Political relations and bilateral tourism demand: The case of China and Japan

Jen-Je Su, Tien Pham, Larry Dwyer

Abstract

Political climate or cross-country relations can potentially affect and be affected by their bilateral visitor flows. Visitors' destination choices can be altered by the political relations and international tourism may improve country relations. Since COVID-19 will inevitably trigger a major shakeup of international relations, understanding how tourism demand and country relations interact should offer useful insight for rebuilding the tourism industry in the post-COVID era. This paper examines the possible bi-directional linkages between China and Japan as a case study. Findings suggest that country relations do influence visitor flows, but not vice versa. The influence is statistically strong regarding visitor flows from China to Japan but is weak and insignificant in the opposite direction, although this relationship appears to be strengthening recently. The paper concludes with some suggestions for further research.

Key words: Bilateral tourism demand, Country political Relations, Japan, China

I. Introduction

While the destination choice literature has focussed on well-known determinants of tourism demand such as income, comparative prices, travel costs, destination 'attractiveness' and so on (Song and Li 2008), the role of political factors in tourist decision making has largely been ignored. However, recent empirical evidence indicates that political factors within a country (e.g. political instability, violent demonstrations, disapproval of the government) and across countries (political relations) may have an important influence on tourist decision making (Karl, Reintinger, and Schmude 2015).

In the literature, political instability is mostly identified with terrorism, unrest and political conflict, in contrast to peace and stability. Political instability generates perceived uncertainty or risks that can affect tourism demand from within and from outside a country. Several authors (Morakabati 2013; Helmy 2014) have explored how a destination's inbound tourism industry is affected by uncertainties arising from conflicts, crises, instability, war, hostilities and instabilities through economic and political courses in a country. The impacts of political instabilities on the tourism market vary in different countries (Tekin 2015) and more or less remain within the country's sovereignty to resolve the issues. In contrast, political relations between countries are beyond a single country's autonomy to improve conditions affecting visitor flows to a destination from specific countries. Between the two, political instability and political relations, the latter is of interest in this paper as it is an emerging research interest in the literature.

Studies show that cross-country relations could directly affect international visitor flows through various channels, from government propaganda to direct means such as visa policies or tourist restriction (Hall 1994; Tse 2013; Kim, Prideaux, and Timothy 2016; Farmaki 2017; Paik 2019). From another perspective, tourism is often viewed as an unofficial path of 'soft' diplomacy and appraised as an important driver of peace (Levy and Hawkins 2010; Becken

and Carmignani, 2016; Pan, Wu, and Chang 2020). According to a recent World Travel & Tourism Council (2016) report, travel/tourism fosters reconciliation and contributes to improve cross-national relations through cultural exchange, interpersonal contact, mutual appreciation and understanding. In contrast, Rowen (2014) and Pratt and Liu (2016) question if tourism really helps to shape international politics and support peace. Instead, tourism development might rather be a beneficiary of peace. The peace-making function of tourism is further complicated by emergent over-tourism in many popular tourist locations around the world – in these places, conflicts between tourists and locals have escalated (Dodds and Butler 2019).

Country relations are an important determinant of trade flows. Unstable political relations among countries can stir nationalistic sentiments among citizens, thereby affecting consumer preferences and trade. Political shocks and the uncertainty they generate, may also influence government behaviour in ways that are detrimental to trade and economic activity generally. An association between bilateral trade and cross-country political relations is well documented in the empirical literature (Pollins1989; Du, Ramirez, and Yao 2017). More recently, Heilmann (2016), Gawarkiewcz and Tang (2017), have estimated the dynamic impact of political shocks on bilateral trade. Davis and Meunier (2011). Davis, Fuchs, and Johnson (2019) further confirm that trade follows the flag, with state-owned enterprises a key means for politicising trade. The level of influence of country relations on trade can vary among countries, depending on the trajectory of a country's history, the structure of the society, its culture, and the economic and political climate in place (Li and Liu 2019).

Since international tourism is an export industry, studies of the effects of political factors on trade have particular relevance for the present study, particularly those that focus on bilateral trade between China and Japan. Li and Liu (2019) shows that political events negatively affect the amount of goods Japan exports to China, with the effect being most pronounced for

highly salient and visible products such as automobiles and cameras. The adverse effects on sales of these products ease quickly, lasting up to 12 months. The authors conclude that, for consumers, certain political tensions, especially those involving enduring territorial disputes, could override entrenched economic interests and preferences, at least in the short term. This finding is consistent with the findings of several other studies that 'trade follows the flag', whereby political relations between countries drive bilateral commerce activities between them (e.g. Keshk, Pollins, and Reuveny 2004).

As expected from an exporting industry, international tourism may be affected by country relations in a similar manner to more general trade. There is a growing literature exploring political impacts on tourism, including nations' territorial integrity, security, political stability, peacefulness, and institutions, all of which can play an important role in influencing tourist inflows (Alsarayreh, Jawabreh, and Helalat 2010) with emphasis on the effects of terrorist activity (Khalid, Okafor, and Aziz 2019; Balli, Uddin, and Shahzad 2019). However, with some exceptions (Keum 2010; Becken and Carmignani 2016), the influence of country relations on visitor flows remains largely untested empirically in the tourism literature. Undeniably, country relations and tourism are intertwined in a complex manner and the linkage between the two is potentially bi-directional. Yet, to our knowledge, there is no published work bringing such long-term dynamic linkages into examination within a clear empirical framework.

