

# THE IMPACT OF 13 COUNTRIES ON CANADA'S INBOUND TOURISM DEMAND

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# RESEARCH MOTIVATION

# INBOUND TOURISM IN CANADA

- ▶ **Inbound Tourism:** The activities of non-Canadian visitors travelling to Canada, irrespective of purpose (World Travel Organization [UNWTO], 2013)
- ▶ Over two decades (1990 to 2012), Canada has attracted more than 830 million international tourists (Statistics Canada, 2014)
- ▶ The World Economic Forum recently ranked Canada as 8<sup>th</sup> in the world in terms of competitiveness as an international destination (just below France and the United States), noting the country's several strengths, including an abundance of cultural resources as well as “rich natural resources (10<sup>th</sup>) with numerous World Heritage sites (ranked 5<sup>th</sup>), excellent air transport infrastructure, highly qualified human resources (5<sup>th</sup>), and a strong policy environment (10<sup>th</sup>)” (Blanke & Chiesa, 2013).

# INBOUND TOURISM IN CANADA

- ▶ After the US, the largest sources of inbound tourism for Canada include: the UK, France, Germany, Japan, Australia, China, South Korea, India, Mexico, Netherlands, Italy, Switzerland, and Jordan (Statistic Canada, 2014)
- ▶ In 2010, over 23.2 million residents from the selected top 13 countries visited Canada, accounting for 90.4% of the total 25.6 million international tourists arrivals in that year; these individuals spent \$10.1 billion in Canada, equivalent to 62.6% of all international tourist expenditures (Statistics Canada, 2011)

# CONTRIBUTIONS OF TOURISM TO THE CANADIAN ECONOMY

- ▶ As implied by the preceding slide, inbound tourism contributes significantly to Canada's economy; for example, we estimate that expenditures made by inbound tourists to Canada generated \$29.3 billion in economic activity in 2012
- ▶ In addition, tourism can generate jobs directly through hotels, restaurants, nightclubs, taxis, and souvenir sales, and indirectly through the supply of goods and services needed by tourism-related businesses
- ▶ In 2012, the Travel Industry Association of Canada (TIAC) (2013) reports that tourist-related expenditures (domestic and international) sustained 495,700 jobs in the tourism industry, as well as an additional 113,800 jobs in other industries

# CONTRIBUTIONS OF TOURISM TO THE CANADIAN ECONOMY

- ▶ Furthermore, growth in business or leisure travel to Canada can lead to significant increases in exports to tourists' countries of origin; a recent econometric analysis conducted by Deloitte (2014), a 1% increase in Canadian arrivals would generate an estimated increase of \$817 million in Canadian exports (pg. 13)
- ▶ Finally, tourism activities generate significant tax revenues for government. For instance, Statistics Canada estimates that tourism activities generated \$21.4 billion in tax revenues for the country in 2011, including \$9.6 for the federal government, \$10.5 billion for provincial/territorial governments, and \$1.3 billion for municipal governments (Morissette, 2013); total revenues for 2012 are estimated at \$22.3 billion (TIAC, HLT Advisory, CTC, & VISA, 2013)

# CHALLENGES FOR THE CANADIAN TOURISM INDUSTRY

- ▶ Total international tourist arrivals to Canada fell from 48.6 million in 2000 to 25.3 million in 2012, declining over almost every year in that interval (TIAC, HLT Advisory, CTC, & VISA, 2013, pg. 37). Canada has grown increasingly reliant on domestic travel over the past decade with spending by Canadians now accounting for 81% of total spending.
- ▶ What explains the decline? In a word, *competition*. Alternative tourist destinations across the developed and developing world are actively and aggressively marketing themselves to international travellers, and some observers argue that Canada has not positioned itself to retain and expand its share of the market

# RECENT GOVERNMENT-SUPPORTED TOURISM INITIATIVES

The Government of Canada has carried out a range of activities to stimulate demand for inbound tourism, including:

- ▶ Improving infrastructure in tourism-related services and information (e.g., issuing 10 years visas that permit multiple re-entries)
- ▶ Strengthening relationships with Canada's major tourism markets, and enhancing domestic security (e.g. , Blue Sky Policy)
- ▶ Improving national parks, and fostering cultural and sports tourism
- ▶ Providing various forms of support to the tourism industry, such as encouraging Canadian banks to issue \$4 billion loans to small tourism business (Canadian Tourism Commission [CTC], 2013)



# RESEARCH MOTIVATION

To summarize the above:

