THE COMPETITIVENESS OF SELECTED CARIBBEAN TOURISM MARKETS

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Introduction

This paper is an empirical study of the price competitiveness of Caribbean tourism, designed to explore how well Caribbean tourism has performed, compared with global markets, and the main factors that have affected that performance. There is a wealth of economic literature on Caribbean tourism, reflecting the fact that tourism services are now the most important economic activity in the region, and the only significant source of foreign exchange for many of the very open economies of the Caribbean (CDB, 2006; UN ECLAC, 2005). The present study is designed to complement existing studies that focus on the competitiveness of Caribbean tourism, addressing the many dimensions of competitiveness, both price and non-price. While we limit ourselves to an examination of price competitiveness alone, our study is comprehensive in its coverage of Caribbean tourism destinations, and it is one of the few studies we have encountered which attempts to assess Caribbean tourism performance and competitiveness in a global context.

This paper reports on the results of an empirical test of factors influencing the shares of Caribbean countries in the markets of the U.S., the U.K. and Canada. Have Caribbean tourism destinations captured increasing shares of tourism from target countries of origin over time? How have market shares been affected by the growth of incomes in these countries of origin? Is Caribbean tourism a "superior" product, compared to other tourism, so

[1] The authors gratefully acknowledge the assistance of Sean Smith of the Caribbean Tourism Organisation (CTO) in compiling the tourism statistics which made this study possible.

that it is preferred as incomes rise? How have tourism prices affected the growth of arrivals? Does price competition among Caribbean countries affect the market share of individual destinations?

Section II presents an overview of the performance of all the larger Caribbean tourism economies, in terms of their market share in each of the main source markets from which the Caribbean draws a significant proportion of visitors. Section III of the paper reviews the economic literature on the determinants of Caribbean tourism, in order to put the present study in context. There is an even larger literature, covering other economic aspects, such as the impact of tourism on growth, as well as social and cultural aspects related to the economy, which does not bear directly on our study, and is not discussed. Our literature survey includes the antecedents of the equation we use for the empirical test, which is discussed in Section IV. Section V presents the data, estimation methodology and results, and this is followed by the conclusion.

Caribbean Tourism Performance

The countries included in this study are selected members of the Caribbean Tourism Organisation (CTO) – the umbrella body to which all the tourism countries in the Caribbean basin belong – each with a total of 3,000 guest rooms or more in 2004. The list comprises Antigua and Barbuda, Aruba, The Bahamas, Barbados, Belize, Bermuda, Cancún (Mexico), Cayman, Dominican Republic (D.R), Jamaica, Puerto Rico, St. Lucia, St. Maarten, Trinidad and Tobago, and the U.S. Virgin Islands. The tourism data on these countries (arrivals by market, expenditures and accommodation) covers the period from around 1980 to 2004, and is published by the CTO (Caribbean Tourism Organisation, 2004).

Accommodation

There are five large Caribbean destinations, each offering visitor accommodation of more than 10,000 rooms: the D.R., Cancún, Jamaica, The Bahamas and Puerto Rico, in descending order (Figure 1). Between them they accounted for 75 percent of total rooms in 2001, the most recent year for which complete information is available. The extraordinary pace of expansion in the D.R. in the last decade and a half has dominated accommodation trends in the Caribbean; in that period the D.R. has moved from a relatively small player to double the capacity of Cancún, the next largest Caribbean destination. Of the other large destinations, there has also been rapid expansion in The Bahamas and Jamaica, though not at the pace of the D.R. Several smaller destinations also saw significant growth since mid-1980s, including Aruba, Belize, the Caymans, St. Lucia, and Trinidad and Tobago (Figure 2).

Market Diversification

The Caribbean as a whole is heavily dependent on the U.S. market, reflecting in the pattern of the larger countries of the region (Figure 3). However, four smaller countries have

achieved a degree of market diversification. Of the five large destinations (those with more than 10,000 rooms), four (Cancún, Jamaica, The Bahamas, and Puerto Rico) sourced two-thirds or more of their tourists from the U.S. With regards to the majority of the smaller destinations, tourists also came mainly from the U.S., but four of these smaller destinations were relatively diversified, having no one market with as much as half of their arrivals, and at least three destinations with over 20%. These four, listed in order of decreasing diversification, were St. Lucia, Trinidad and Tobago, Barbados, and Antigua and Barbuda. In terms of market diversification the D.R. and St. Maarten, a large and small destination, respectively, are in the middle of the range, each with two important sources of visitors taking more than a 75 percent share.

Gains and Losses

The Caribbean held its own, in terms of global market share, in the vital U.S. market, and gained market share in the Canadian market, but lost ground in the U.K., over the period from the late 1970s to 2004. For tourists from the U.S., growth rates for arrivals to the Caribbean matched the growth rates of American tourists traveling abroad to all destinations (Figure 4). There were five exceptions, where arrivals from the U.S. stagnated or declined, from the mid-1980s onwards: Antigua and Barbuda, The Bahamas, Barbados, Bermuda, St. Maarten and the U.S. Virgin Islands. In all the Caribbean countries in our sample arrivals from the U.S. recovered quickly after the events of September 11, 2001, whereas total U.S. travel abroad continued to decline, up to 2004.

The growth of arrivals from Canada was strong and persistent, even though Canadian travel abroad stagnated from about 1990 onwards (Figure 5). In contrast, total travel by UK residents grew strongly, but visitors to the Caribbean rose slowly, especially from the late 1990s (Figure 6). As a result of these two trends, Canada overtook the UK as the second most important source of visitors to the Caribbean, though arrivals were still no more than about 20% of U.S. arrivals. Cancún and the DR were the destinations responsible for the strong showing on the Canadian market. They more than made up for declines suffered by The Bahamas and Barbados, each of whom recorded a 50 percent decrease in Canadian visitors during this period. Barbados, Cancún and Jamaica are the destinations that made the largest contributions to the increase in U.K. visitors.

Factors Affecting Tourism Competitiveness

There is a wealth of economic analysis of Caribbean tourism, reflecting the importance of the contribution this sector makes to the region’s economic output, and our survey must therefore be selective. We choose to review studies that have explored the reasons for the growth of Caribbean tourism, leaving aside studies of the impact of tourism on the economy, as well as sociological and cultural approaches to the study of tourism. Our survey covers non-price as well as price factors, and interdisciplinary approaches that include an economic element.

In order to put the results of our tests in perspective, it should be acknowledged that the growth of tourism is largely influenced by non-price factors that will not be a focus of our investigation. In-depth studies of non-price factors in the competitiveness of Caribbean tourism include the regional analysis by Poon (1990), and a large number of national studies, only a few of which have been made widely available (Laventhol and Howarth, 1989; O.A.S., 1994; World Bank, 2005). Major regional policy studies such as those of the Caribbean Regional Negotiating Machinery (2003) and the West Indian Commission (1992) also included substantial analyses and recommendations on tourism, focusing on non-price competition. These studies explored the impact on tourism competitiveness of such factors as the flexibility, quality, and adaptability of tourism services, policies that take advantage of niche markets, investment in product variety, and sufficient emphasis and funding for the environmental protection and conservation.