This paper seeks to fill an important research gap. Given the fast-changing nature of tourism and international relations, the linkage between these two variables might not hold constant over time. If in fact this is the case, determining the links and tracking the movement over time would provide valuable information for tourism policy and management. The paper uses China-Japan relations as a case study for the implications on bilateral tourism flows. The findings are new and provide an important contribution to the tourism literature as they

explicitly recognise the political determinant on tourism development, a main economic driver for China and Japan in this study as well as for other destinations. As the impact of COVID-19 to globalization and world politics won't disappear after the pandemic (McNamara and Newman 2020; Drezner 2020), understanding how country relations would affect tourism is imperative for rebuilding the international tourism industry in the post-COVID era.

The rest of the paper is organized as follows. Section 2 briefly reviews the historical background on the China-Japan relations, including recent bilateral tourism trends. Section 3 describes the data and the econometric settings for the modelling tasks. The paper utilizes the Political Relations Index (PRI) developed by the Institute of International Relations at Tsinghua University in China to reflect the perceived political or country relations between China and Japan. In addition to applying the lag-augmented Granger causality test of Toda and Yamamoto (1995) to examine the interaction of political relations and bilateral tourism flows between China and Japan, we further employ two newly developed algorithms – the rolling and the recursive testing algorithms (Shi, Hurn, and Phillips 2020) – to trail the development of the causal linkage of tourism and country relations between the two countries. This time-varying causality test is new to and useful for tourism research. The empirical results and discussion are in section 4. In the concluding section 5, policy implications are addressed with suggestions for further research.

2. Japan-China political relations and tourism

Historically, ancient Japan fell within the cultural sphere of the vast Chinese civilization, strongly shaped by China with its language, art, philosophy, and culture. The Sino-Japanese war in 1894-95 marked the modern tension between the two countries, when Japan inflicted a

shock defeat on China and emerged as the first non-Western world power in modern history. The relationship between the two countries was totally shattered after Japan's invasion of China in World War II leaving large casualties for both countries – in particular, on the Chinese side, which still influences contemporary political relations with Japan (Cheng, Wong, and Prideaux 2017).

For China, Japanese occupation in World War II remains a deep, open wound. A survey by the Pew Research Center (2016) shows that while about half the respondents in Japan say their country has apologised sufficiently for its military actions during the War, only 10 per cent of Chinese respondents share the same view. On the other hand, China's massive military moderation and far-reaching expansion in recent years deeply troubles Japan (Vogel 2019). A long-standing dispute over ownership of Diaoyu/Senkaku Islands has periodically damaged their bilateral relations (Hollihan 2014). Interestingly and somewhat surprisingly, in a joint survey annually conducted by the Genron think-tank in Japan and the China International Publishing Group in 2019, 45.9 per cent of Chinese respondents reported a positive image of Japan, but the feeling is not mutual as less than 15 per cent of the Japanese respondents have a favourable impression of China (Genron-NPO 2019). The relationship between the two countries has recently been depicted as 'tense, dangerous, deep, and complicated' in Vogel (2019), who alleges that this is the second most important bilateral relationship in the world, apart from the relationship between China and the United States. Despite the historical complications and political tensions between China and Japan, since the opening of the Chinese economy to the world in 1978, business connections between the two countries have flourished, mainly due to

proximity in geography and complementarity in technologies. Accordingly, China-Japan relations are characterised as 'cold politics, hot economics' (Vekasi and Nam 2019). Trade and investment between the two countries have continued to grow over time. In 2017, China

overtook the U.S. to become the largest trading partner of Japan, and Japan also became China's third largest trading partner (United Nations Conference on Trade and Development 2019). In the same year, the total stock of Japanese foreign direct investment in China was worth US$164 billion, with more than 30,000 Japanese companies having operations in China (IMF 2019).

For both countries, tourism is a good source of export income with each progressively relaxing visa policies to attract more tourists from each other. Since 2003, China has adopted a visa- free policy for Japanese tourists for up to 15 days (Du 2008), granting Japan Approved Destination Status in 2009. Japan subsequently softened the financial requirement and increased the number of offices in mainland China for visa applications. Multiple-entry visas with long validity and staying time were introduced to attract high spend Chinese visitors. In 2018, there were approximately 8 million Chinese visitors to Japan, accounting for more than one-third of Japan's total international arrivals; and in return, there were about 2.5 million Japanese visitors to China, comprising of over one tenth of Japan's total international departures. Nonetheless the concern remains regarding the potential for Chinese tourists to be explicitly and negatively influenced by Chinese popular nationalism in their attitudes and travel intentions towards countries that have been hostile in the past (Cheng et al. 2017).

3. Data and Methodology

Political/country relations vary along a continuum from cooperative normal relations, to political tensions, occasionally threatening and occasionally to war (Davis and Meunier 2011). To make 'country relations' an operational concept, we adopt an index developed by Yan Xuetong and colleagues (Yan and Qi 2009; Yan, et al. 2010) at the Institute of International Relations of Tsinghua University to gauge the relations between China and

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Japan. Du et al. (2017) refers to this index as the Political Relations Index (PRI), as its construction is mainly based on political/diplomatic events. We adopt the same as notation in Du et al. (2017) for this paper. We note that the PRI is bounded between -9 and 9 and can be categorized into six groups as rival (-9 to -6), tense (-6 to -3), bad (-3 to -1), normal (0 to 3), good (3 to 6), and friendly (6 to 9).

