

An overview of cruise tourism research through comparison of cruise studies published in English and Chinese

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Abstract:

The concept of cruise tourism should be examined given the rapid growth of this segment of travel worldwide. Rapid increases in cruise tourists and port construction have been observed in China, but systematic research on cruise tourism in China remains unavailable. Hence, this study conducts a thorough review of cruising studies published in top English tourism and hospitality journals and eminent Chinese journals. A content analysis of 62 cruising studies in English and 26 cruising-related articles in Chinese identifies trends in research and methodology and the differences between English and Chinese cruise tourism literature. Significant research topics and methodology trends are discussed and future research directions are also presented.

Keywords: cruise tourism; cruise ship; English literature; Chinese literature; comparison

1. Introduction

Cruise, which bears the characteristics of “tourism” and “hospitality,” is a leisure experience wherein cruisers travel on a cruise ship to different destinations. This form of leisure experience is popular in North America and Europe. The growth rate of global cruise tourism has consistently increased over the recent years with as high as 20.5% increment of cruise passengers in five years (2011–2016). More specifically, 24.7 million people cruised in 2016 and an additional three million passengers are expected to join cruise travel in 2018 (CLIA, 2018). To meet the rising demand of the cruise market, 27 new ships have been scheduled to debut in 2018 on top of 449 existing cruise ships as of 2017 (CLIA, 2018). Despite the continuing popularity of cruise tourism in the global arena, certain changes have been observed in recent years, such as the growing interest of young generations in cruise tourism, increasing diversity of customer profile, and cross-generation travel, that is, grandparents are in a cruise with grandchildren (CLIA, 2017; 2018). The popularity of cruise tourism has recently extended to other areas, such as Asia. The cruise industry in Asia is growing at double-digit rates in terms of capacity deployment in the region and as an important source market (CLIA, 2016). Passenger volume increased from 775,000 to nearly 2.1 million passengers between 2012 and

2015, which is equivalent to 39% compound annual growth rate (CLIA, 2016). According to the CLIA (2018), the United States continues to hold the biggest increment in cruise demand (11.5%) followed by China (2.1%). The Caribbean remains the key region of cruise line deployment (35.4%), followed by the Mediterranean (15.8%), Europe without Mediterranean (11.3%), and China (6%) (CLIA, 2018). China is the main driver of passenger growth in Asia, which accounted for almost half of regional passenger volume in 2015 (CLIA, 2016).

China is quickly gaining ground in cruise development given its 183% growth rate in 2016 from the rate in 2015; It also ranks second in terms of total port calls and leads the Asian source market in terms of passenger volume (CLIA, 2016). This finding demonstrates a considerable demand for cruising experience among Chinese travelers. Although the cruise industry in China remains at its infancy stage, this development is promising because of various reasons including the emerging middle class in China could support a robust cruise industry (Sun, Feng, & Gauri, 2014). Thus, many coastline cities in China, such as Shanghai, Shenzhen, Guangzhou, Tianjin, Sanya, Haikou, Dalian, Qingdao, and Xiamen, have set their sights on the “cruise economy.” The Shanghai Wu Songkou International Cruise Terminal is a leading homeport in the Asia-Pacific region in terms of the number of passengers; the terminal recorded more than 3 million passengers in 2016 and 1,013 ships are berthing at the port with an annual growth rate of 48.97% (Wangyi News, 2017).

The global cruise industry has been expanding, particularly in China. As a newcomer, China has plenty to learn in terms of development of cruise tourism, and leaves much room for innovation as a new test ground. This study aims to provide the state-of-the-art of cruise tourism at the global and local levels with comparison to understand the status quo of cruise tourism in China. This study aspires that its knowledge contribution to the literature can be an insightful reflection of past practices and provide certain hints for the future cruise development in China.”

The study of tourists in the context of cruise tourism is relatively limited, and has been centered in the Western hemisphere with a lack of understanding of new markets and operation at new destinations. To date, only three English review articles examined cruise tourism. Papathanassis

and Beckmann (2011) provided a comprehensive analysis of cruising studies and argued that the “theoretical poverty” hypothesis is somewhat disputable; this study suggested that despite some indications, research tendencies can be found in cruise tourism literature. Sun, Jiao, and Tian (2011) presented a review of cruise research, which primarily focused on marketing research and revenue management. Sun, Feng, and Gauri (2014) reported the evolution of the cruise tourism industry in Mainland China; they indicated the long-term market potential of the cruising in China despite the fact that it is still young and continuously evolving.

Three Chinese review papers were identified given the growing importance of China in terms of market source and port development. One study reviewed overseas cruise tourism literature (Yang, 2015); one article analyzed overseas marketing research in the cruise tourism industry (Zhang, Kou, & Ma, 2012); and another examined the current research process and future research agenda of cruise tourism industry in China (Sun & Feng, 2012). However, to the best of the authors’ knowledge, no study conducted a systematic review that employed qualitative content analysis through a comprehensive examination of Chinese and English cruise literature. These studies should obtain a holistic picture of cruise development to appraise critically the existing approaches employed in cruise tourism research and provide suggestions for future research.

The current study provides an overview of cruise studies published over the past 20 years (1997–2016) in top six English journals in tourism and hospitality industry, namely, *Annals of Tourism Research (ATR)*, *Tourism Management (TM)*, *Journal of Travel Research (JTR)*, *Cornell Hospitality Quarterly (Cornell)*, *International Journal of Hospitality Management (IJHM)*, and *Journal of Hospitality and Tourism Research (JHTR)*. The present study also reviews cruise literature published in high-quality Chinese journals embodied in the Chinese Social Sciences Citation Index (CSSCI) over the past 20 years (1997–2016) to better understand the trends in cruise development and research. This study aims to compare Chinese cruise literature with overseas literature. A substantial volume of literature has been published in English tourism and hospitality journals. Thus, the present study includes English literature published in top six journals that could present research progress and methodology trends of

cruise research. Given the relatively low number of Chinese tourism and hospitality journals, this study includes Chinese papers published in CSSCI journals as long as the topic of such was about cruise tourism to obtain a whole picture of Chinese cruise tourism research. These efforts can identify the similarities and differences of each body of literature and offer learning suggestions to each other. The results will provide potential research gaps for future research.