Other studies analyze both price and non-price effects. For example, Randall and Samuel (2003) argue that the Caribbean has lost price and non-price competitiveness, based on trends in hotel rates, selected wage rates, public utility tariffs, comparing Caribbean and world arrivals and tourist receipts from the main tourist markets.[2] A special issue of the journal *Social and Economic Studies* devoted to tourism (March 2002) discussed, among other factors, the changes in the competitive landscape in the Caribbean (especially the re-emergence of Cuba as an important destination), the segmentation of the Caribbean tourism market into cruise, all-inclusive, 'sun-lust', special interest (cultural, adventure, community-based, agro) and eco-tourism, and the carrying capacity of tourist destinations. Closely related to the latter is the concept of the maturity of tourism destinations, reflected in the studies of Moore and Whitehall (2005) and Whitehall and Craigwell (2005).

Closer to our own study is the body of work estimating price and income elasticities of demand for Caribbean tourism, as well as elasticities of substitution among tourism destinations. They include a detailed sectoral study on Barbados by Clarke, Wood and Worrell (1986); a regional study on elasticities of substitution by Rosensweig (1988); tourism demand elasticities for selected English-speaking Caribbean countries by Worrell (1987); demand relationships for Barbados tested by Greenidge and Whitehall (2000); discussion of trends in different indices of price competitiveness for Barbados by Worrell, Boamah and Campbell (1996); and a preliminary test of tourism demand equations for selected Organization of Eastern Caribbean States (OECS) countries (Sahely, 2005). In addition, McIntyre's (1995) competitiveness study, which employed revealed comparative advantage (RCA) and constant market share (CMS) methodologies, included an analysis of tourism in Barbados and Jamaica. Greenidge's (2001) paper attempted to uncover patterns in tourism activity over the year, using a structured time series model, while the studies of Griffith

[2] They include additional quantitative analysis for the Eastern Caribbean Currency Union (ECCU), including real exchange rates and foreign direct investment.

(2000) and Poon (1995) were more narrowly focused on the impact of taxation on tourism prices.

What do we glean from this literature? The determinants of tourism performance for Caribbean countries are many and varied, and prices will yield only a part of the explanation of Caribbean competitiveness. In interpreting our results we must bear in mind the important factors surveyed above which are subsumed in *ceteris paribus* in our study. They include the fact that we consolidate market segments that may respond differently, for example in summer or winter, for luxury or non-luxury accommodation, and for different niche markets, such as sports, cultural or eco-tourism. In an aggregate study such as this we cannot take account of product differentiation through marketing, historical association, or cultural affinities. We also do not explicitly take account of changes in tastes and technology over the past 20 years, as a result of the introduction of computers and the internet, the emergence of cruise tourism as a dominant form, and other innovations. We cannot take account of institutional, organizational changes such as the bankruptcy of major tour operators and airlines, whose collapse has resulted in major shifts in competitive performance. We do not take account of maturity, carrying capacity, environmental investment, and other factors such as those discussed by Whitehall and others in the recent literature. We try to combine the important insights contained in the studies cited above with our own results, to enrich our understanding on the multifaceted nature of the influences on Caribbean tourism performance.

Empirical Framework

The analysis will be based on the following standard demand equation, which resembles those commonly found in the literature (e.g. Song, Witt and Jensen, 2003):

Market share = f(output, own price, competitors' prices, air transport costs)

The market share is each country's arrivals as a percentage of total tourists from each country of origin; output is the real gross domestic product (GDP) in the tourists' country of origin; the own price is measured using the consumer price index (CPI) of the Caribbean tourist destination, adjusted by the exchange rate of the Caribbean destination with the tourists' country of origin; competitors' prices are captured by the CPI of the closest competing Caribbean tourist destination, adjusted by the exchange rate of that Caribbean destination with the tourists' country of origin and air transport costs are measured by the product of the international oil price and the distance from the New York/London/Toronto to the capital of the Caribbean destination. We expect output and competitors' prices to be positively related to market share while own price and air transport costs should be negatively associated with market share.

Can we be confident that the data we observe are a reflection of tourism demand, rather than the result of a market adjustment that resolves discrepancies between demand and supply? We believe it is plausible to interpret the observations as lying on a dynamic demand curve, because rarely did a destination show evidence that available hotel capacity was fully utilized. The supply curve for tourism may be considered infinitely elastic, up to full capacity, when elasticity abruptly becomes zero. Therefore, so long as demand remains short of capacity, year-to-year observations will follow the changes in demand conditions (Box 1). It appears that demand very seldom comes up against capacity constraints, because new investment stays ahead of expected demand.[3]

Data, Estimation Methodology and Results

Data

The Caribbean Tourism Organization, CTO (CTO, 2006) is the source of the tourism data for the Caribbean – arrivals by market, expenditures by market, hotel accommodation – which are published annually. For this study Sean Smith of the CTO compiled series beginning in the late 1970s for some countries, and in 1980 for the remainder. Data on world tourism, including tourists from the U.S., Canada and the U.K., used to calculate market shares, came from the World Tourism Organization, WTO (WTO, 2006). All the macroeconomic data, comprising the growth rates of real GDP of source countries, the CPI of Caribbean tourism destinations, the exchange rates, and the average crude oil price, are sourced from the *International Financial Statistics* (IMF, 2006). Distances between capitals and other major cities were obtained from the U.S. Department of Agriculture website (USDA, 2006).

The use of global market share, as the measure of Caribbean countries' tourism competitiveness is surprisingly rare in the literature, even though improvement in market share is the most commonly understood meaning of competitive gain. The fact that each Caribbean destination's share of the global market is miniscule, which may account for the reluctance of previous researchers to use this measure, affects neither the validity of the measure nor the robustness of the results of our tests. Our measure is more comprehensive than the share of Caribbean tourism, for example, because it reflects both the destination's performance against Caribbean competitors and the Caribbean's performance on the world tourism market.

The use of GDP growth rates to capture possible income effects is common in tourism demand studies, but it represents a compromise made in the interests of model tractability. It would have been preferable to model the consumers' choice among a basket of goods and services, including tourism (see Morley, 1992), and to have differentiated among the many

[3] This deserves to be further investigated, in future studies.

varieties of tourism product, such as resort tourism, winter tourism, sports tourism, eco-tourism, etc. Different types of tourism product, different regional markets, different levels of income within a country or region, all may account for diverse reactions to the same proportionate change in real income. This variation, which it is impossible to capture in an aggregate study, may in practice result in little overall impact of GDP changes, as some choices counteract the effects of others.

The use of the CPI as a measure of the price of tourism is based on the plausible assumption that there is a strong correlation between general inflation and the prices charged for tourism services, but this is an assumption that cannot be tested, because no data exist. Nowhere in the Caribbean is there an index of prices of services and goods consumed mostly by tourists.