- ▶ Tourism makes an important contribution to the Canadian economy by increasing economic output, as well as by expanding employment, exports, and tax revenues
- ▶ However, the data clearly indicate that inbound tourism arrivals to Canada are declining
- ▶ A variety of approaches have been and are being implemented to address this, but to do so effectively, we must first understand the determinants of demand for inbound tourism
- ▶ **In other words: what factors explain the number of tourists visiting Canada in any given year?**

# INBOUND TOURISM DEMAND



# ECONOMETRIC METHODS: VARIABLES

To develop a credible econometric model, we must first select an appropriate dependent variable to represent demand for inbound tourism, as well as a satisfactory set of independent variables, which we will use to explain variation in the former

## Potential dependent variables:

- ▶ tourist arrivals ✧
- ▶ length of stay (LOS)
- ▶ tourism expenditures

## Potential independent variables

- ▶ income
- ▶ tourism price (own-price effect)
- ▶ substitution price
- ▶ population
- ▶ distance
- ▶ exchange rate
- ▶ qualitative variables

# ASIDE: ELASTICITY

- ▶ How can we quantify the impacts of price and income on the demand for tourism?
- ▶ Elasticity measures how much one variable responds to changes in another variable; for instance, the coefficient of income elasticity tells us the extent to which tourism demand (however demand is expressed) increases when income rises by one percent
- ▶ A larger coefficient of elasticity implies that tourism demand is relatively sensitive to changes in a given factor:
  - ▶ A coefficient exceeding one implies that inbound tourism demand reacts strongly to changes in prices, income, etc.
  - ▶ By contrast, a coefficient lower than one implies that inbound tourism demand is relatively insensitive to a given factor

# ASIDE: ELASTICITY (CONT.)

The magnitude of the *coefficient of income elasticity of (inbound) tourism demand* tells us the extent to which tourism is considered a *luxury good* (i.e., the degree to which demand for travel increases with income):

- ▶ Based on a comprehensive review of the literature, Witt and Witt (1992) conclude that tourism is a luxury good with an expected income elasticity of demand higher than one
- ▶ By contrast, Crouch (1995) finds that income elasticities of the demand for tourism are country-specific, and that no generalization can be made about its value. Why might tourism be a luxury good for travellers to some countries but not others? One possible reason: business travel (which is relatively insensitive to changes in personal income) accounts for a relatively large proportion of tourist arrivals in certain countries

# ECONOMETRIC METHODS II: DATA

- ▶ This study employs panel data, which includes observations over the same cross-sectional units (e.g., individuals, firms, countries, etc.) over a period of time
- ▶ By incorporating both temporal and cross-sectional elements, panel data techniques may offer more insight into the determinants of tourism demand than approaching the problem from purely a time-series or a cross-sectional perspective
- ▶ Although panel data techniques typically require a large number of observations, this very requirement increases the available degrees of freedom, reduces collinearity and generates more efficient estimates (Song et al., 2008)

# ECONOMETRIC METHODS II: DATA (CONT.)

- ▶ In choosing a modelling approach, it is important to recognize the tendency for travelers to visit the same destination repeatedly, as well as the potential for tourists to spread awareness of a particular tourist destination through word-of-mouth (Gray, 1966; Yap, 2013); failing to account for this runs a serious risk of model misspecification
- ▶ To address this issue, we applied generalized method of moments (GMM) to a dynamic panel data model using the technique developed by Arellano and Bond (1991), where the model in question includes lagged values of tourist arrivals
- ▶ The approach used explicitly imposes the assumption of no second-order serial correlation

# ECONOMETRIC METHODS III: MODEL STRUCTURE

Dynamic panel data model:

$$\begin{aligned} & \ln(TA_{it}) \\ &= \alpha + \beta_1 \cdot \ln\left(\frac{RGDP_{it}}{POP_{it}}\right) + \beta_2 \cdot \ln(P_{it}) + \beta_3 \cdot \ln(P_{st}) + \beta_4 \\ & \cdot \ln(Dummy_t) + \beta_5 \cdot D_{i,j} + \beta_6 \cdot \ln(TA_{i,t-1}) + \varepsilon_t \end{aligned}$$

Where:  $P_{it} = \frac{CPI_{ca,t}/EX_{ca,t}}{CPI_{i,t}/EX_{i,t}}$

$$P_{s,t} = \sum_{j=1}^3 \frac{CPI_{j,t}}{EX_{j,t}} \cdot W_{ij,t} \rightarrow W_{ij,t} = \frac{TA_{ij,t}}{\sum_{j=1}^3 TA_{ij,t}}$$



# MODEL RESULTS

# ECONOMETRIC RESULTS

Variable	Dynamic (Arellano-Bond)	Static (Fixed Effects)
LGTA <sub>i,t-1</sub>	0.593 ***	N/A
LGRGDP	0.697 ***	1.421 ***
LGPOP	0.813 *	2.594 ***
LGRCPPI	0.004	0.097
LGWP	-0.493 ***	-0.924 ***
LG DST	-1.650	N/A (dropped)
D1	-0.253 ***	-0.525 ***
D2	-0.079 ***	-0.094 *
D3	-0.133 ***	-0.086
D4	-0.029	-0.156 *
CONSTANT	0	-44.75 ***

NOTE: \*\*\*, \*\* and \* represent significance at 1 percent, 5 percent and 10 percent, respectively.