According to Yan and Qi (2009), the PRI is based on reports of bilateral political events such as official visits, meetings, agreements, military conflicts, and unexpected incidents, from the Chinese newspaper Renmin Ribao (People's Daily), as well as information from the Ministry of Foreign Affairs of the People's Republic of China, between China and nine major countries (Australia, France, Germany, India, Japan, Pakistan, Russia, the UK and the US). The data is collated monthly, starting from 1950. The political events are weighted by severity, similar to the long-established Goldstein scale comprising revisions to the World Events Interaction Survey (Goldstein 1992). The coding process involves converting events related to the political relations between China and a foreign country into a uniform scale from the lower bound (-9) of the most severe degree of confrontation to the upper bound (+9) of the highest degree of friendship. Table 1 provides a list of typical political events and the associated scores for illustration.

[Insert Table 1 about here]

The monthly event score comprises combined measures of conflict and cooperation. When there is more cooperation than conflict during a particular month, the indicator is positive; when there are more conflicts than co-operations, the indicator is negative, and zero when the positives and negatives are judged to cancel out. Effectively, the event score comprises a 'net cooperation scale'. The calculation PRI is based on a formula that accumulates these net

event scores over time. The index thus changes monthly depending on whether the net event score for each month is positive, negative or zero (Institute of Modern International Relations 2018).

Our formal approach to employing a continuous time-series index of PRI offers advantages in capturing the two-way interaction of changes in political/diplomatic relations and tourism demands over time as compared with the usual ad-hoc event-based dummy variables which are often treated as exogenous. Our approach allows for feedback from tourism to country relations, to assess if tourism can be an effective peace maker. More specifically, the monthly frequency of PRI in our modelling framework allows measurement of the magnitude of the responsiveness of visitor flows between the two countries in regard to changes in political climate.

PRI data from January 1996 to December 2017 is presented in Figure 1. Overall, the relations between Japan and China tend to have deteriorated over the period, from "good" to "tense" (+5 down to -5). It is important to note that the relations between the two countries never became too extreme over the study period. The relations between the two countries gradually declined in 2005-2006 due to their different perceptions of the political status of Taiwan, and subsequently were improving toward 2010. However, this was followed by the deepest drop in the index in September 2012, triggered by the nationalisation of the disputed Diaoyu/Senkaku islands by the Japanese government. Although it seems that relations have shown some improvement in recent years, the relationship has remained *tense* since then.

[Insert Figure 1 about here]

Monthly tourism data on visitors travelling from China to Japan are obtained from JTB Tourism Research & Consulting Co. of Japan (2020) and data for visitors from Japan to

China are collected from various editions of the China Tourism Yearbook by China Tourism Press. Currently, the data are available till the end 2017 from the Yearbook. Thus, the sample period in this study is limited to the period 1996-2017. Total visitor arrivals from China to Japan are denoted as $VA_{CN,JP}$ and from Japan to China as $VA_{JP,CN}$. Figure 2 shows the bilateral visitor arrivals between the two countries. While the SARS outbreak in 2003 affected visitors from Japan to China more than those from China to Japan, the number of Chinese visitor arrivals in Japan has been in an up-trending spiral since 2012, and totally outnumbered the trend of visitors from Japan to China by the end of 2014.

[Insert Figure 2 about here]

The original arrival data are not seasonally adjusted. Tourism and all other data used in this paper are on a monthly basis, from January 1996 to December 2017. We conducted seasonal adjustment for the two series with the X-12 procedure to ease the effect of seasonality.

In addition to PRI, $VA_{CN,JP}$, and $VA_{JP,CN}$, we also consider several macroeconomic variables often employed in tourism demand modelling. These variables include the Industrial Production (IP) index of China (IP_{CN}) and Japan (IP_{JP}) as a proxy for economic condition; nominal exchange rate (FX) and real bilateral effective exchange rates (REER) and the consumer price index (CPI) of both countries to reflect the relative costs for travelling of the two countries (Crouch 1994; Song and Li 2008; Pham, Nghiem, and Dwyer 2017). It should be noted that the IP index is used as a proxy for GDP, as monthly GDP data is not available. This is a common practice in macroeconomic modelling – see, for example, Du et al. (2017). All variables are obtained from the World Bank Global Economic Monitor Database. The two IP's and the two CPI's series are seasonally adjusted.

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For testing the dynamic linkage between political relations and visitor flows, we first consider the following vector autoregressive process of order p (VAR(p)) with a trend:

$$Y_t = \delta_0 + \delta_1 t + \sum_{i=1}^{p} \Phi_i Y_{t-i} + \mu_t, \tag{1}$$

where Y_t is an n-vector time series and μ_t is a zero-mean independent, identically distributed process with a non-singular covariance matrix. To conduct a Granger causality test for the possibly integrated vector Y_t, where each series of Y_t is at most with integration of order d, Toda and Yamamoto (1995) propose the following lag-augmented VAR($p+d$) model:

$$Y_t = \delta_0 + \delta_1 t + \sum_{i=1}^{p} \Phi_i Y_{t-i} + \sum_{j=p+1}^{p+d} \Phi_j Y_{t-j} + \mu_t. \tag{2}$$

The kth element of Y_t does not Granger-cause the jth element of Y_t if the following null hypothesis cannot be rejected: H$_0$: $\Phi_1^{j,k} = \cdots = \Phi_p^{j,k} = 0$. That is, the ($j,k$) element in Φ_i equals zero for i = 1,...,p. Otherwise, if the null hypothesis is rejected, the kth element of Y_t is said to Granger-cause the jth element of Y_t. The inference is done by applying the usual joint F (Wald) test.