The choice of a single competitor for each destination is based on our judgment that the degrees of freedom lost by including additional variables in equations for which we have limited observations is likely to result in greater loss of information than would be contributed by including other competitors' prices. It is reasonable to expect that the strongest price competition will come from one's closest neighbor, because the cost of transportation to the destination is such a major element in the total cost.

Previous studies, including a study in which one of the present authors was involved (Clarke, Wood and Worrell, 1986), used some actual series of airline prices, but this may not be a good choice because of the notorious complexity of airline pricing. A more common choice is an international crude oil price, justified because fuel price changes invariably precipitate changes in airfares. Our study focuses on competitiveness, and more distant destinations are at a competitive disadvantage, on the basis of transportation costs alone. We therefore take the product of the oil price and the distance from the Caribbean destination to the principal city from which tourists travel from each market (New York, Toronto and London) as our index of the cost of air transport.

Methodology and Results

All the variables were transformed to logarithms and estimations of the different equations were done in the econometric software program of EVIEWS 5.0. Given the short length of the series (24 or 25 observations, except for Aruba and Cancún)[4] we opted not to use the now popular Johansen (1988) or Peasaran *et al* (2001) ARDL tests for co-integration that are data-hungry estimators. Instead, and based on the findings of a number of monte carlo studies (for example, Inder, 1993) we employed the more powerful small sample single equation co-integration test of Engle and Granger (1987). We are therefore assuming that the relatively high power of this test in small samples will outweigh any loss in efficiency by not

[4] Cancún had no significant tourist accommodation prior to 1991, and did not report to CTO until that year.

considering such issues as endogeneity of the regressors and the possibility of a co-integration rank that is greater than one.

The first step in the Engle-Granger methodology is to check to see if the series are stationary. To do this the familiar Augmented Dickey-Fuller (ADF) statistic is utilized. The results of this test (not reported due to space considerations but available from the authors) indicate that the variables are integrated of the first order, that is, I(1). As this statistic, and indeed all unit root tests, is based on asymptotic principles, and our sample is short, we follow the suggestion of Watson and Teelucksingh (1997) and confirm these results with the correlogram.

Next we test the variables in the market share equations for co-integration or a long run relationship using the ADF statistic and the correlogram of the residuals, recognizing that, on account of the small sample size, the bias in the Engle-Granger estimates could be significant although the parameter estimates are super consistent (Banerjee et al, 1986). These long-run results are given in Tables 1 and 2. We take each source market in turn starting with the U.S.. The findings for this market indicate that the variables from the various Caribbean countries form a co-integrated set, although co-integration for Barbados and St. Maarten is only admitted when the co-integration regression excludes the drift and trend variables. Overall, the results are very diversified in terms of sign, size and significance. Consequently, except for a wrongly signed significant or insignificance source country real output variable, we have already mentioned in the previous section the difficulty of capturing real output effects in an aggregate study like this one undertaken here, it was quite difficult to discern a common pattern among the regressions.

To simplify matters we follow the section above on Caribbean Tourism Performance and categorized the countries according to their U.S. market share of tourist arrivals. In addition, in the regressions we only utilized those variables that have the correct a priori sign and are significant. When these two conditions are incorporated into the analysis the following conclusions can be made. The common determinant driving countries with a relatively small U.S. market share of visitors (Aruba, Belize, Bermuda, Cayman Islands and the U.S. Virgin Islands) in the long run is competitor price. Excluding Aruba, which has a competitor price elasticity of 2.6, the range of the competitive price elasticity for these types of countries is quite narrow (between 0.16 and 3). Competitor price is also the most popular significant variable for those economies that are heavily dependent on the U.S. tourist market (Cancun, The Bahamas, Jamaica and Puerto Rico), although this finding is not as compelling as in the previous set of countries by virtue of the smaller number (two compared to four) of significant and correctly signed coefficients of the competitor price variable. Nevertheless, the elasticity value for Jamaica (0.18) falls within the range given above for most of the territories that has a small U.S. market share while that for Puerto Rico (3.2) is more in line with that of Aruba. For the countries in the mid-range (Antigua and Barbuda, Barbados, Dominican Republic, St. Lucia, St. Maarten, Trinidad and Tobago) air transport costs (with

elasticity values ranging from –0.26 to -0.39) and own prices (with a figure for elasticity of –5.3 for Antigua and Barbuda to the much closer values of -0.32 for the Dominican Republic and –0.55 for Trinidad and Tobago) are the two frequent forces of tourism competitiveness.

With respect to the UK market share, a similar country categorization and sign and significance condition were imposed. The results for the destinations that made the largest contributions to the increase in U.K. visitors (Barbados and Jamaica) suggested that own and competitive prices were the critical common factors affecting UK market share. In both cases the values of the elasticities were highest in Barbados (-2. 57 and 3.12 compared to –0.57 and 1.48 in Jamaica for own price and competitor price, respectively). For the other countries, only the regression for Bermuda satisfied the sign and significance restriction and this indicated that along with own and competitor prices, the market share of UK arrivals depends on air transport cost. From this equation a 10 percent increase in own price and air transport costs will reduce the Bermuda UK market share by about 5 percent and 3 percent respectively, and a similar size expansion in the competitive price of the Dominican Republic will raise the UK market share of Bermuda by 30 percent.

Out of the three markets, even with our imposed criteria, the results of the Canadian market share were not very clear-cut as many of the explanatory variables in the regression equations had insignificance and wrongly signed parameter estimates. For the countries with the relatively low level of Canadian tourist arrivals (The Bahamas, Barbados, Bermuda and Trinidad and Tobago) competitor prices (ranging from 0.27 for The Bahamas to 1.13 for Trinidad and Tobago) appear to be the most common determinant of Canadian market share. Of the two economies in the higher bracket (Dominican Republic and Jamaica), only significant and correctly signed coefficients were found for the Dominican Republic and they indicated that Canada's real output (with an elasticity of 4.5) and own price (with an elasticity of –0.7) were important to tourism competitiveness.

The final step in the Engle-Granger procedure is to look at the impact of the independent variables on tourism market share in the short run. To do this we took the long run results from above, and embedded them in a model of changes, developing the so-called error-correcting models in the process. These error correcting models are estimated by starting with a general lag structure of order one (conditioned by the short sample size) and then a 'general to specific' procedure is applied to reduce them to more parsimonious congruent specifications where only significant variables are retained. These findings are given in Tables 3 and 4. They are as diverse as the long-run results discussed above, and consequently, we impose the same two conditions as in the long-run equations as well as required that the models satisfy the standard diagnostic checks on the errors, for serial un-correlation, homoscedasticity, normality, and the model structure, for general misspecification and stability. Also, following the Granger Representation theorem (Engle and Granger, 1987) the error correcting term had to be negative and significant for co-integration to be upheld. This latter requirement was obtained for all countries relying on the

U.S. tourist market except Bermuda (explosive root), Cancun (sample too short) and Barbados and St. Maarten where the error correcting term was insignificant, collaborating the relatively tentative result of the long run regression for these two countries. For the significant and correctly signed error correcting term, the value of this coefficient ranged from -0.5 (relatively moderate adjustment) for Puerto Rico to -0.99 (almost instantaneous adjustment in the year) for The Bahamas.

