"An Empirical Assessment of The Determinants of Tourist Arrivals in the Caribbean Region: Evidence from Tobago"

Co-authored by:

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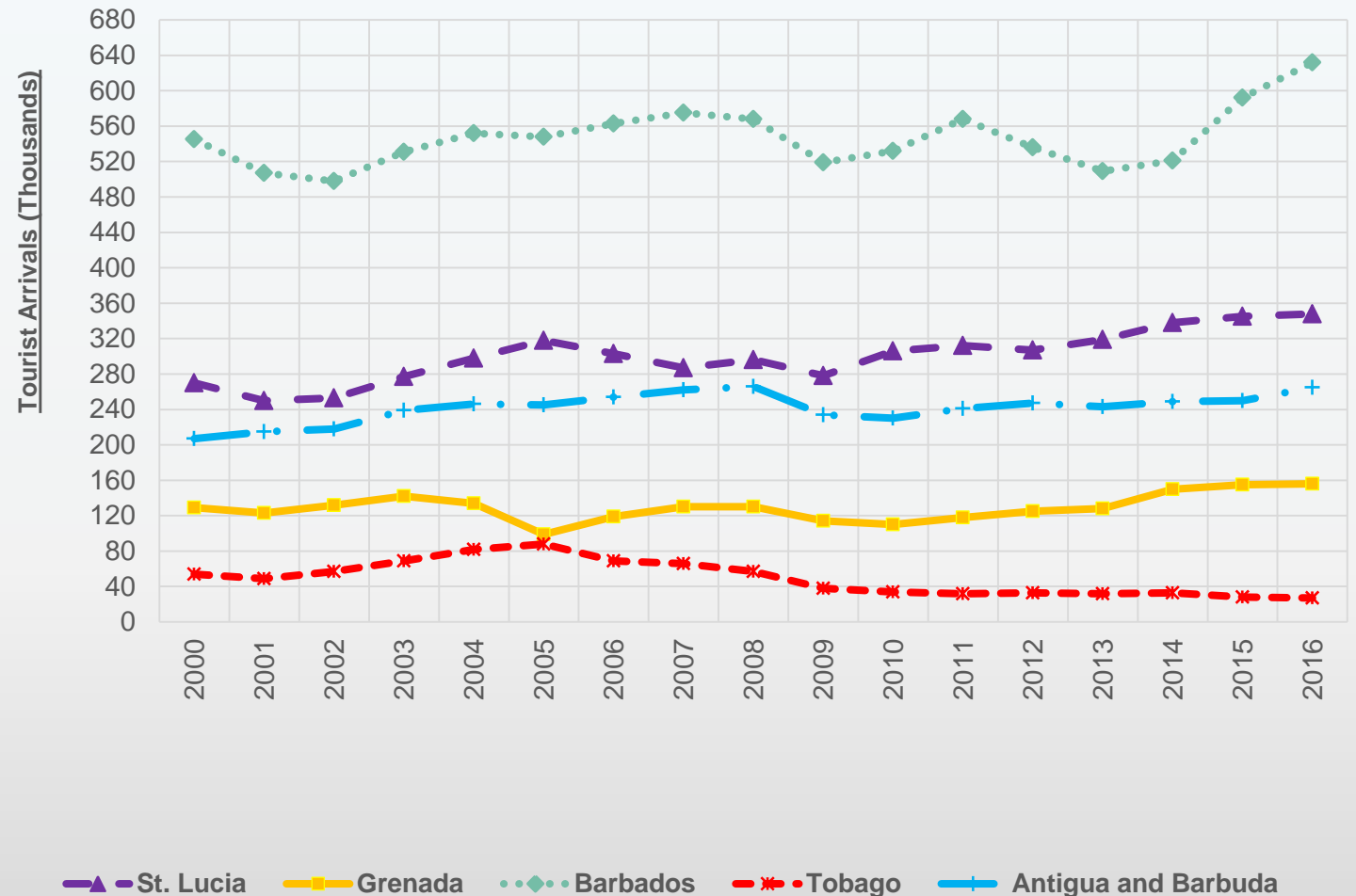**Economic Management and Research Unit,**

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1. MOTIVATION

- ❖ In the **early 2000s**, Tobago enjoyed **fairly rapid growth** in international tourist arrivals.

- ❖ From **2006**, arrivals to the island have been trending downwards.