2. Methods

To obtain relevant cruising studies, two authors generated a list of all possible relevant keywords that may be useful in retrieving cruising-related articles in tourism and hospitality. The following nine keywords were identified: “cruise,” “cruising,” “cruise tourism,” “cruise vacation,” “cruise package,” “cruise line,” “cruise terminal,” “cruise ship,” and “cruise liner.”

For English literature, one of the authors searched the database of the university library, which included relevant year subscriptions to each of the six journals. For example, subscription to *Tourism Management* fell under “ScienceDirect” database. The author then searched relevant cruising studies using keywords derived from each journal publisher’s website using the option of “search within current journal” within the publication year range of “1997–2016.” English cruising articles published in the top journals in the recent two decades were accessible as the university library used in this study was subscribed to all top six journals in tourism and hospitality since 1995. Articles were downloaded if their abstracts contained the keywords. Both research papers and discussion papers/research notes were included. This process generated 62 articles.

For Chinese literature, the database of the China National Knowledge Infrastructure (CNKI) (URL: <http://www.cnki.net/>), which is the most comprehensive database for Chinese literature, was utilized to retrieve cruising research articles in Chinese. The articles were identified using each of the nine keywords in the papers’ abstracts and applying the same publication year range of 1997–2016. To obtain high quality papers, only journals in the CSSCI were included. Similar

to the process for English literature, both research papers and discussion papers/research notes were considered. A total of 41 articles were identified. To ensure their appropriateness for this study, each of the papers were screened by reading their abstracts. The entire texts were then read if the abstracts failed to clearly indicate their research topics. Finally, 26 articles were selected for further analysis.

Two Excel databases were created to record the information of each article, one for English and another for Chinese literature. Following Xiao and Smith (2006)'s recommendations, various aspects of literature were recorded, including publication information, authorship, research topics, research design, and key findings. The information of each article was examined by content analysis. Each paper was read and the corresponding information of each paper was entered into the Excel files for subsequent analysis. The researchers performed multiple readings of the summarized information under each component to generate the trends of English cruising studies and Chinese ones. For the general trend review, descriptive analysis was conducted in terms of publication year and journal, authorship, and study location. For the research topics review, the articles were grouped and classified by content analysis of each paper. Multiple topics are allowed in each article. For the methodology review, each article was examined based on the research approach (i.e., quantitative, qualitative, and mixed), data collection methods, sample, and data analysis methods. Comparisons were made of such information between English cruising literature and Chinese ones.

3. Results

3.1 General trend

3.1.1 General trend of English literature

Sixty-two papers were selected for literature written in English. On average, 3.1 cruising papers were published per year in six tourism and hospitality journals, and only 0.52 article was published per year in each journal (Fig. 1). Cruising research noticeably increased from 26

papers in the first decade (1997–2006) to 36 papers in the next decade (2007–2016) (Fig. 2). Cruising research studies published in tourism journals were more prolific than those published in hospitality journals with 47 papers found in the former and 15 papers in the latter. Although the number of cruising studies published in hospitality journals was small, a significant increasing rate was observed in recent years.

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Fig. 1

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Fig. 2

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Regarding the amount of publications in each journal, TM has the highest quantity of cruising papers over the years (22), followed by JTR (16), IJHM (10), ATR (9), Cornell (4), and JHTR (1). A close examination of the cruising research over the last two decades indicates that JTR (9) led cruising studies from 1997–2006, followed by TM (7), and ATR (5). All three were tourism journals. In the second decade (2007–2016), TM (15) led cruising studies, whereas IJHM (8) demonstrated a rapid growing rate (Fig. 3). TM and IJHM showed an increasing number of publications in cruising research over the years. Cornell maintained the same rate, whereas JTR, ATR, and JHTR demonstrated decreasing numbers.

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Fig. 3

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Regarding the authorship of cruising publications in tourism and hospitality fields, most English cruising studies were published by joint authorships (43 papers; 69%). In terms of the first authorship publication for such studies, James F. Petrick (5) appeared to be the most productive researcher, followed by Kam Hung (4) and Mark R. Testa (4). The top three productive researchers maintained their ranking in all cruising studies they authored, regardless of authorship; 11 papers were found from Petrick and 4 each from Hung and Testa. Alexis

Papathanassis and Xiaodong Sun shared the same number of publications contributed, with 2 papers each for first authorship. All three review papers on cruising were published by both; 1 paper was published by Papathanassis (published in ATR) and 2 from Xiaodong Sun (both published in IJHM).

In terms of the location of first author affiliation, most first authors were located in North America (35; 56.5%), followed by Asia (14; 22.6%), Europe (10; 16.1%), and Oceania (3; 4.8%) (Table 1). Certain specific countries in those regions were involved. First authors from Asia were particularly located in Mainland China, Hong Kong SAR, South Korea, Taiwan, and Malaysia. The UK, Germany, Spain, Italy, Norway, and Turkey constitute the location of Europe's first authors. First authors from Oceania come from Australia and New Zealand. In terms of study locations, 59 cruising studies, excluding the 3 review papers, were classified as follows: North America (specifically Florida and Hawaii) (42), followed by Asia (8), Europe (2), and Oceania (2) (Table 2). We found that North America (specifically USA) has consistently been the most popular research area for two decades, and Asia is a new area of concern because majority of the studies were published in recent years. Europe is the second popular cruising area, in particular the Mediterranean. However, research conducted in Europe is limited because only two studies were published – one in 2012 and another in 2016.” Comparing Table 1 with Table 2, differences in the number of authors and study locations show that the authors do not necessarily conduct studies in their country of residence. Thus, cruising tourism issues in certain areas where cruising is prominent may have been ignored.

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Table 1

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Table 2

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3.1.2 General trend of Chinese literature

Twenty-six papers were selected for literature published in Chinese. On average, 1.3 studies were published per year in CSSCI journals. The first research, which was published by Hu and Chen (2004) in *Tourism Tribune*, was a discussion paper on the development of Shanghai's cruise industry. In addition, the number of publications on cruising fluctuated over the years (Fig. 4). Cruising studies notably increased from only one paper in the first decade (1997–2006) to 25 publications in the following decade (2007–2016), a trend which is identical to the late start but fast-growing cruise industry in China.