In the case of the territories that depend on the Canadian market explosive roots in the error correcting mechanism were found for The Bahamas and Trinidad and Tobago, while all the models relating to the UK market share satisfied the Granger Representation theorem. Both market structures revealed a relatively quick adjustment to short run discrepancies in the long run. For the UK, the values for the error correcting term ranged from –0.55 for Antigua and Barbuda to –0.89 for Bermuda, while for Canada it fell between –0.64 for Barbados and -0.90 for the Dominican Republic.

In general the short run impacts (in terms of sign, size and significance) of the exogenous variables on the respective market shares were quite similar to those that existed in the long run, although the additional two statistical requirements reduced the sample of countries for the various markets somewhat. For the islands where the U.S. market is important, as in the long run, countries with the small market share concentrate on their competitor prices (Aruba has an elasticity figure of 0.092 while the value of the Cayman Islands is 0.143). However, they also pay more attention to air transport cost in the short run than they do in the long run (Aruba's elasticity was –0.241, relatively close to the –0.279 recorded for Belize). Similar to the long run, air transport costs (both Antigua and Barbuda and Trinidad and Tobago have an elasticity of around –0.17) are the commonly found critical determinant for those countries in the mid-range. The result for the economies with a large share of U.S. visitors was based solely on the findings of Jamaica as all the other countries failed the statistical criteria imposed. The Jamaican market share regression confirmed the importance of air transport costs, observed in those countries in the small and large U.S. market share brackets. The elasticity indicated that a one unit change in air transport cost will contract Jamaica U.S. market share in the short run by close to 10 percent.

In terms of the findings for the economies that utilized the UK tourist market, Barbados and Jamaica, the two countries with the highest market share, own price (with an elasticity range from –0.2 for Jamaica to -1.5 for Barbados) seems to be the common variable of importance. Barbados other significant and correctly signed explanatory variables were output (lagged elasticity of approximately 4) and competitive prices (lagged elasticity of about 1.5) while for Jamaica, only own price proved to be pertinent. Recall that in the long run both own and competitor prices were significant. As in the long run, only Bermuda satisfied the statistical criteria and own price was once again an influential variable along with air transport cost. A one-unit increase in the Bahamas price level decreases Bermuda Canadian market share by

30 percent while a similar size rise in air transport costs has an initial contraction effect on market share of about 10 percent.

In the short run, the variable significantly affecting the countries with the smallest market share of Canadian's visitors was real output (with an elasticity impact ranging from 1.57 for Bermuda to 5.43 for the Dominican Republic), in contrast to competitor prices in the long run. For the economies in the high Canadian market share bracket, again output (with values of lagged elasticity between 1.75 and 3.81) was the most frequent and dominant explanatory variable, as was found in the long run.

Conclusions

The results manifest no clear pattern of price or income effects on the competitiveness of the Caribbean tourism product, in the eyes of tourists from the U.S., U.K. or Canada. Own prices, competitors' prices, air transport costs, growth rates in their countries of origin, all are important at one time or another, in explaining the market share of individual countries, but none is consistently more important than any other, for any country or group of countries, or from any source country. Frustrating, as this may seem to the researcher, it appears to be the reality that policy makers confront.

These results offer no basis for general guidance about macroeconomic policies to spur the growth of tourism. That is true both for countries' own policies affecting the domestic rate of inflation, and for competitors' policies and inflation. Foreign shocks such as an oil price hike or depression in source country GDP growth also do not have lasting effects for all countries, though there is some variety of experience in this regard. These findings are not altogether unexpected, as they confirm that non-price factors and market segmentation are the keys to competitiveness, and that overall price and income effects, to the extent that they matter, may be of secondary importance for many, if not most countries. While this is true as a generalization for the region, there may exist possibilities for individual countries to take advantage of price and income elasticities within particular markets.

References

Banerjee, A., J. Dolado, D. Hendry and G. Smith, 1986, "Exploring Equilibrium Relations in Econometrics through State Models: Some Monte Carlo Evidence," *Oxford Bulletin of Economics and Statistics*, 48, 253-78.

Caribbean Development Bank, 2006, *Annual Economic Review 2005.*

Caribbean Tourism Organisation, 2004, CTO *Caribbean Tourism statistical Report 2002-3.*

Caribbean Regional Negotiating Machinery, RNM, Caribbean Trade and Adjustment Group, 2003, *Improving Competitiveness for Caribbean Development*, Ian Randle Publishers.

Clarke, Carl, Celeste Wood and DeLisle Worrell, 1986, "Prices, Incomes and the Growth of Tourism in Barbados, 1956-83," *Central Bank of Barbados Economic Review*, XIII:1, June.

Engle, Rob and Clive Granger, 1987, "Co-integration and Error Correction: Representation, Estimation and Testing," *Econometrica*, 55:2, March, 251-76.

Greenidge, Kevin, 2001, "Forecasting tourism demand - an STM approach," *Annals of Tourism Research*, 28:1, January, 98-112.

Greenidge, Kevin and Peter Whitehall, 2000, "Tourism maturity and demand," in Alain Maurin and Patrick Watson, *Empirical Studies in Caribbean Economy*, Caribbean Centre for Monetary Studies.

Griffith, Jennifer, 2000, "The Impact of VAT on Tourism in Barbados," Central Bank of Barbados Working Papers.

Inder, Brent, 1993, "Estimating Long-Run Relationships in Economics: A Comparison of Different Approaches," Journal of Econometrics, 57:2, 53-68.

Johansen, Soren, 1988, "Statistical Analysis of Co-integrating Vectors," *Journal of Economic Dynamics and Control*, 12, 231-54.

Laventhol and Howarth, 1989, Barbados Tourism Study, September.

McIntyre, Arnold, 1995, *Trade and Economic Development in Small Open Economies: The Case of the Caribbean Countries*, Praeger.

Moore, Winston and Peter Whitehall, 2005, "The tourist area lifecycle and regime switching models," *Annals of Tourism Research*, 32:1, 112-26.

OAS, 1994, "Economic analysis of tourism in Jamaica," Technical report to Jamaica Tourist Board.

Pesaran, M.H., Y. Shin and R. Smith, (2001), "Bounds testing approaches to the analysis of long run relationships", *Journal of Applied Econometrics*, 16:3, 289-326.

Poon, Auliana, 1990, "Flexible specialisation and small size: the case of Caribbean tourism," *World Development*, 18:1, 109-23.

Poon, Auliana, 1995, "Eastern Caribbean tourism competitiveness - the impact of CET reduction," OECS Policy Project, February 13.

Randall, Ruby and Wendell Samuel, 2003, "Tourism in the Eastern Caribbean: meeting the competitive threat,"in IMF, "Eastern Caribbean Currency Union - Selected Issues," IMF Country Report 03/88, Mar 2003.

Rosensweig, Jeffrey, 1988, "Elasticities of substitution in Caribbean tourism," *Journal of Development Economics*, 29:1, July, 89-100.