The Toda-Yamamoto test procedure (which is often referred as the lag-augmented Granger causality test) is advantageous as it does not require the pre-test of cointegration. The inclusion of the extra d lags is to ensure that the standard Wald statistic for testing Granger causality has the usual Chi-squares χ_p^2 asymptotic distribution under the null hypothesis. In practice, p is unknown *a priori* and can be determined based on the Bayesian Information Criterion (BIC) or the Akaike Information Criterion (AIC). Based on the augmented Dickey-Fuller test, the testing outcome asserts that the maximum integration order among these variables is 1; therefore, we set d=1. To conserve the space the results are not reported but available upon request.

- H1: China-Japan relations do not Granger-cause China-to-Japan visitor arrivals

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- H2: China-Japan relations do not Granger-cause Japan-to-China visitor arrivals

- H3: China-to-Japan visitor arrivals do not Granger-cause China-Japan relations

- H4: Japan-to-China visitor arrivals do not Granger-cause China-Japan relations.

We consider three VAR models. Model 1 is the benchmark model which contains the three main variables: PRI, $VA_{CN,JP}$ and $VA_{JP,CN}$. To accommodate the effects via relevant macroeconomic factors, the benchmark model is extended to Model 2, which includes three additional variables, IP_{CN}, IP_{JP}, and REER, and to Model 3, which contains five extra variables IP_{CN}, IP_{JP}, CPI_{CN}, CPI_{JP}, and FX. The two extended models are used for the purpose of robust checking – they postulate that, apart from the core economic reasons, it is possible for a visitor from one country to avoid a trip to the other country when the political climate offers an unwelcome or hostile condition, and also when it is perceived not to be appropriate from a nationalistic or patriotic point of view. All series are log-transformed, except for PRI.

To trace the likely time-varying linkage between PRI and VAs, following Shi et al. (2020), two algorithms – the rolling window algorithm and the recursive evolving algorithm – based on the lag-augmented causality tests are considered. The two algorithms can be described as follows. Let s_1 and s_2 be the starting and ending points of the subsample for VAR modelling and $W(s_1, s_2)$ denote the lag-augmented Wald statistic for testing causality on the subsample from s_1 to s_2. Denote sw as the fixed subsample window (i.e. $sw = s_2 - s_1 + 1$) and the rolling tests are comprised of a series of subsample lag-augmented Wald tests: $W(1, sw)$, $W(2, sw + 1)$, ..., $W(T - sw + 1, T)$, where T is the full sample size. Analogously, the full sample lag-augmented Wald statistic can be denoted as $W(1, T)$.

The recursive evolving procedure includes a series of recursive calculations of the lag-augmented Wald statistics in a backward expansion for a given end point in the sample. The

recursive statistics are defined as the maximum value (i.e. the supremum norm) of the statistics over the entire recursion. Specifically, let τ be the minimum number of observations required for the VAR model estimation and f be the endpoint of interest. The recursive statistic is defined as

$$supW_f(\tau) = \sup_{s_2=f,s_1\in[1,s_2-\tau+1]} \{W(s_1,s_2)\}, \qquad (3)$$

which is the supremum of a sequence of Wald statistics: $\{W(s_1,s_2)\}_{s_2=f}^{s_1\in[1,s_2-\tau+1]}$. We set $f = \tau, \ldots, T$. Through moving forward the end point over the whole sample, a series recursively evolving causality tests (i.e. $supW_\tau(\tau), supW_{\tau+1}(\tau), ..., supW_T(\tau)$) are obtained. As shown by the simulation results of Shi et al. (2020), the recursive procedure tends to outperform the rolling procedure in terms of testing power.

In practice, for statistical reference, a bootstrap procedure is implemented to generate the critical values for both rolling and recursive testing procedures. The bootstrap approach is particularly useful for resolving the multiplicity issue in recursive testing. The time-varying tests are performed with the Matlab code provided by Shi (Shi, et al. 2020).

4. Empirical Results and Discussions

The full-sample results based on the BIC for VAR lag selection are reported in Table 2. For robust checking, we added dummies for the SARS pandemic (2003) and the Global Financial Crisis (2008) into the VAR models, but the causality testing results were unchanged. We also considered AIC for lag selection and the main results were similar. To conserve space, only results based on BIC are reported.

[Insert Table 2 about here]

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Clearly, the lag-augmented Granger-causality test is statistically significant for H1 in all three models, implying that the China–Japan political/diplomatic condition is a non-trivial factor in predicting future tourism flows from China to Japan. Interestingly, the result for H2 shows that Japanese travellers are less sensitive to the political conditions between Japan and China than are the Chinese. The contrasting results might reflect different governmental influences across the two countries, or that Chinese tourists tend to be more responsive to political climate while visitors from Japan to China are not as sensitive. As for the causal relationship of tourism towards country relations, the testing results of H3 and H4 are both insignificant, implying that tourism does not assume a decisive role in shaping foreign relations between China and Japan even though the bilateral visitor flows between the two countries are sizable. Therefore, overall, international tourism tends to follow the national flag (diplomacy leads tourism) but not the other way around (tourism does not lead to a better relationship). This finding is consistent with the findings for international trade and political relations (Pollins 1989; Davis et al. 2019).