# DYNAMIC RESULTS

- ▶ There is a significant correlation between tourist arrivals to Canada in any given year and arrivals recorded in the preceding year
- ▶ The sign of the income elasticity of demand coefficient (LGRGDP) (0.697) suggests that tourism to Canada is a normal good, but the coefficient's magnitude indicates that the latter is not a luxury good
- ▶ A 1% increase in a country's population (LGPOP) is estimated to result in a 0.813% increase in tourist arrivals, although this is only marginally significant
- ▶ Substitution price elasticity (LGWP) (-0.493) suggests Mexico, the UK, and the US tend to act not as substitutes but as complements for travel to Canada

# DYNAMIC RESULTS (CONT.)

- ▶ The 9/11 terrorist attacks (d1), the 2008-09 global recession (d2) and the SARS epidemic (d3) significantly reduced tourist arrivals to Canada
- ▶ Own-price elasticity (LGRCPI) and distance from Canada (LGDST) are found to be statistically insignificant, as is the 2010 Vancouver Olympic Games (d4)
- ▶ The coefficients associated with linguistic similarity (D5), border-sharing (D6), and the H1N1 pandemic (D7) are not mentioned either because they were determined to have no effect, or because they were omitted due to multicollinearity

# DYNAMIC VS. STATIC RESULTS

- ▶ In absolute terms, the estimated coefficients are smaller in the dynamic model than in its static counterpart
- ▶ The coefficient representing the population of various countries of origin (LGPOP) is significant at 1% in the static model, but at only 10% in the dynamic model
- ▶ While insignificant or marginally significant in the static model, coefficients representing the 9/11 terrorist attacks (d1) and the 2008-09 global recession (d2) are statistically significant in the dynamic model; conversely, the coefficient for the 2010 Vancouver Olympic Games (d4) is significant (though only marginally) in the former but not the latter
- ▶ These differences underscore the importance of accounting for “habit” in constructing econometric models of tourism demand

# STUDY CONCLUSIONS AND LIMITATIONS, AND OPPORTUNITIES FOR FUTURE RESEARCH

# CONCLUSION

- ▶ Even after controlling for all other variables, “habit” plays a significant role in explaining Canadian inbound tourism demand
- ▶ In contrast to static results, dynamic panel data estimation results suggest that own-price elasticity is negligible in the short run, which may imply that inbound travel to Canada is not perceived by travellers to be a luxury good
- ▶ Demand for Canadian tourism is relatively insensitive to its price
- ▶ Three countries traditionally viewed as alternatives for travel to Canada (i.e., Mexico, the UK, and the US) may in fact be price complements
- ▶ Sharing a border or an official language with Canada does not significantly influence inbound tourism demand

# CONCLUSION

- ▶ Distance between Canada and each country included in the sample, as a proxy for travel costs, was determined not to be significantly correlated with the tourist arrivals from those countries
- ▶ Although the H1N1 pandemic appears to have had a negligible impact on Canada's inbound tourism demand, this was certainly not true of SARS; these results suggest that although not all health crises affect tourist intentions in the same way (due, perhaps, to the perceived severity of particular diseases) international tourists are concerned with health and safety issues
- ▶ Tourist arrivals to Canada did decline slightly during the global recession, although the magnitude of the decline is less than that observed for the 9/11 terrorist attacks or the SARS epidemic



# STUDY LIMITATIONS AND AVENUES FOR FUTURE RESEARCH

- ▶ As we noted, tourist expenditures arguably better reflect inbound tourism demand than arrivals, but data availability precludes the use of the former at this time
- ▶ Future work could aim to modify or improve upon the econometric techniques we used in our analysis (e.g., developing a different model for every country)
- ▶ Given concern expressed over Canada's "travel deficit" (TIAC, HLT Advisory, CTC, & VISA, 2013; Canadian Chamber of Commerce, 2013; Industry Canada, 2011; Deloitte & TIAC, 2013, we could re-conceptualize the model in terms of "net tourism arrivals" or "net tourism expenditures"
- ▶ We could also consider policy applications, such as tourism demand forecasting

THANK YOU!