Sahely, Leah, 2005, "Tourism demand," Central Bank of Barbados, XVI Annual Review Seminar, July 26-29.

Social and Economic Studies, 2002, 51:1, March, "Tourism in the Caribbean," guest edited by Chandana Jayawardena and Anne Crick.

Song, Haiyan, Stephen Witt and Thomas Jensen, 2003, "Tourism forecasting: accuracy of alternative econometric models," *International Journal of Forecasting*, 19, 123-141.

UN ECLAC, 2005, *Economic Surevy of Latin America and the Caribbean, 2004-5*.

Watson, Patrick and Sonja Teelucksingh, 1997, "Macroeconomic Modeling and Co-integration in a Small Sampling Framework (with Application to Trinidad and Tobago), in D. Worrell and R.C raigwell (Editors), *Macroeconomics and Finance in the Caribbean: Quantitative Analyses*, Technicall Papers Series 2, Caribbean Centre for Monetary Studies, 13-55.

West Indian Commission, 1992, *Time for Action*, Report.

Whitehall, Peter and Roland Craigwell, 2005, “Tourism maturity and a ranking of relative tourism potential in the Caribbean,” Central Bank of Barbados *Economic Review* XXXII:2, September.

World Bank, 2005, “Achieving environmentally sustainable tourism in the OECS sub-region.”

Worrell, DeLisle, 1987, *Small Island Economies: Structure and Performance in the English-speaking Caribbean Since 1970*, New York: Praeger.

Worrell, DeLisle, Daniel Boamah and Trevor Campbell, 1996, “The price competitiveness of Barbados' exports,” *Central Bank of Barbados Econ Review*, June, 12-32.

Box 1. The Caribbean Tourism Market

Figure *a* below models the typical Caribbean tourism market. S gives the maximum market share that this country can accommodate. It reflects past investment, and is fixed for the three years represented in the figure (t_0, t_1, t_2). Current investment may shift S outwards in the future. At t_0 tourism suppliers set their offer price at $P\ t_0$ and, facing the demand curve D_{t0}, they find that their actual market share turns out to be M_{t0}. The data we observe will show the coordinates of point *A*. At t_1 tourism suppliers raise prices to P_{t1}, to recover the inflation in their supply costs, and their market share turns out to be M_{t1}. The observed data will be characterized at point *B*. Similar logic defines point *C* at time t_2, and over time yields the observed demand curve D_{obs}, which is the two-variable version of the estimated equation. We make the simplification that supply remains unchanged over three periods merely to make the figure less busy, but it is not necessary to the argument, so long as the demand remains below capacity at the contemporaneous offer price.

Figure a. The Tourism Market

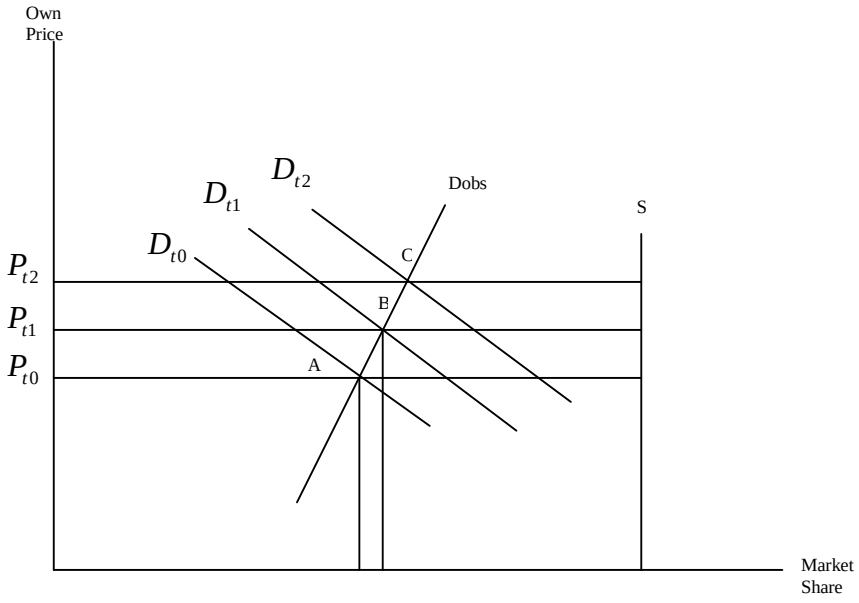


Table 1
Co-integration Results of US Market Share

	Constant	Growth	Own Price	Competitor Price	Air Transport Price	R^2	DW	ADF	N
ANB	-2.880***	-2.020*	-5.279*	5.878*	-0.259**	0.866	1.298	-3.554**	24
	(1.704)	(3.310)	(4.263)	(4.165) [VI]	(2.903)				
ARU	-8.722*	-1.533**	0.153	2.617**	0.078	0.929	1.358	-3.104**	18
	(7.741)	(2.667)	(0.165)	(2.756) [SLU]	(0.852)				
BAH	0.120	-0.683**	-0.163	0.010	0.001	0.923	1.932	-4.432*	24
	(0.179)	(2.171)	(0.633)	(0.162) [JA]	(0.025)				
BDS	3.436***	-0.443	1.469***	0.838***	-0.384**	0.788	0.956	-2.562**	24
	(1.724)	(0.634)	(1.836)	(1.835) [TT]	(2.260)				
BZ	-3.317	-1.401***	-0.280	0.296*	0.311***	0.780	1.176	-2.849***	24
	(1.003)	(1.927)	(0.275)	(3.292) [CNC]	(1.760)				
BER	6.151*	-2.179*	-0.160	0.157**	-0.094	0.982	1.933	-4.938*	24
	(7.050)	(4.612)	(0.378)	(2.229) [JA]	(1.624)				
CNC	3.428	-1.204	0.396	-1.193	0.127	0.366	1.648	-3.087***	13
	(0.543)	(0.996)	(1.306)	(1.159) [BZ]	(1.202)				
CAY	-4.197*	-1.573**	1.584*	0.214**	-0.146***	0.611	1.232	-3.703**	24
	(3.899)	(2.567)	(2.877)	(2.342) [JA]	(1.934)				
DR	-9.745*	-0.688	-0.316***	1.369	0.257	0.406	0.942	-2.724***	24
	(4.615)	(0.649)	(1.850)	(1.312) [PR]	(1.565)				
JA	-6.158*	0.364**	-0.088	0.180***	0.009	0.469	1.361	-3.745**	24
	(4.980)	(2.539)	(0.942)	(1.958) [DR]	(0.102)				
PR	-3.827**	0.041	-2.772***	3.223**	0.170***	0.476	1.110	-3.617**	24
	(2.160)	(0.064)	(1.854)	(2.457) [ANB]	(1.804)				
SLU	-9.000*	1.041***	1.715***	-1.127	-0.365*	0.922	1.614	-4.174*	24
	(5.965)	(1.846)	(1.700)	(1.386) [BDS]	(3.208)				
MTN	0.600	-1.794***	4.985***	-3.858***	-0.389**	0.735	0.875	-2.669**	24
	(0.247)	(1.907)	(2.058)	(2.015) [ANB]	(2.784)				
TT	-11.094*	-0.059	-0.554***	0.816	0.347	0.482	1.328	-4.351*	24
	(8.743)	(0.111)	(1.988)	(1.342) [SLU]	(3.812)				
VI	0.046	1.705	-4.648	2.594	-0.166	0.474	0.983	-3.326**	24
	(0.017)	(1.220)	(1.238)	(0.627) [MTN]	(0.699)				