Next, we apply the two time-varying procedures (rolling window and recursive) to trace the evolving causal linkages. For lag selection, both BIC and AIC are considered. As the results are insensitive to lag selection, to save space, only results with BIC are presented. The endpoint of each time-varying tests starts from December 2005 with an increment of one month till the end of full-sample in December 2017. We set both the subsample window of the rolling procedure and the minimum required observations of the recursive procedure at 120 (i.e. 10 years). We report the empirical results based on the benchmark model (Model 1) in Figure 3. The time-varying procedures are applied on all three models and reach very similar results. To conserve space, only results from Model 1 are reported. Please note, results in this figure are based on two time-varying procedures (rolling and recursive). In

each graph, the blue line gives the Wald statistics and the dash line in each graph represents the 5 per cent bootstrapping critical value.

[Insert Figure 3 about here]

For H1, PRI does Granger-cause China-to-Japan arrivals but the effect does not hold for every subsampling period. The turning point arises from the subsample with endpoint in October 2012, where the recursive testing procedure starts showing significant impact (at 5 per cent level) of PRI to Chinese-to-Japan arrivals. The rolling procedure generates a very short-lived (1 month) significant result in February 2013 but soon turns insignificant for about 2 years before becoming significant again from February 2015 and on. As the recursive procedure tends to be more powerful than the rolling procedure, it is of no surprise that the former produces more significant outcomes. Clearly, the results reveal an evolving causal effect from PRI to China-to-Japan arrivals. The significant results starting from the end of 2012, which coincides with the spike of the dispute of ownership of Diaoyu/Senkaku islands between the two countries and, interestingly, shortly after that the number of Chinese arrivals starts growing exponentially.

A simple visual analysis (Figures 2 and 3), suggests that PRI and $VA_{CN,JP}$ are negatively correlated (especially, from the end of 2012 as PRI is falling while $VA_{CN,JP}$ is rising), but this can be misleading as both series are very persistent (presumably, nonstationary). From the econometric theory (e.g. Phillips 1986; Su 2008), a plain relationship between two persistent series is subject to be spurious. PRI and visitors are nonstationary and they are not cointegrated according to the Engle-Granger cointegration test. Therefore, the VAR approach is advantageous. Indeed, from our subsample VAR analysis, we find that starting from the end of 2012, $VA_{CN,JP}$ becomes more sensitive of the change of PRI: when PRI improves

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(declines), $VA_{CN,JP}$ tends to rise (drop) immediately in the following month but bounces back in the month after. We depict the estimated lag parameters of PRI of the two VA equations ($VA_{CN,JP}$ and $VA_{JP,CN}$) of VAR(2) (selected by BIC) with subsample of January 2008 to December 2017 in Table 3. The lag parameters of PRI to $VA_{CN,JP}$ are 0.141 (first lag) and -0.153 (second lag), both are significant at 1 per cent level.

[Insert Table 3 about here]

For H2, PRI does not Granger-cause Japan-to-China arrivals throughout the sampling period, except for the last few months toward the end of 2017. Like the time-varying results regarding H1, the Wald statistics of both time-varying procedures are considerable larger in the second-half period, implying the rising impact of PRI to VA series. From Table 2, the lag parameters of PRI to $VA_{JP,CN}$ are 0.047 (first lag) and -0.020 (second lag), where the first lag coefficient is significant at 1 per cent level but the second lag is insignificant.

Evidently, the reverse causal effects from VA's to PRI are insignificant and neither H3 nor H4 can be rejected throughout the entire subsamples. These time-varying test results confirm the lack of substantial influence of visitor flows to country relations between China and Japan.

5. Conclusion

Tourism has increasingly become a crucial economic driver in many countries, making it more imperative to understand factors that can determine tourism demand. Beyond the standard economic factors such as price and income determinants, this paper has demonstrated that country relations have a strong effect on visitor flows from China to Japan,

particularly since the end of 2012 with relations viewed as 'tense' between the two countries. Our findings are that bilateral visitor flows in response to their cross-country relations are dissimilar and Chinese tourists are more sensitive than Japanese tourists to the two countries' relations. For the Japanese visitors, the overall effect on the visitor flows to China is generally rather weak and statistically insignificant. However, the influence of country relations on the visitor flows from Japan is clearly more pronounced over the tense period between the two countries than at other times. Thus, a prolonged tense condition could potentially generate strong adverse impacts on the number of Japanese visitors to China, resulting in reductions in bilateral tourism flows. On the other hand, no clear evidence of influential causality of tourism on country relations is found.

Just as 'trade follows the flag', so too do visitor flows. Since the full-sample Granger-causality test assumes a stable overtime relationship between political relations and visitor flows, testing may not be able to reveal the true relationship when it is time-varying. Using a newly developed time-varying causality test, the causal relationship at different points of time is clearly differentiated, thus providing early warnings of changes in tourism demand when country relations evolve. Both techniques were applied to analyse the bi-directional relationship between tourism demand and country relations. The use of disaggregated data also allows us to uncover the potential heterogeneous impact of political tensions on different sectors of tourism and hospitality. While researchers have noted the potential role of tourism in reducing tension (Levy and Hawkins 2010) our findings do not support this. Rather, tourism may benefit from peaceful relations between countries (Pratt and Liu 2016). More research is necessary to specify the causal mechanisms and conditions under which a two-way relationship holds.