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Fig. 4

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Regarding the amount of publications in each Chinese journal, *Tourism Tribune* has the highest number of cruising papers over the years (10), followed by *Tourism Forum* (2), *World Regional Studies* (2), *Chinese Journal of Maritime Law* (2), *Consumer Economics* (1), *Around Southeast Asia* (1), *Economic Geography* (1), *Economic Review* (1), *Science Research Management* (1), *Enterprise Economy* (1), *Truth Seeking* (1), *Shandong Social Sciences* (1), *Statistics & Information Forum* (1), and *China Soft Science Magazine* (1). Cruising research in China was dispersed in journals of various disciplines, which represent tourism and economics, geography, and social sciences.

Most Chinese cruising studies were combined research (23; 88.5 %). In terms of first authorship publication, Xiaodong Sun was the most prolific researcher in cruising studies, who published 5 papers in Chinese and 2 in English. Yan-qing Zhang followed with 2 papers published as first author. Yi Fang, Fang-yuan Fu, Jian-wei Hu, Peng Jia, Qing Lan, Bai-qing Li, Hua Li, Xia Li, Xiao-nian Li, Huan-qing Liu, Fangyuan Lyn, Li Nie, Lihua Shen, Likun Sun, Ruihong Sun, Jun Wang, Hui Wu, Jian-ming Yang, and Shu-min Zhang were all tied for the same number of papers contributed (1 paper published as first author).

The frequencies of first author affiliation indicated that the academia from Shanghai prevailed in cruising research. Most first authors were located in Shanghai (11; 42.3 %), followed by Dalian (3; 11.5%), Beijing (2; 7.7 %), Qingdao (2; 7.7 %), and Changsha (2; 7.7 %). Excluding the 3 review papers, most Chinese cruising studies were found in Asia (26), followed by North America (6), and Europe (1) (Table 3). China was undoubtedly the most examined area in Asia in literature published in Chinese (19). Shanghai was the most studied city in terms of specific study site in China (2). Qingdao and Sanya also emerged. However, other coastline cities, which have joined the cruise tourism industry as important players in China, such as Tianjin, Guangzhou, and Shenzhen, have been ignored in the research. This finding mirrors the number of authors' locations.

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Table 3
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3.2 Research topics

3.2.1 Research topics of English literature

Five key themes of cruise tourism research have emerged in the analytical output based on the English literature (Table 4). These themes are, namely, research on customers, employees, cruise management, destination management, and overview papers. Records of the topics suggest that the current cruising research in English covered a wide range of issues in the industry. However, they primarily emphasized cruise travelers. The majority of studies in this area focused on the aspects of customer satisfaction (9), behaviors (7), and loyalty (7), cruising experiences (4), and decision making (3). Cruise management is the second most studied area in the English cruising literature with 18 papers focused on this area. The topic of revenue management seems to be most popular in this research category (4), followed by branding of cruise lines (3), regional cruise development (2), and corporate responsibility (2). Several studies investigated employee issues, such as job satisfaction (3), leadership (2), career development (1), and cross-cultural management (1). A number of studies examined concerns

from the destination management perspective (e.g., visitor management and various impacts of cruise development on local communities). However, studies in these aspects were scattered.

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Table 4

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3.2.2 Research topics of Chinese literature

Twelve key research topics were identified in cruising studies published in Chinese covering five research areas including customers, cruise management, destination management, business environment and overview papers (Table 5). The most popular topic was regional cruising development (9) among which 7 were discussion papers. Revenue management and law in cruise industry garnered the same attention (3). The other topics of current Chinese cruising studies include competitiveness of ports (2), cruise itineraries (1), web search (1), demand forecasting (1), cruise industry policy (1), pricing mechanism (1), and seasonality of cruise tourism (1). Literature reviews were conducted on cruising studies (3) with one paper systematically reviewed English cruising literature (Yang, 2015), another reviewed studies on the overseas cruise market (Zhang, Kou, & Ma, 2012), and the last paper introduced cruise tourism industry in China (Sun & Feng, 2012). Thus, a range of interests were investigated. However, empirical studies on Chinese cruising travelers were very limited with only one explored potential intention of Chinese cruising travelers (Li & Qu, 2016).

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Table 5

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3.3 Methodological trends

3.3.1 Methodological trends of English literature

Cruising studies in tourism and hospitality published in English predominantly adopted a

quantitative approach. More than half of the current studies were quantitative studies (39; 62.9%), followed by qualitative (14; 22.6%), mixed-method studies (4; 6.5%), and others (5; 8.0%) (Table 6). Studies that employed qualitative methods, such as interviews, focus groups, and content analysis of previous studies in the development process of the survey instrument (e.g., Huang & Hsu, 2010; Hung & Petrick 2010), were categorized as quantitative studies.

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Table 6

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Quantitative methods

Thirty-nine papers adopted the quantitative inquiry approach. In terms of data collection methods for quantitative approach studies, questionnaire survey (37) was the major method adopted. Other techniques include secondary data (1) and experiment (1). Through the use of publicly available online cruise data, Ramanathan and Ramanathan (2016) demonstrated rational importance-performance analysis (RIPA) to investigate customer satisfaction. Testa, Williams, and Pietrzak (1998) conducted four sequential experiments to test the 31-item cruise line job satisfaction questionnaire (CLJSQ). Their findings indicated three facets of job satisfaction in the cruise industry, namely, satisfaction with the company, supervisor, and ship.

In terms of quantitative data analysis methods, CFA and SEM were dominant over the years (Table 7). SEM was the major analytical technique used (4) in the first decade (1997–2006), followed by CFA (3), MANOVAs (3), logistic regression (3), factor analysis (3), descriptive (2), and *t*-test (2). The following methods were used once: regression analysis, ANOVA, moderated regression analysis, and chi-square test. Among the 15 papers published in the first decade, 7 applied one quantitative data analysis technique, another 7 articles used two data analysis methods, and only 1 study utilized three analytical techniques. In the second decade (2007–2016), seven new analytical techniques were applied in cruising studies, which include EFA, correlation, multiple regression analysis, moderated mediation analysis, cluster analysis, two-tailed *z*-test, and the fuzzy AHP method. Among the 24 studies in the second decade, 8 papers used only one quantitative analysis method, 11 utilized two analytical techniques, 4

studies applied three quantitative analytical methods, and 1 paper combined four analytical techniques in its research.