Notes: ANB = Antigua and Barbuda; ARU = Aruba; BAH = The Bahamas; BDS = Barbados; BZ = Belize; BER = Bermuda; CNC = Cancún; CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; MTN = St. Maarten; TT = Trinidad and Tobago and VI = US Virgin Islands. The numbers in round (…) parentheses under the coefficients are t-statistics while the notation in square brackets […] represents the location of the respective (available) competitor prices based on the nearest distance from the source countries. * indicates significance at the 1% level, ** significant at the 5% level and *** significant at the 10% level. R^2 is the multiple coefficient of determination, DW is the Durbin-Watson statistic for first order serial correlation, ADF is the Augmented Dickey-Fuller test and N is the number of observations. The underline (___) under the ADF statistic indicates the model has no drift and trend terms.

Table 2a
Co-integration Results of UK Market Share

	Constant	Output	Own Price	Competitor Price	Air Transport Price	R^2	DW	ADF	N
ANB	-9.717*	0.774**	4.545	-4.596*	-0.011	0.841	1.861	-4.610*	25
	(4.245)	(2.485)	(3.359)*	(3.206) [MTN]	(0.121)				
BDS	-6.246**	0.189	-2.567**	3.117**	-0.180	0.579	1.216	-4.183*	25
	(2.758)	(0.425)	(2.139)	(2.846) [SLU]	(1.267)				
BER	0.567	-0.809*	-0.469*	0.297*	-0.279*	0.877	1.355	3.384**	25
	(0.496)	(4.086)	(3.778)	(3.056) [DR]	(3.453)				
JA	-13.834*	0.508	-0.573*	1.479*	-0.209***	0.891	1.254	-3.321**	25
	(5.719)	(1.316)	(4.372)	(5.159) [BAH]	(1.700)				
SLU	-9.138*	0.190	-0.679	1.072	-0.068	0.729	1.210	-3.633*	25
	(5.921)	(0.628)	(0.909)	(1.311) [BDS]	(0.704)				
TT	-12.406*	-0.143	-0.248	0.555	0.404*	0.521	1.141	-3.527*	25
	(5.794)	(0.449)	(0.653)	(1.512) [SLU]	(3.740)				

Table 2b
Co-integration Results of Canadian Market Share

	Constant	Output	Own Price	Competitor Price	Air Transport Price	R^2	DW	ADF	N
BAH	-2.564**	-1.296*	-0.018	0.273*	0.064**	0.882	1.754	-5.358**	24
	(3.290)	(5.467)	(0.111)	(3.875) [JA]	(1.088)				
BDS	-0.239*	-0.709**	-2.068	2.011	0.011	0.515	0.611	-1.947**	24
	(0.122)	(1.273)	(1.266)	(1.276) [SLU]	(0.056)				
BER	-2.965**	-0.162	-2.042*	0.930*	0.016	0.790	0.855	-2.667***	24
	(2.205)	(0.352)	(3.651)	(3.289) [BAH]	(0.193)				
DR	-32.200*	4.521*	-0.703**	-0.180	-0.152	0.915	1.038	-2.975*	24
	(9.181)	(11.238)	(3.276)**	(0.828) [JA]	(0.796)				
JA	-4.999*	-0.001**	0.226**	-0.097	-0.049	0.301	1.373	-2.452**	24
	(4.900)	(2.401)	(2.341)	(1.100) [DR]	(0.625)				
TT	-8.013**	-1.035**	0.130	1.128**	-0.366	0.549	1.981	-4.850*	24
	(3.763)	(2.343)	(0.312)	(2.459) [SLU]	(2.900)				

Notes: ANB = Antigua and Barbuda; BAH = The Bahamas; BDS = Barbados; BER = Bermuda; DR = Dominican Republic; JA = Jamaica; SLU = St. Lucia; MTN = St. Maarten and TT = Trinidad and Tobago. The numbers in round (…) parentheses under the coefficients are t-statistics while the notation in square brackets […] represents the location of the respective (available) competitor prices based on the nearest distance from the source countries. * indicates significance at the 1% level, ** significant at the 5% level and *** significant at the 10% level. R^2 is the multiple coefficient of determination, DW is the Durbin-Watson statistic for first order serial correlation, ADF is the Augmented Dickey-Fuller test and N is the number of observations.

Table 3

Error Correcting Model Results for US Market Share

	Constant	Δ Market Share Lagged	Δ Output	Δ Output Lagged	Δ Own Price	Δ Own Price Lagged	Δ Competitor Price	Δ Competitor Price Lagged	Δ Air Transport Cost	Δ Air Transport Cost Lagged
ANB	0.094	0.409**	-3.142*		-5.625*		4.730**			-0.172**
	(1.376)	(2.468)	(3.033)		(5.501)		(2.922) [VI]			(1.947)
ARU	0.080***	0.675**	-4.292**	2.363***				0.092***		-0.241*
	(2.092)	(2.585)	(3.049)	(1.907)				(1.630) [SLU]		(3.153)
BAH	-0.028**									
	(2.231)									
BZ	0.070	0.371	-2.292**		3.552***		-0.251			-0.279**
	(1.052)	(1.637)	(1.414)		(1.945)		(1.667) [CNC]			(2.333)
CAY	-0.007	0.373***					0.127***	0.143**		
	(0.509)	(2.031)					(1.981) [JA]	(2.291) [JA]		
DR	0.242*		-3.628**	-3.850**						0.287**
	(3.513)		(2.324)	(2.335)						(2.771)
JA	0.090*	0.305**		-2.681*		0.098**				-0.088***
	(3.501)	(1.966)		(3.713)		(2.169)				(1.959)
PR	0.153**	0.256	-2.628**		-2.365				0.151**	
	(2.091)	(1.236)	(2.544)		(1.431)				(2.024)	
SLU	0.102*						-1.668**		-0.289*	
	(3.156)						(2.586) [BDS]		(3.211)	
TT	0.062***	0.473**	-1.837***		0.385**				0.215**	-0.177**
	(1.836)	(2.463)	(1.944)		(2.406)				(2.716)	(2.340)
VI	-0.008	0.462**								
	(0.189)	(2.365)								

Notes: ANB = Antigua and Barbuda; ARU = Aruba; BAH = The Bahamas; BDS = Barbados; BZ = Belize; CNC = Cancún, CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; TT = Trinidad and Tobago and VI = US Virgin Islands. The numbers in round (…) parentheses under the coefficients are t-statistics while the notation in square brackets […] represents the location of the respective (available) competitor prices based on the nearest distance from the source countries. * indicates significance at the 1% level, ** significant at the 5% level and *** significant at the 10% level.. Δ is the first difference operator.