The results of the present study are, of course, only as good as the accuracy of the political scale and indicator weightings. Its construction may, however, miss events that are not

reported in the Chinese newspapers and official records. Clearly, to analyse the determinants of bilateral tourism flows, an index incorporating information from both countries' newspapers and official records would be more comprehensive. Unfortunately, this data is not available. Tourism researchers now have an opportunity to refine the scale to better reflect tourism contexts and to undertake further study of its relevance to bilateral tourism flows between various other destinations.

Given the importance of China as a source market for outbound tourism globally, the results have implications for tourism flows worldwide. At the time of writing this paper, many countries are supporting an inquiry into China's role in spreading COVID-19, which may have substantial implications for Chinese outbound tourism to countries supporting such an inquiry. Tourism destinations in a substantial bilateral relationship with China should be aware of the potentially disruptive nature of political events particularly those that can be used by Chinese nationalists to stoke nationalist fury towards the destination. Beyond this, deeper understanding in the effect of country relations on tourism flows will be increasingly important in the post COVID-19 era, with profound impacts on the distribution of global tourism.

In marketing research, an emerging body of work has examined the concept of 'consumer animosity' (Riefler and Diamantopoulos 2007), defined as 'remnants of antipathy related to previous or ongoing military, political or economic events'. Empirical studies have demonstrated that such animosity can lead to negative impacts on consumers' willingness to buy the products of firms from the offending nation (Klein, Ettenson and Morris 1998; Nijssen and Douglas 2004). The question arises as to whether there is a tourism equivalent to consumer animosity that influences tourism flows between countries. This issue demands further research.

Another issue needing further research concerns the role of tourism firms in influencing visitor flows in response to changes in political relations. Will travel agents and tour operators in an origin destination continue 'business as usual' or will they change strategy? Obviously, this will depend on the extent of changes in political relations between countries and the type of government influence on the local industry. Tourism firms may play a relatively passive role in this (e.g. promoting/marketing certain 'politically more acceptable' destinations ahead of others), or may adopt a more proactive role (e.g. cutting business ties with firms in particular outbound markets). Changes in behaviour on the supply-side will play an important role in influencing the size of effects on visitor flows in any context of changed political relations between countries.

The implications of the study undertaken here go beyond tourism between China and Japan. In a world where consumer purchasing decisions, including tourism choices, have become increasingly politicised, standard approaches to tourism demand modelling may be unsuitable to capture the influence of important determinants of tourism demand. One determinant likely to become increasingly important is that of country relations and more empirical work is required to assess the strengths of the links with tourism flows. Hopefully, other researchers will seek to refine the approach employed here and apply it to other country contexts.

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Tables and Figures

Table 1: Selected political events with scores

Positive Events Scores	Negative Events Scores
• Establish confederacy (+9)	• Declare or military attack (-9)
• Sign bilateral military alliance (+7.5)	• Break official diplomatic relations (-7.5)
• Completely lift political, military, and economic blockade (+6)	• Escalation of war or send troops to participate in multi-national wars against each other (-6)
• Reach agreement on border demarcation (+4.5)	• Downgrade diplomatic relations (-4.5)
• Announce the cessation of hostile military operations (+3)	• Recall ambassador (-3)
• Lift arms embargo (+2.5)	• Arms embargo (-2.5)
• Establish regular national leaders meeting (+2)	• Expel senior diplomat (-2)
• Official visit of head of state (+1.5)	• Cancel official visit of head of state (-1.5)
• Small scale joint military exercise (+1)	• Postpone national leader's visit (-1)
• Resume military contact (+0.8)	• Suspend military exchanges (-0.8)
• Joint communique (+0.6)	• Discontinue dialogue on political/security issues (-0.6)
	• Minor military frictions (-0.5)
	• Strong dissatisfaction (-0.3)

• Transfer military technology (+.5)	• Reiterate opposition (-0.1)
• Conduct political security dialogues and consultations (+0.3)	
• Reiterate support (+0.1)	

Source: Institute of International Relations at Tsinghua University, China. Please refer http://www.imir.tsinghua.edu.cn/publish/iisen/7523/index.html for the full of events

Table 2: Full-sample empirical results

Hypothesis	H1 (PRI→VA$_{CN,JP}$)	H2 (PRI→VA$_{JP,CN}$)	H3 (VA$_{CN,JP}$→PRI)	H4 (VA$_{JP,CN}$→PRI)
Model 1	13.18 (0.001)***	0.571 (0.751)	1.480 (0.477)	0.644 (0.725)
Model 2	10.87 (0.004)***	0.813 (0.666)	1.362 (0.506)	0.354 (0.838)
Model 3	9.006 (0.027)**	0.030 (0.862)	0.116 (0.733)	0.354 (0.552)

Notes: p-value in the parenthesis. ** and *** indicate significance at the 5% and 1% levels, respectively.