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Table 7

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Qualitative methods

Fourteen cruising studies used a qualitative approach. Among these papers, 5 studies combined two data collection techniques. The other 9 articles used one method. Secondary data is the most popular technique. Eight papers utilized this source, followed by interview (6), observation (3), ethnography (1), and case study (1). In the ethnography study through observations on a cruise ship, Noy (2014) offered up-close depictions of photo-taking routines and public displays of multiple images of vacationing tourists. In terms of case study approach, Lois, Wang, Wall, and Ruxton (2004) examined the applicability of formal safety assessment to the cruise industry.

Only 1 qualitative study explained the recruitment process of participants. Morais, Kerstetter, and Yarnal (2006) utilized purposeful sampling. In this study, the authors used purposeful sampling in recruiting participants for in-depth interviews to examine a “love triangle” formed by the loyal relationships among providers, customers, and their friends.

Content analysis is the main technique applied for extracting and processing qualitative data. Previous researchers presented different terms in their studies, such as “content analysis,” “coding,” and “inductive epistemology.”

Mixed methods

Four cruising studies adopted mixed methods. By observing and recording events when and where they happened, Jaakson (2004) explored the concept of tourist bubbles in ports experienced by cruise ship passengers. Papathanassis (2012) examined the social dynamic and role of situational factors on guest-to-guest interaction on board cruise ships. This study was

divided into two phases, beginning with a survey of 173 randomly selected respondents to determine the comparative significance of guest-to-guest interactions. The study concluded with an analysis of 76 semi-structured interviews to propose a model of factors affecting satisfaction with the interactions. Chen (2016) applied the fuzzy Delphi and fuzzy IPA methods to investigate how Taiwan could build a niche in the cruise tourism industry of Asia. Using 2 focus groups (7 men and 8 women participated in each group) and a survey of 384 subjects, Hanks and Mattila (2014) investigated the impact of gender and pre-purchase mood on consumer guilt after a purchase of cruising service.

3.3.2 Methodological trends of Chinese literature

Among the 26 Chinese papers, 3 articles were review papers, 11 were discussion papers, and 12 studies were research articles (Table 8). Among the research papers, quantitative approach was the most applied approach (6; 23.1 %), followed by qualitative (5; 19.2 %), and mixed approach (1; 3.8 %).

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 Table 8

Quantitative methods

Six studies applied the quantitative inquiry approach, and all of them used secondary data as data collection method, which included cruising market reports in China and the North America, the national economy and society developed statistics in China, and available information from the internet. Among the secondary data research, 2 studies examined the competitiveness of port cities in China (i.e., Nie & Dong, 2010; Wu, Wang, Zhang, & Zhang , 2015), another 2 examined revenue management (i.e., Sun & Feng, 2013a; Sun & Feng, 2013b), 1 explored the spatial-temporal characteristics and influential factors of potential cruising markets in China by analyzing the searching data of the Baidu index (i.e., Li & Qu, 2016), and another used cruising market data of a cruise line in North America to compare two models (EMSR-a and

EMSR-b) in capacity allocation.

In terms of quantitative data analysis methods, many advanced statistical analysis techniques were applied (Table 9), such as the cloud model, constrained nonlinear programming, X-12-ARIMA seasonal adjustment method, and TRAMO/SEATS seasonal adjustment method. Four studies utilized two analytical techniques, whereas the other 2 used only one method.

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Table 9

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Qualitative methods

Five cruising studies applied a qualitative approach. Secondary data was the most used data collection method (4) followed by interview (3). Secondary data included CLIA reports, government documents, and previous studies. Interview data covered interviews with cruising researchers, staff in ports and cruise lines, and tourist administration officials. None of the studies explained their sampling methods with regard to recruiting interviewees. Content analysis was the dominant data analysis method. For example, to understand the “low price dilemma” of the Chinese cruise market, Sun, Ye, and Xu (2016) applied secondary data and telephone interviews to examine the price formation mechanism of cruise products. Their results indicated that the present marketing pattern (“charter ships” or “block group space”) changed the formation of the cruise market in China. The characteristics of this market include package cruise tours, tourism intermediaries as main competitors, monopolistic competition, and fierce price competition. These characteristics, combined with the negative impact of the uncertainty of the external environment on demand, resulted in lower prices in the cruise market.

Mixed methods

One study applied mixed methods to offer a forecasting model for cruising demand based on the BP neural network (Jia, Liu, Sun, & Yang, 2013). In the first stage, the study identified the factors that affect demand through content analysis of secondary data and regression analysis

of previous market data in the US. This study proposed the BP neural network model in forecasting cruising demand based on these factors. In the second stage, the study used panel data on the US cruise market from 1999–2009 and the Chinese cruise market from 2005–2009 to test the model.

4. Discussion and implications

Scientific communication is characterized as “invisible colleges,” whereas the diffusion of knowledge in a scientific community is a typical process, wherein ideas are transmitted from one person to another (Xiao & Smith, 2008). Comparisons of existing cruising literature in English with that in Chinese can benefit knowledge transfer in the scientific community regarding cruising research. Given that the cruise industry in China is still in its early stage, understanding the existing knowledge of cruise tourism in English can provide new directions for Chinese research, which may help enhance the development of cruise tourism industry in China.

Regarding the number of publications, the present study found increasing trends in studies published in English and Chinese over the last two decades. This trend in English studies is consistent in two journals, namely, *TM* and *IJHM*. The larger number of cruising papers published in tourism journals signals that cruising is largely regarded as a tourism instead of hospitality phenomenon. Although cruising tourism in China is in its early stage, the paucity of cruising research in Chinese tourism and hospitality is surprising given the increasing investigations of cruise economy in other fields, such as in economics, geography, and maritime law. Unlike the numerous foreign experts on cruising research, the number of Chinese researchers is limited.