Table 3 Cont'd
Error Correcting Model Results for US Market Share
(Diagnostic Tests)

	Error Correcting Term Lagged	R^2	**DW**	**JB**	**BG**	**ARCH**	**WHITE**	**RAMSAY**	**CUSUM SQUARE**
ANB	-0.570** (2.562)	0.731	1.726	0.235	0.439	0.118	1.530	1.599	Stable
ARU	-0.803** (2.800)	0.534	2.032	0.621	0.208	2.529	1.171	0.111	Unstable
BAH	-0.986 (3.990)	0.548	1.715	0.036	0.071	0.583	0.232	2.162	Unstable
BZ	-0.914* (3.953)	0.576	2.331	2.417	1.563	0.283	1.015	0.861	Stable
CAY	-0.686 (3.317)	0.547	1.871	0.891	0.073	1.650	0.302	0.248	Stable
DR	-0.891* (4.436)	0.553	1.580	0.732	0.864	0.530	4.036*	9.273*	Stable
JA	-0.859* (5.490)	0.815	1.790	0.634	0.078	0.823	0.800	0.293	Stable
PR	-0.496** (2.438)	0.491	1.910	0.656	0.090	0.951	1.843	5.155*	Stable
SLU	-0.702* (3.597)	0.597	1.967	1.353	0.010	0.030	1.175	0.001	Stable
TT		0.606	2.342	0.089	1.492	0.001	1.128	0.028	Stable
VI	0.772* (3.701)	0.429	1.887	2.621	0.019	1.976	7.279*	0.917	Unstable

Notes: ANB = Antigua and Barbuda; ARU = Aruba; BAH = The Bahamas; BZ = Belize; CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; TT = Trinidad and Tobago and VI = US Virgin Islands. The numbers in round (…) parentheses under the coefficients are t-statistics. * indicates significance at the 1% level, ** significant at the 5% level and *** significant at the 10% level. R^2 is the multiple coefficient of determination, DW is the Durbin-Watson statistic for serial correlation, JB is Jarque-Bera test for normality, BG is Breusch-Godfrey statistic for general order serial correlation, ARCH is a check for Autoregressive Conditional Heteroscedasticity, WHITE is a test for general heteroscedasticity, RAMSEY statistic checks for general model misspecification, and CUSUM SQUARE is a test for the stability of the model parameters.

Table 4a
Error Correcting Model Results for UK Market Share

	Constant	Δ Market Share Lagged	Δ Output	Δ Output Lagged	Δ Own Price	Δ Own Price Lagged	Δ Competitor Price	Δ Competitor Price Lagged	Δ Air Transport Cost	Δ Air Transport Cost Lagged
ANB	0.075***			-1.911						
	(1.971)			(1.448)						
BDS	-0.087	0.201		3.666*	1.543**		1.543**			
	(2.239)	(1.549)		(2.706)	(2.103)		(2.374) [SLU]			
BER	-0.067**			1.583	-0.285**				-0.122***	0.119
	(2.282)			(1.650)	(2.173)				(1.841)	(1.494)
JA	0.115**	0.425*	-2.603***		-0.158***	0.285*	0.259	-0.677*		
	(2.716)	(2.721)	(1.928)		(1.983)	(3.208)	(1.507) [BAH]	(3.295)		
SLU	0.018							-0.201		
	(1.020)							(1.373)		
TT	-0.014				0.172***		0.292			
	(0.639)				(1.795)		(1.628) [SLU]			

Table 4b
Error Correcting Model Results for Canadian Market Share

	Constant	Δ Market Share Lagged	Δ Output	Δ Output Lagged	Δ Own Price	Δ Own Price Lagged	Δ Competitor Price	Δ Competitor Price Lagged	Δ Air Transport Cost	Δ Air Transport Cost Lagged
BDS	-0.233*		3.197*	3.812*		1.292**		-1.223***		
	(6.490)		(4.141)	(4.141)		(2.264)		(1.973) [SLU]		
BER	0.027	0.425**	1.569***		-2.836***		0.715*	-0.742**	-0.124***	
	(0.460)	(2.308)	(2.062)		(1.858)		(3.182) [BAH]	(2.517) [BAH]	(1.893)	
DR	-0.093	0.576**	5.432**		-0.578**					
	(1.043)	(2.497)	(2.187)		(2.645)					
JA	-0.053***			1.746***	0.251*				-0.147***	
	(1.746)			(1.962)	(3.264				(1.808)	

Notes: ANB = Antigua and Barbuda; BDS = Barbados; BER = Bermuda; DR= Dominican Republic; JA = Jamaica; SLU = St. Lucia and TT = Trinidad and Tobago. The numbers in round (…) parentheses under the coefficients are t-statistics while the notation in square brackets […] represents the location of the respective (available) competitor prices based on the nearest distance from the source countries. * indicates significance at the 1% level, ** significant at the 5% level and *** significant at the 10% level.. Δ is the first difference operator.

Table 4a (cont'd)
Error Correcting Model Results for UK Market Share
(Diagnostic Tests)

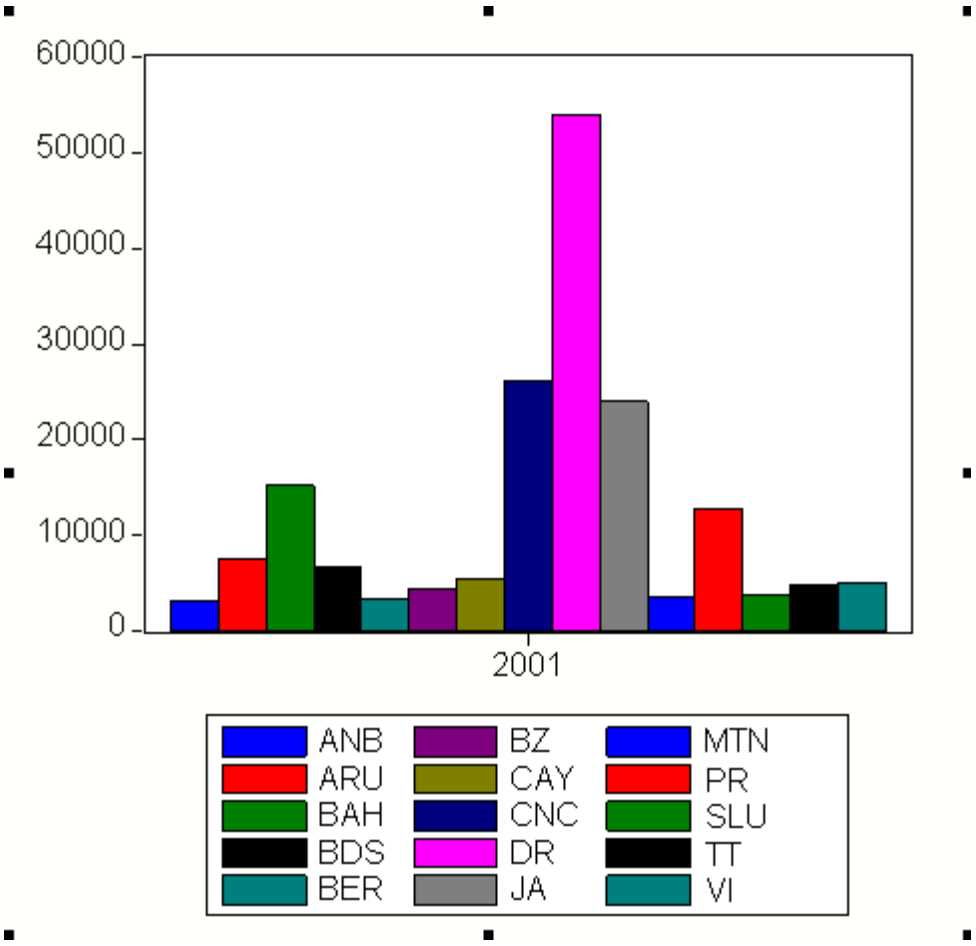
	Error Correcting Term Lagged	R^2	DW	JB	BG	ARCH	WHITE	RAMSAY	CUSUM SQUARE
ANB	-0.552* (2.989)	0.337	1.766	0.380	0.458	0.093	1.836	1.675	Stable
BDS	-0.706* (5.061)	0.767	1.641	1.797	0.331	1.048	0.903	1.759	Stable
BER	-0.888* (3.718)	0.619	1.362	0.024	0.249	0.276	0.727	1.878	Stable
JA	-0.727* (5.142)	0.729	2.391	0.650	1.841	0.665	2.128	0.089	Stable
SLU	-0.748* (4.338)	0.481	1.758	1.104	0.559	0.686	2.125	0.663	Unstable
TT	-0.507* (2.916)	0.446	1.704	1.382	0.906	4.639**	1.583	0.863	Stable

