasian-Naghneh, 2011).

Tourism demand is usually measured by tourist arrivals from an origin place to a given destination, followed by tourist expenditure (Song & Li, 2008). Therefore, tourist arrival forecasting plays an important role in tourism planning and decision-making. A forecast of tourist arrivals is obtained by applying combined models or a single-equation forecasting model, with the purpose of accurately projecting the number of tourists to a destination at a future time so as to provide essential information to different sectors of the tourism industry and public sectors for planning, controlling, budgeting, and policy-making (Uysal & O'Leary, 1986; Athanasopoulos & de Silva, 2012). In the selection of a forecasting model, forecasting accuracy is a crucial criterion, and is measured by comparison of the forecasted volume with actual tourist volumes (Mahmoud, 1984; Chaitip, Chaiboonsri, & Mukhjang, 2008). The difference between the forecasted tourist arrivals and actual numbers is referred as a forecast error. Chu (2004) found that the most popular measures used to evaluate the accuracy of forecasting are the values of the mean absolute percentage error (MAPE) and the root mean square error (RMSE).

3.1. Forecasting Chinese tourists to Australia

Forecasting tourist arrivals, particularly Chinese tourist arrivals, is of paramount importance since China is Australia's most valuable and fast-growing inbound tourism market (Tourism Australia, 2011). In the past 20 years, Australia has experienced faster growth of tourist arrivals from China (with 19.4% CAGR between 1993 and 2013) than any other tourism market (Australia Trade Commission, 2013), and in 2013, China became Australia's second largest inbound market for visitor arrivals (Tourism Australia, 2015). The rapid growth of Chinese tourist arrivals has a significant impact on the Australian economy. In 2010, the Chinese inbound market contributed $3.26 billion to the Australian economy (Tourism Australia, 2011). In 2013, total spending from Chinese tourists reached $4.8 billion, which made China the largest tourism market for total expenditure and visitor nights in Australia (Tourism Australia, 2015). By 2020, this market has the potential to contribute $7.4 to $9 billion annually (Tourism Australia, 2011).

Both the private and public sectors in Australia have paid great attention to the Chinese market and aimed to further increase the number of Chinese tourist arrivals. As an example, Tourism Australia, in consultation with industry and government stakeholders, developed "Australia's China 2020 Strategic Plan" to ensure that Australian tourism would remain competitive in the fast-growing market for outbound travel from China and grow this market to as much as $9.5 billion in overnight expenditure and 860,000 visitors per year by 2020 (Tourism Australia, 2011). Hence, at a macro level, it is important to analyze and forecast Chinese tourist arrivals as a contributor to Australian GDP and source of revenue. For the public sector, most direct revenue from