- ❖ Tourist arrivals to the Caribbean region were negatively impacted by the **Global Financial Crisis in 08/09.**

- ❖ **Arrivals in neighboring Caribbean islands rebounded** but arrivals to Tobago continues on its **downward trajectory**.

International Tourist Arrivals, by Air to Selected Caribbean Islands 2000-2016

Tourist Arrivals (Thousands)

St. Lucia — Grenada — Barbados — Tobago — Antigua and Barbuda

2. OBJECTIVES

The primary objectives of this paper are:

❖ To **examine tourist arrivals to Tobago** with a view to assessing the **primary factors influencing it**; and

❖ To **devise policy measures** for the rejuvenation of the tourism industry in Tobago.

3. REVIEW OF THE LITERATURE

❖ The literature identifies three broad groups of factors (**push; pull; and resistance factors)** which determine tourist arrivals (Fretchling, 2001).

❖ The empirical literature is **fairly extensive**. (Key papers include: Naude & Saayman, 2005; Tsounta, 2007; Ibrahim, 2013; Pivcevic, Kulis & Seric, 2016)

❖ Very few studies examine the factors which influence tourist arrivals from a **Caribbean standpoint.** These few studies have all tended to examine this phenomenon with respect to **specific source markets.**

❖ Our study seeks to provide fresh empirical evidence on the determinants of arrivals in the **Caribbean region from a broader range of source market countries using tourist arrival data for Tobago for the period 2010 to 2016.**

❖ We specify the following model in line with previous specifications by Fourie and Santana-Gallego (2011) and Surugiu, Leitão and Surugiu (2011).

$$LnTA_{ijt}$$
$$= \beta_0 + \beta_1 LnLagTA_{ijt-1} + \beta_2 LnGDPpc_{jt} + \beta_3 LnDestGDPpc_{it} + \beta_4 RREER_{ijt}$$
$$+ \beta_5 RmRate_{it} + \beta_6 CRIME_{it} + \beta_7 DFT_{ijt} + \beta_8 DFS_{sjt} + \beta_9 LnDistance_{ij}$$
$$+ \beta_{10} Language_{ij} + \beta_{11} Colony_{ij} + \lambda_t + \mu_{ijt}$$

❖ We **expect** *LagTA, GDPpc, DestGDPpc, DFT, DFS, Language and Colony* to **positively affect tourist arrivals.**

❖ On the contrary, we **expect** *RREER, RmRate, CRIME and Distance* to **negatively influence tourist arrivals.**

❖ Our **preferred** estimation strategy is **Poisson.**

5. EMPIRICAL RESULTS: BENCHMARK - POISSON

Variables	Baseline Coefficients
LnLagTA	0.15***
LnGDPpc	0.21***
RREER	-0.13
RmRate	-0.02***
CRIME	0.02
DFT	0.35***
DFS	0.18
LnDistance	0.05
Language	-0.19**
Colony	-0.04
Constant	-0.17
Pseudo R^2	0.24
Observations	382

❖ Familiarity with the destination from previous visits positively influences arrivals.

❖ Higher GDP per capita in tourism source market countries positively impacts arrivals.

❖ Surprisingly, *RREER* is negative but not significant.

❖ Higher room rates act as a disincentive to arrivals.

❖ Notably, C*RIME* is positive and insignificant.

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

5. EMPIRICAL RESULTS: BENCHMARK - POISSON

Variables	Baseline Coefficients
LnLagTA	0.15***
LnGDPpc	0.21***
RREER	-0.13
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DFT	0.35***
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Language	-0.19**
Colony	-0.04
Constant	-0.17
Pseudo R^2	0.24
Observations	382

❖ The existence of direct international flights to Tobago boosts arrivals to the island.

❖ Surprisingly, DFS is positive but not significant.

❖ Interestingly, *LnDistance* is positive and insignificant.

❖ Arrivals to Tobago are lower from countries where English is the main official language.

❖ *Colony* is negative and insignificant.

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

6. EMPIRICAL RESULTS: SPLIT SAMPLE - POISSON

Variables	Baseline Coefficients	European Countries Coefficients	Non-European Countries Coefficients
LnLagTA	0.15***	0.15***	0.08**
LnGDPpc	0.21***	0.29***	0.02
RREER	-0.13	0.02	-0.34
RmRate	-0.02***	-0.02***	-0.01
CRIME	0.02	0.04**	-0.01
DFT	0.35***	0.21*	0.70***
DFS	0.18	0.25	0.57**
LnDistance	0.05	0.19	0.19***
Language	-0.19**	-0.21	0.21
Colony	-0.04		
Constant	-0.17	-2.01	-0.14
Pseudo R^2	0.24	0.24	0.19
Observations	382	202	180

❖ European Countries: our results seem consistent with our baseline results.