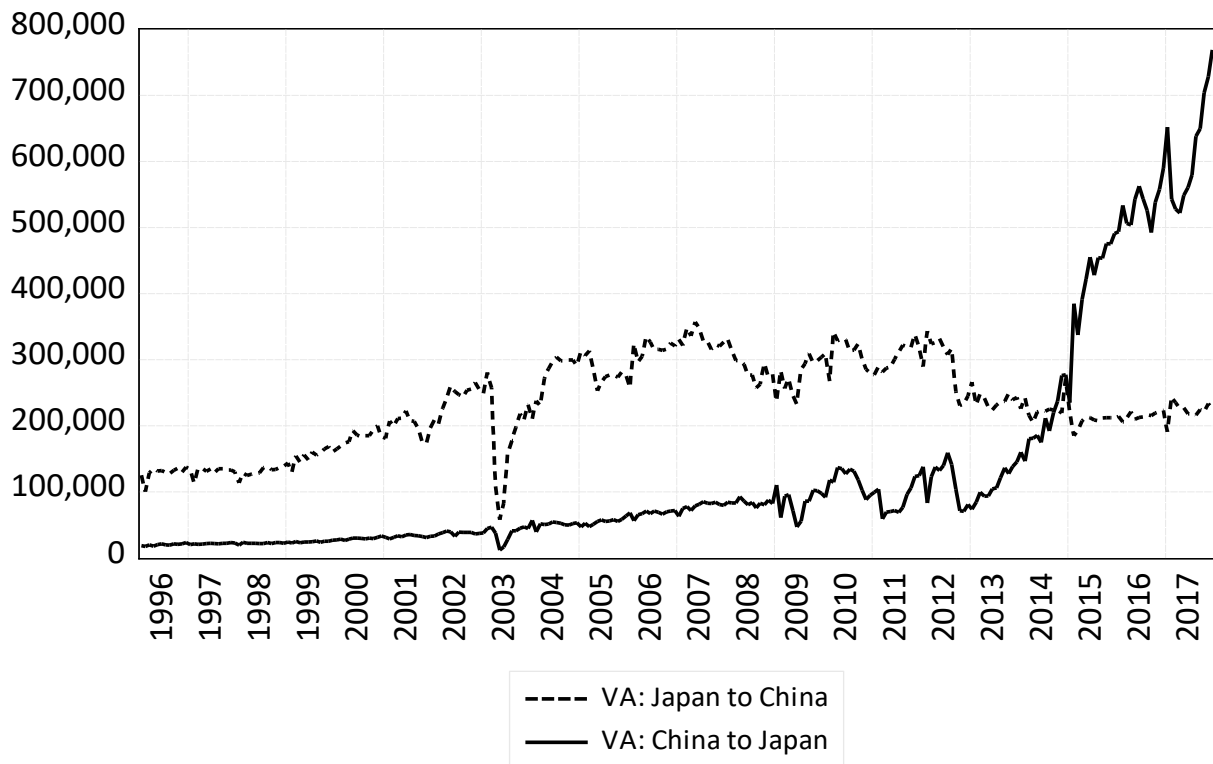**Table 3: Selected subsample VAR (2) results of PRI to VA (2008.Jan to 2017.Dec)**

	VA$_{CN,JP}$	VA$_{JP,CN}$
PRI(-1)	0.141 (3.110)***	0.047 (2.486)***
PRI(-2)	-0.153 (-3.386)***	-0.020 (-1.041)