In terms of locations of first authors and study locations, results for English studies showed that both industries are dominated by North America. This finding is consistent with the prevalent role of North America in the cruising industry. Asia comes second in both locations

of first authors and study locations. The results of this study indicate an imbalance in cruising research locations among English studies. Europe is the second largest market after North America, but only two studies were conducted in Europe. The UK was the third source market of ocean passengers in 2015 (1.78 million) (CLIA, 2015), but no cruising research was conducted in this location. For Chinese studies, the location of first authors and the study location are dominated by Shanghai, which is consistent with its important status as the most developed and competitive port city in China regarding cruising tourism.

The topics in English studies show diversity with a broad spectrum of investigation, such as customer studies and human resource, cruise, and destination management with majority of the topics on the demand side, such as customer satisfaction, behaviors, and loyalty, cruising experience, and decision making. However, the investigation is incomprehensive and lagging behind industry practice considering the fast development of cruise tourism at the global scale. For instance, changes in tourism demand over the recent years, such as the increased number of young and cross-generation travelers that embark on cruise tourism as well as new industry practices, such as keeping travelers connected to their social contacts during cruise vacation, have yet to be reflected in cruising studies. Further updated research should be conducted to cope with the fast growth of cruise tourism in the global arena.

The number of Chinese publications is small and the research topics are limited. Moreover, contrary to English literature, Chinese literature largely focuses on issues concerning the supply side instead of the customer as key focus. In particular, regional cruise development, which refers to the development of the cruising economy of a city or an area, is a highly popular research topic. This outcome may be attributed to the fact that the cruise industry in China recently started. Thus, investigating the development of cruising in an area or a city is an important prerogative.

Despite the fact that similar categories of investigation are found across English and Chinese literature, specific topics are unidentical, with a larger variety found in the English literature. Human resource management, which is one of the areas of concern in the English literature,

remains unexplored in the literature on Chinese cruising. In contrast, business environment, which is one of the key areas of investigation in Chinese literature, was not examined in English literature. This notion may be due to the interest of scholars in uncertain government policies, regulations, and laws which characterize the early stages of the cruise industry in China. However, uncertainties in the business environment in China may also present rich opportunities for various parties, such as cruise liners who wish to expand market share in Asia, coastal destinations who wish to be a home port or port of call for further development of local tourism, travel agencies who are challenged by online delivery channels, the government and tourism offices who would like to stimulate the local economics with the multiplier effect of cruise tourism, and Chinese tourists who are constantly looking for a new travel experience. With the stimuli from various dimensions, the cruise industry has much potential to become one of the popular travel modes of Chinese travelers. The cruise industry in China is still at the initial stage of a product lifecycle, which signifies opportunities for product innovation and development. Understanding the Chinese mindset is key to providing a unique cruising experience and reaching high levels of customer satisfaction and revisit intentions. Although the development of the cruise industry in mature destinations, such as North America, is likely predictable, the understanding of cruise development in China should be contextualized in the local culture with a link to global business environment. Therefore, the influence of the Chinese culture and other contextual factors, such as political environment, is worthy of investigation.

Differences exist in terms of research methods. First, more than 90% of the English articles are research papers, which correspond to less than 50% for the Chinese literature. Most Chinese studies are discussion papers. Second, most of the English studies applied the quantitative approach, wherein survey is the most prevalent data collection method. However, a slight gap exists between the number of quantitative and qualitative studies in Chinese studies. Secondary data is the most applied data collection technique not only for the quantitative, but also for qualitative Chinese research. Unlike the clear explanation of sampling strategies in most English literature, the majority of Chinese studies did not indicate sampling methods. Third, in comparing data analysis techniques, the types of statistical analysis methods applied in English literature outnumber those from Chinese ones. However, Chinese quantitative studies were

likely to utilize complicated models (e.g., cloud model, constrained nonlinear programming, and expected marginal seat revenue algorithms). This approach may be attributed to the research topics of those Chinese studies, which include comparing the competitiveness of ports and revenue management. Content analysis is the dominant analytical technique in for qualitative research in English and Chinese studies.

5. Conclusions

This study reviewed English and Chinese cruising studies for the last two decades to provide a baseline for understanding the existing knowledge on cruise tourism and compare Chinese and foreign cruise studies. To the best of the authors' knowledge, no similar research exists. Gaining significant knowledge of cruising tourism can potentially offer future research directions.

This study reveals imbalances in cruise study locations and research topics. Results indicate that studies published in English are dominated by North America, not only for the milieus of first authors, but also for study locations. Only a few studies were conducted in Europe despite the fact that this location is the second biggest source market. In addition, research subjects of overseas studies primarily entail investigation from the demand side. However, research from the supply side, such as cruise lines, cruise itineraries, and ports, is lacking. The number of publications in Chinese is minimal perhaps because of the short history of the cruising industry and the narrow research topics. Most current studies focused on developing cruise tourism and building ports in a particular area of China. However, research on cruise travelers from Mainland China is almost ignored. Given the cultural differences between China and other countries, Mainland Chinese customers should be examined in terms of their determinants of deciding to take a cruise and their cruising experiences. This information is crucial in understanding cruise travelers from Mainland China and further expanding the Chinese market in the future.

In terms of methodological trends, this study found that the shift from descriptive analysis to

advanced statistical analysis has been gradual in both English and Chinese literature. However, Chinese studies utilized limited data collection methods and most of them applied secondary data. Thus, the present study suggests that more rigorous primary data collection techniques, such as interview, focus group discussion, and survey, should be considered for future Chinese cruise research.

This study may help scholars consider future research topics and advance theoretical contribution to cruise research because understanding research trends contributes to obtaining theoretical context for future research. In addition, methodological quality is one of the key determinant of paper acceptance (Perdue, Meng, & Courtney, 2007), and gaining significant knowledge of the applications of research methods can potentially enhance scholarly understanding of how cruise research can be conducted. In conclusion, this study may help researchers develop future research while considering current research gaps and methodological limitations. Given the rapid expansion of the cruise industry, this assessment is a timely theoretical and methodological contribution to the cruise knowledge community.