❖ Non-European Countries: the differences from our baseline results seem more fundamental.

❖ **Especially, for European countries, our baseline results seem robust.**

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

7. EMPIRICAL RESULTS: ZERO FLOWS - PPML

Variables	Poisson Baseline Coefficients	PPML Full Sample Coefficients	PPML European Countries Coefficients	PPML Non- European Countries Coefficients
LnLagTA	0.15***	0.20***	0.15***	0.13***
LnGDPpc	0.21***	0.26***	0.30***	0.09**
RREER	-0.13	0.10	0.51	-0.28
RmRate	-0.02***	-0.01**	-0.02***	-0.00
CRIME	0.02	0.06***	0.08***	0.02
DFT	0.35***	0.23*	0.19	0.52**
DFS	0.18	0.25*	0.20	0.63***
LnDistance	0.05	0.08	0.41	0.17***
Language	-0.19**	-0.07	-0.11	0.54***
Colony	-0.04	-0.26		
Constant	-0.17	-2.20***	-4.85*	-2.15***
Pseudo R^2 / R^2	0.24	0.64	0.76	0.51
Observations	382	537	217	320

❖ Full Sample: our results seem fairly consistent with our earlier Poisson estimation results.

❖ European Countries: our results seem fairly consistent with our earlier Poisson estimation results.

❖ Non-European Countries: our results seem fairly consistent with our earlier Poisson estimation results.

❖ **Our baseline results seem robust to the inclusion of zero flows in our sample.**

* $p<0.1$; ** $p<0.05$; *** $p<0.01$

8. EMPIRICAL RESULTS: ENDOGENEITY - IV

Variables	Poisson Baseline Coefficients	IV Full Sample Coefficients	IV European Countries Coefficients	IV Non- European Countries Coefficients
LnLagTA	0.15***	0.46***	0.57***	0.10
LnGDPpc	0.21***	0.43***	0.76***	0.06
RREER	-0.13	-0.61	0.60	-1.35**
RmRate	-0.02***	-0.04**	-0.08***	-0.02
CRIME	0.02	0.01	0.13**	-0.05
DFT	0.35***	3.39***	2.27***	5.36***
DFS	0.18	-0.32	1.26	0.08
LnDistance	0.05	0.26**	1.08	0.49***
Language	-0.19**	-0.40***	-0.48	0.29
Colony	-0.04	1.10*		
Constant	-0.17	-0.29	-8.95	-0.42
Pseudo / Adj. R^2	0.24	0.69	0.83	0.33
Observations	382	382	202	180

❖ Full Sample: our results are generally consistent with our benchmark results.

❖ European Countries: our results are largely consistent with our benchmark results.

❖ Non-European Countries: the differences from our baseline results seem more fundamental.

❖ **Especially for our full sample and European countries, our baseline results seem robust.**

* p<0.1; ** p<0.05; *** p<0.01

9.CONCLUSION

❖ **Our study unearths several interesting findings.**

i.   Familiarity with destination from previous visits and availability of airlift from the source market country to Tobago positively affect tourist arrivals.

ii.   Particularly in the case of arrivals from European countries, higher GDP per capita in the source market country positively influences arrivals while room rates negatively influence arrivals.

iii. Language negatively affects tourist arrivals to Tobago.

iv.   Direct flights to Trinidad and transport cost (distance) do not seem to have any significant impact in influencing arrivals; particularly for European countries.

v.   Interestingly, relative prices (RREER), crime and colonial ties do not seem to matter for arrivals to Tobago.

9.CONCLUSION

❖ **Our findings have special implications for policy.**

i.   Policy makers need to monitor and pay particular attention to economic conditions in source market countries when devising policies to increase arrivals.

ii.   Focus should be placed on increasing airlifts.

iii.   Owners of hotels and guesthouses on the island should consider adjusting the prices of their room stock.

❖ **Our study is not without limitations.**

i.   Data on international tourist arrivals by source country were only available from 2010.

ii.   Accurate data on Tobago's marketing spend on promotional activities in source market countries were not available.

❖ **It is our intention to broaden the scope of our study** by examining the determinants of arrivals in other Caribbean countries to allow for comparative analysis.

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Thank You!

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