Note: t-statistics in the parenthesis, ***: significance at the 1% level

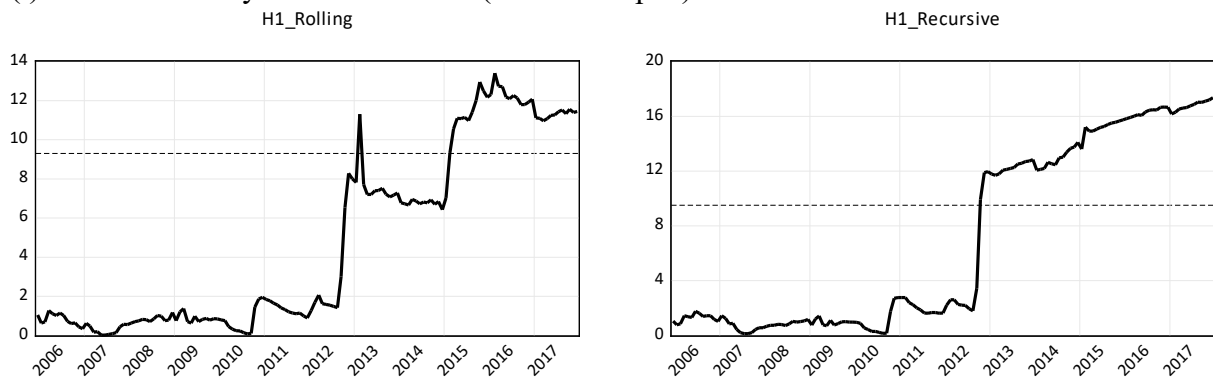**Figure 1: Foreign relations index (PRI) between China and Japan**
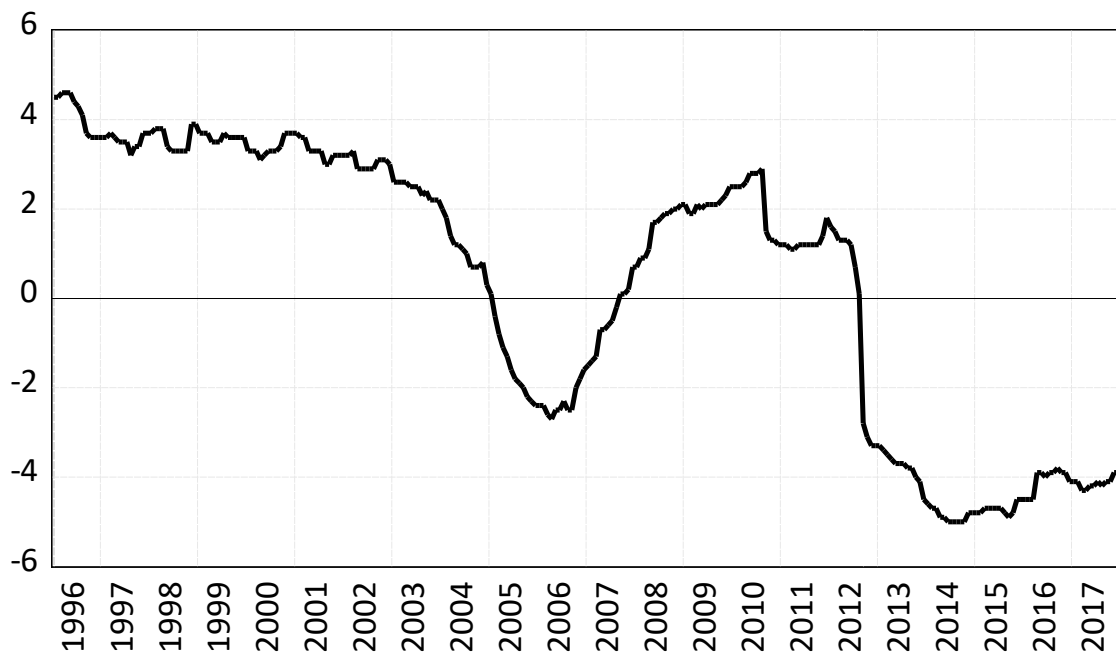
Figure 2: Visitor arrivals (VA) between China and Japan
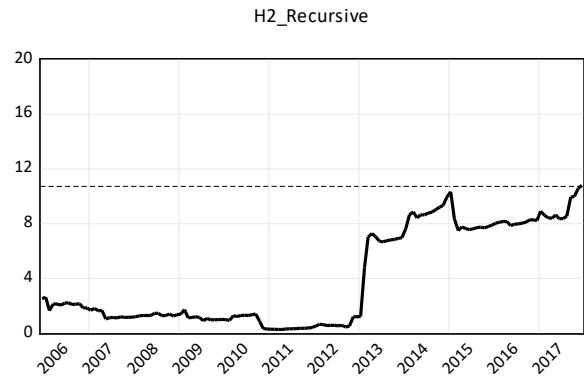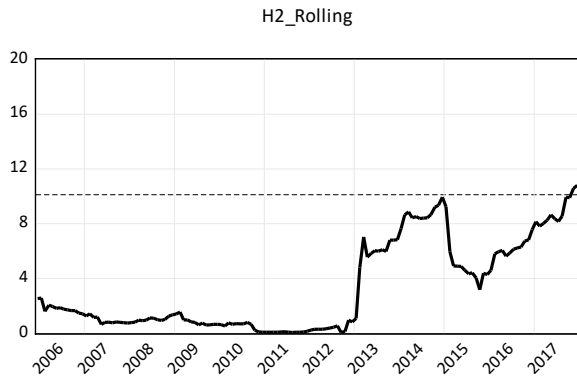

- - - - VA: Japan to China
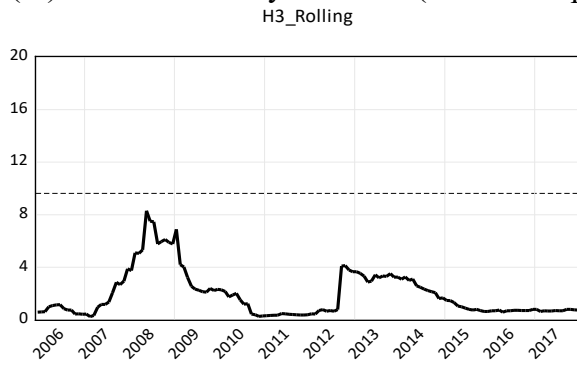—— VA: China to Japan

Figure 3: Time-varying empirical results

(i) H1: no causality from PRI to VA (China to Japan)

H1_Rolling

H1_Recursive

(ii) H2: no causality from PRI to VA (Japan to China)

H2_Rolling

H2_Recursive

(iii) H3: no causality from VA (China to Japan) to PRI

H3_Rolling

H3_Recursive
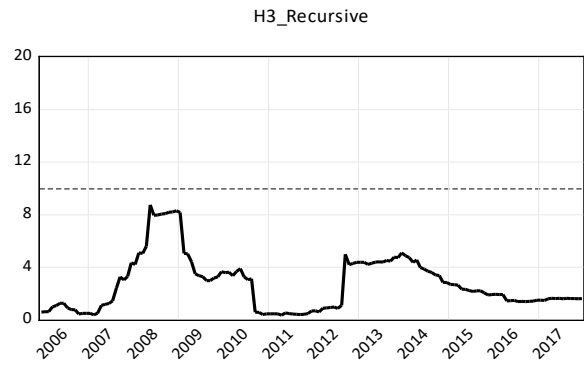
(iv) H4: no causality from VA (Japan to China) to PRI

H4_Rolling

H4_Recursive