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Table 1. Location of first author for English literature

Continent	Frequency	Percent	Country/Area	Frequency	Percent
North America	35	56.5%	USA	33	53.2%
			Canada	2	3.2%
Asia	14	22.6%	Mainland China	4	6.5%
			Hong Kong	4	6.5%
			South Korea	4	6.5%
			Taiwan	1	1.6%
			Malaysia	1	1.6%
Europe	10	16.1%	UK	4	6.5%
			Germany	2	3.2%
			Spain	1	1.6%
			Italy	1	1.6%
			Norway	1	1.6%
			Turkey	1	1.6%
Oceania	3	4.8%	Australia	2	3.2%
			New Zealand	1	1.6%

Table 2. Study locations of English literature

Continent/Seas	Frequency	Country/Area	Frequency	Publication year(s) (frequency)
North America	42	USA	40	1997-2006 (18), 2007-2016 (22)
		Jamaica	1	2000 (1)
		Mexico	1	2004 (1)
Asia	8	Singapore	2	2010 (1), 2014 (1)
		Hong Kong	2	1999 (1), 2014 (1)
		Phuket	1	2014 (1)
		(Thailand)		
		Sanya (China)	1	2014 (1)
		Port Klang	1	2014 (1)
Europe	2	(Malaysia)		
		Taiwan	1	2016 (1)
		Germany	1	2012 (1)
		Italy	1	2016 (1)

Oceania	2	Australia	2	1998 (1), 2011 (1)
Caribbean	1			2000 (1)
No-specific-place	8			2004 (1), 2005 (2), 2009 (1), 2012 (1), 2014 (2), 2016 (1)

Note: multiple locations were studied in some articles.

Table 3. Study locations of Chinese literature

Continent	Frequency	Country	Frequency	City	Frequency	Publication year(s) (frequency)
Asia	26	China	19	Shanghai	2	2004 (1), 2010 (1)
				Qingdao	1	2012 (1)
				Sanya	1	2009 (1)
				Nanjing	1	2015 (1)
				No-specific-place	14	2010 (3), 2011 (1), 2012 (2), 2013 (3), 2014 (1), 2015 (2), 2016 (2)
		Japan	1	No-specific-place	1	2012 (1)
		South Korea	1	No-specific-place	1	2012 (1)
		Burma	1	No-specific-place	1	2011 (1)
		Thailand	1	No-specific-place	1	2011 (1)
		Laos	1	No-specific-place	1	2011 (1)
		Cambodia	1	No-specific-place	1	2011 (1)
		Vietnam	1	No-specific-place	1	2011 (1)
North America	6	USA	2	No-specific-place	2	2013 (2)
		No-specific-place	4			2010 (1), 2013 (1), 2015 (2)
Europe	1	No-specific-place	1			2015 (1)
No-specific-place	1					2016 (1)

Note: multiple locations were studied in some articles.

Table 4. Key topics of English cruising studies

Key topics	Numbers	Sources
CUSTOMER RESEARCH		

Customer satisfaction	9	Petrick (2004c), Ramanathan & Ramanathan (2016), Sirakaya, Petrick, & Choi (2004), Teye & Leclerc (1998), Dumana & Mattila (2005), Lynn & Kwortnik (2015), Testa, Skaruppa, & Pietrzak (1998), Huang & Hsu (2010), Hosany & Witham (2010)
Consumer behaviors	7	Jaakson (2004), Noy (2014), Qu & Ping (1999), Cantis, Ferrante, Kahani, & Shoval (2016), Petrick (2005), Hyun & Han (2015), Henthorne (2000)
Customer loyalty	7	Petrick (2004a), Petrick (2004c), Gabe, Lynch, & McConnon (2006), Petrick, Tonner, & Quinn (2006), Morais, Kerstetter, & Yarnal (2006), Li & Petrick (2008), Hosany & Witham (2010)
Cruising experiences	4	Yarnal & Kerstetter (2005), Hosany & Witham (2010), Huang & Hsu (2010), Li & Kwortnik (2016)
Decision making	3	Hung & Petrick (2012), Xie, Kerstetter, & Mattila (2012), Viña & Ford (2001)
Perceived value	3	Petrick (2004b), Petrick (2004c), Dumana & Mattila (2005)
Service quality	2	Petrick (2004c), Chua, Lee, Goh, & Han (2015)
Price sensitivity	2	Petrick (2005), Chua, Lee, Goh, & Han (2015)
Motivation	2	Hung & Petrick (2011a), Hung & Petrick (2011b)
Customer-to-customer interaction	2	Papathanassis (2012), Huang & Hsu (2010)
Constraints	1	Hung & Petrick (2010)
Consumer guilt	1	Hanks & Mattila (2014)
Travelers' environmentally responsible decision-making	1	Han, Lee, & Hwang (2016)
Crisis management	1	Liu, Pennington-Gray, & Krieger (2016)
CRUISE MANAGEMENT		
Revenue management	4	Wie (2005), Toh, Rivers, & Ling (2005), Li (2014)
Branding	3	Hwang & Han (2014), Kwortnik (2006), Dev (2006)
Regional cruise development	2	Chen (2016), Sun, Feng, & Gauri (2014)
Corporate social responsibility	2	Font, Guix, & Bonilla-Priego (2016), Bonilla-Priego, Font, & Pacheco-Olivares (2014)
Cruise itineraries	1	Lee & Ramdeen (2013)
Cruise lines' segmentation	1	Li & Kwortnik (2016)
Factors motivating cruise lines to select specific ports of call	1	Wang, Jung, Yeo, & Chou (2014)
Safety	1	Lois, Wang, Wall, & Ruxton (2004)
Supply chain management	1	Véronneau & Roy (2009)
Theming	1	Weaver (2005)
Legal strategy	1	Wilson (2012)
EMPLOYEE MANAGEMENT		
Job satisfaction	3	Larsen, Marnburg, & Øgaard (2012), Testa, Skaruppa, & Pietrzak (1998), Testa, Williams, & Pietrzak (1998)
Leadership	2	Testa (2002), Testa (2009)
Career development	1	Brownell (2008)

Cross-cultural management	1	Testa (2009)
DESTINATION MANAGEMENT		
Visitor management	1	Scherrer, Smith, & Dowling (2011)
Economic impacts	1	Dwyer & Forsyth (1998)
Cultural impacts	1	Wood (2000)
Social impacts	1	Jordan, Vogt, & DeShon (2015)
OVERVIEW PAPERS		
Literature review	3	Papathanassis & Beckmann (2011), Sun, Jiao, & Tian (2011), Sun, Feng, & Gauri (2014)

Note: multiple topics are allowed in each article.

Table 5. Key topics of Chinese cruising studies

Key topics	Numbers	Sources
CUSTOMER RESEARCH		
Demand forecasting	1	Jia, Liu, Sun, & Yang (2013)
Web search	1	Li & Qu (2016)
CRUISE MANAGEMENT		
Regional cruise development	9	Shen, Yang, & Dong (2012), Lan & Guo (2011), Li, Zhou, & Zhi (2015), Sun & Qiao (2010), Wang, Wang, & Xia (2010), Hu & Chen (2004), Zhang & Cheng (2012), Li (2009), Zhang, Ma, & Liu (2010)
Revenue management	3	Fu & Wang (2016), Sun & Feng (2013a), Sun & Feng (2013b)
DESTINATION MANAGEMENT		
Competitiveness of ports	2	Nie & Dong (2010), Wu, Wang, Zhang, & Zhang (2015)
Cruise itineraries	1	Sun, Wu, & Feng (2015a)
BUSINESS ENVIRONMENT		
Law	3	Lyn & Guo (2014), Fang (2013), Li & Yan (2013)
Cruise industry policy	1	Liu & Liu (2012)
Pricing mechanism	1	Sun, Ye, & Xu (2016)
Seasonality of cruise tourism	1	Sun, Wu, & Feng (2015b)
OVERVIEW PAPERS		
Literature review	3	Zhang, Kou, & Ma (2012), Yang (2015), Sun & Feng (2012)

Table 6. Statistics of research methods applied by English studies

Approach (frequency, percentage)	Methods	Frequency
Quantitative (39, 62.9%)	Survey	37
	Secondary data	1
	Experiment	1
Qualitative (14, 22.6%)	Interview	6
	Secondary data	8

Mixed (4, 6.5%)	Observation	3
	Ethnography	1
	Case study	1
	Focus group discussion & survey	1
	Focus group discussion, Delphi, & survey	1
	Observation & survey	1
	Interview & survey	1
Others (5, 8.0%)	Model discussion	2
	Literature review	3

Note: multiple methods are used in each article.

Table 7. Summary of data analysis methods of English quantitative studies

Data analysis methods	1997 – 2006	2007 – 2016	Sum
CFA	3	12	15
SEM	4	10	14
EFA	0	7	7
Descriptive	2	2	4
Regression analysis	1	4	5
MANOVAs	3	1	4
Factor analysis	3	1	3
Logistic regression	3	0	3
t-test	2	1	3
ANOVA	1	0	1
Correlation	0	2	2
Multiple regression analysis	0	2	2
Moderated regression analysis	1	0	1
Chi-square	1	0	1
Moderated mediation analysis	0	1	1
Cluster analysis	0	1	1
Two-tailed z-test	0	1	1
Fuzzy-AHP method	0	1	1

Table 8. Statistics of research methods applied by Chinese studies

Approach (frequency, percentage)	Methods	Frequency
Quantitative (6, 23.1 %)	Secondary data	6
Qualitative (5, 19.2 %)	Secondary data	4
	Interview	3
Mixed (1, 3.8 %)	Secondary data	1
Others (14, 53.8 %)	Discussion paper	11
	Literature review	3

Note: multiple methods are used in each article.

Table 9. Summary of data analysis methods of Chinese quantitative studies

Data analysis methods	1997 – 2006	2007 – 2016	Sum
Entropy-TOPSIS	0	1	1
Cloud model	0	1	1
Regression	0	1	1
Constrained nonlinear programming	0	1	1
X-12-ARIMA seasonal adjustment method	0	1	1
TRAMO/SEATS seasonal adjustment method	0	1	1
Correlation	0	1	1
Multiple regression	0	1	1
Expected Marginal Seat Revenue (EMSR)	0	1	1
algorithms			

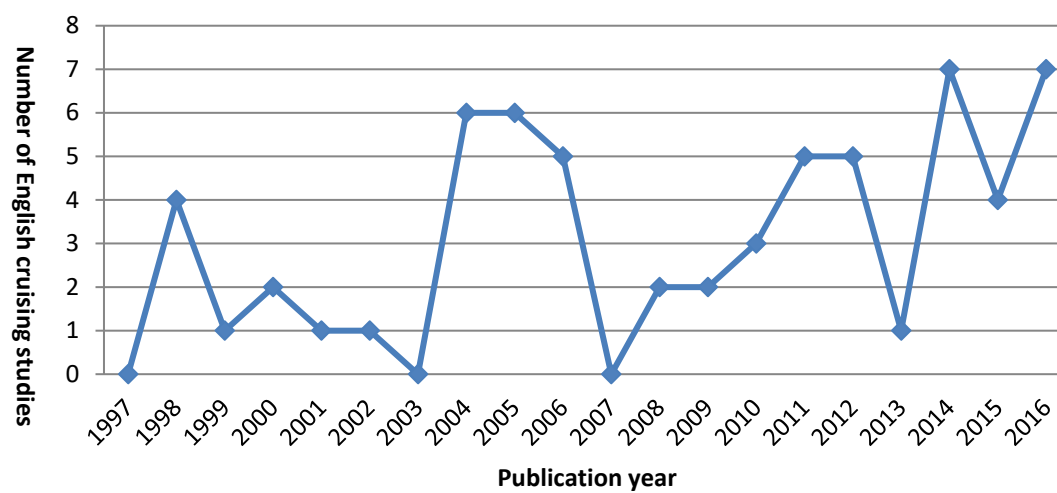


Fig. 1. Number of English cruising studies in years.

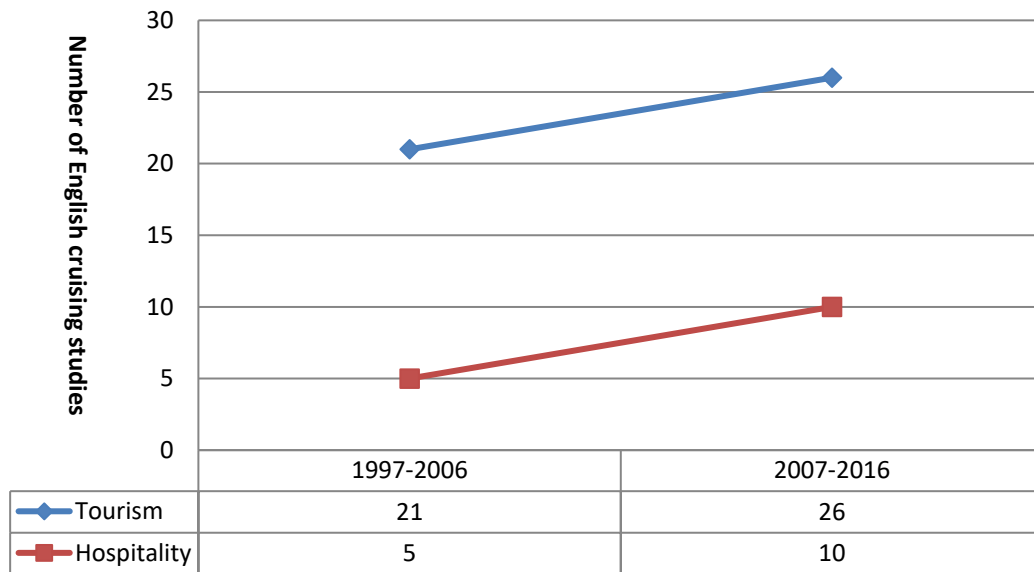


Fig. 2. English tourism and hospitality publications on cruising in two decades.

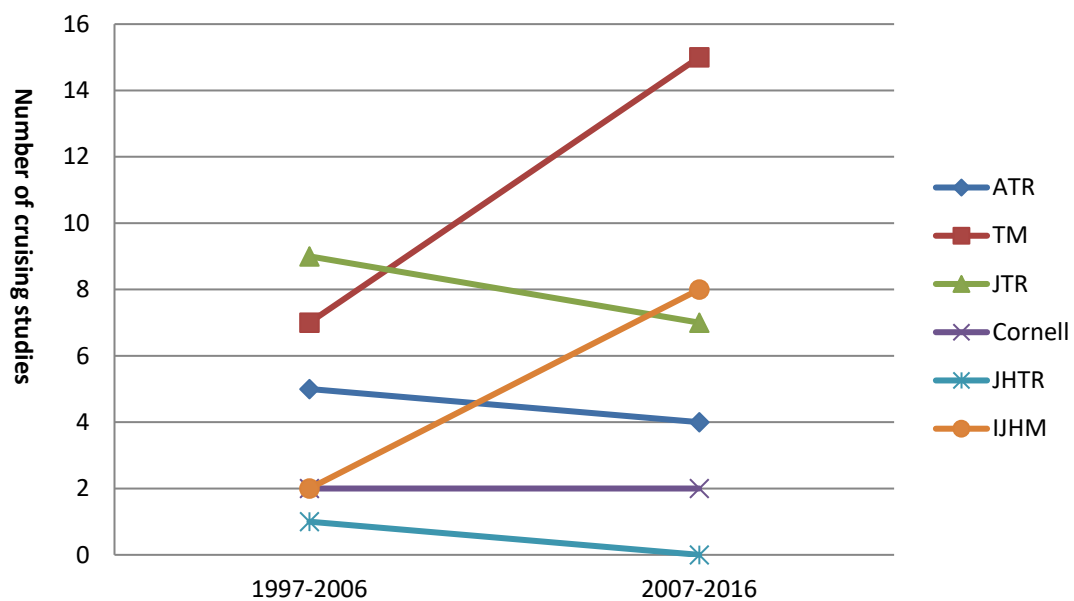


Fig. 3. Number of cruising studies in six tourism and hospitality English journals in two decades.

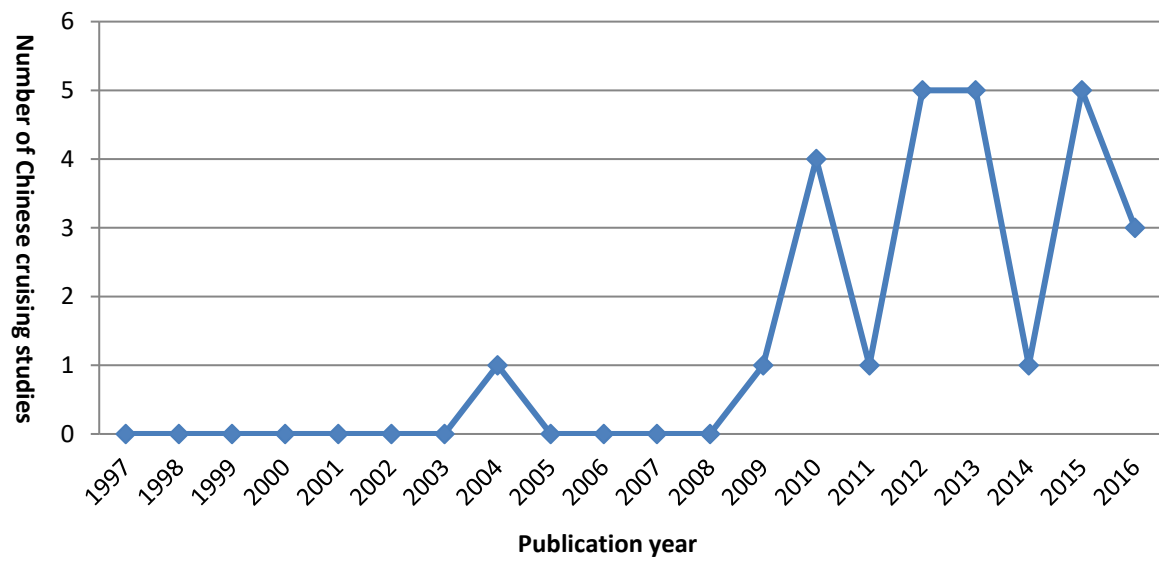


Fig. 4. Number of Chinese cruising studies in years