Table 4b (cont'd)
Error Correcting Model Results for Canadian Market Share
(Diagnostic Tests)

	Error Correcting Term Lagged	R^2	DW	JB	BG	ARCH	WHITE	RAMSAY	CUSUM SQUARE
BDS	-0.639 (5.947)	0.763	1.952	1.292	0.044	0.429	0.571	1.822	Stable
BER	-0.678 (3.834)	0.718	2.263	1.500	0.781	0.678	0.949	1.156	Stable
DR	-0.900* (2.942)	0.544	2.453	1.142	2.812	0.003	1.872	0.711	Stable
JA	-0.781* (3.947)	0.716	1.485	1.924	2.509	0.410	0.428	0.056	Stable

Notes: Notes: ANB = Antigua and Barbuda; BDS = Barbados; BER = Bermuda; DR=Domonican Republic; JA = Jamaica; SLU = St. Lucia and TT = Trinidad and Tobago. The numbers in round (…) parentheses under the coefficients are t-statistics. * indicates significance at the 1% level, ** significant at the 5% level and *** significant at the 10% level. R^2 is the multiple coefficient of determination, DW is the Durbin-Watson statistic for serial correlation, JB is Jarque-Bera test for normality, BG is Breusch-Godfrey statistic for general order serial correlation, ARCH is a check for Autoregressive Conditional Heteroscedasticity, WHITE is a test for general heteroscedasticity, RAMSEY statistic checks for general model misspecification, and CUSUM SQUARE is a test for the stability of the model parameters.

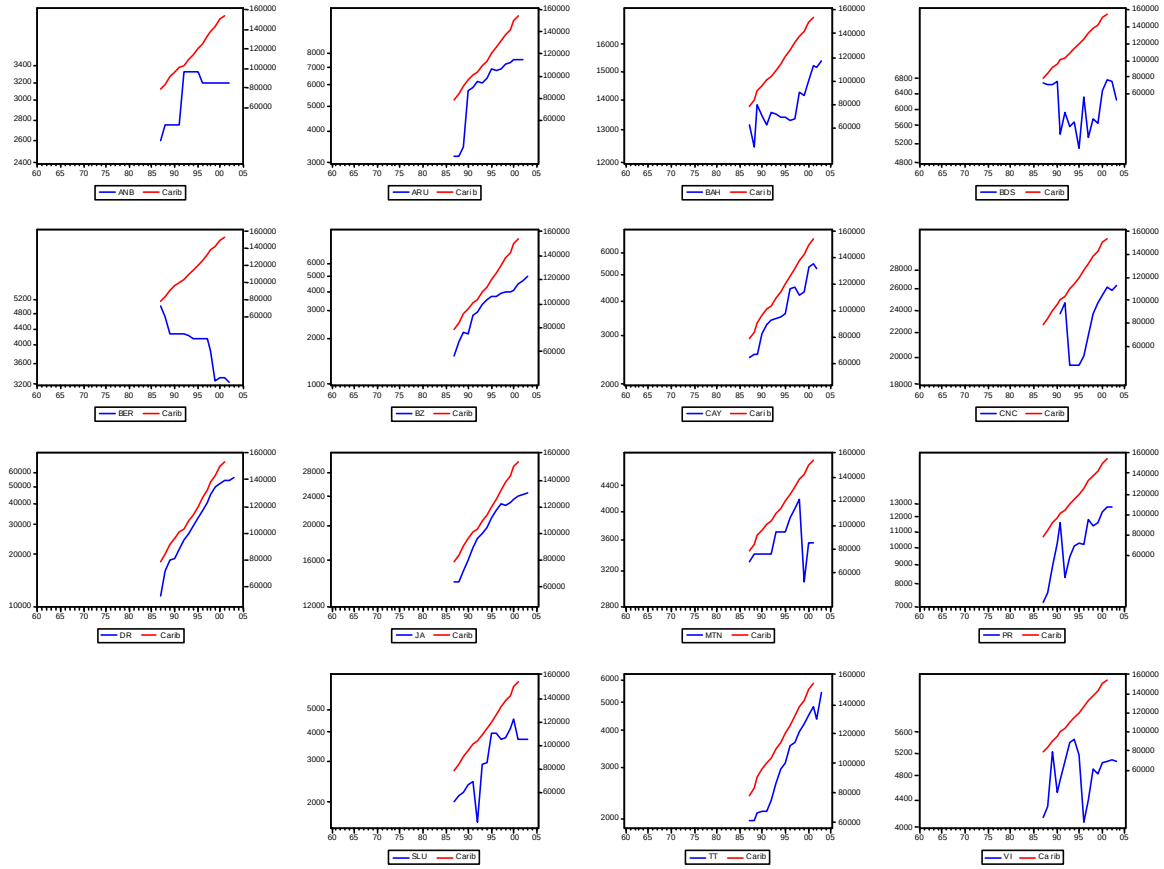
Figure 1. The Number of Rooms in Caribbean Destinations



Source: Caribbean Tourism Organization

Note: ANB = Antigua and Barbuda; ARU = Aruba; BAH = Bahamas; BDS = Barbados; BZ = Belize; BER = Bermuda; CNC = Cancun; CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; MTN = St. Maarten; TT = Trinidad and Tobago and VI = U.S. Virgin Islands.

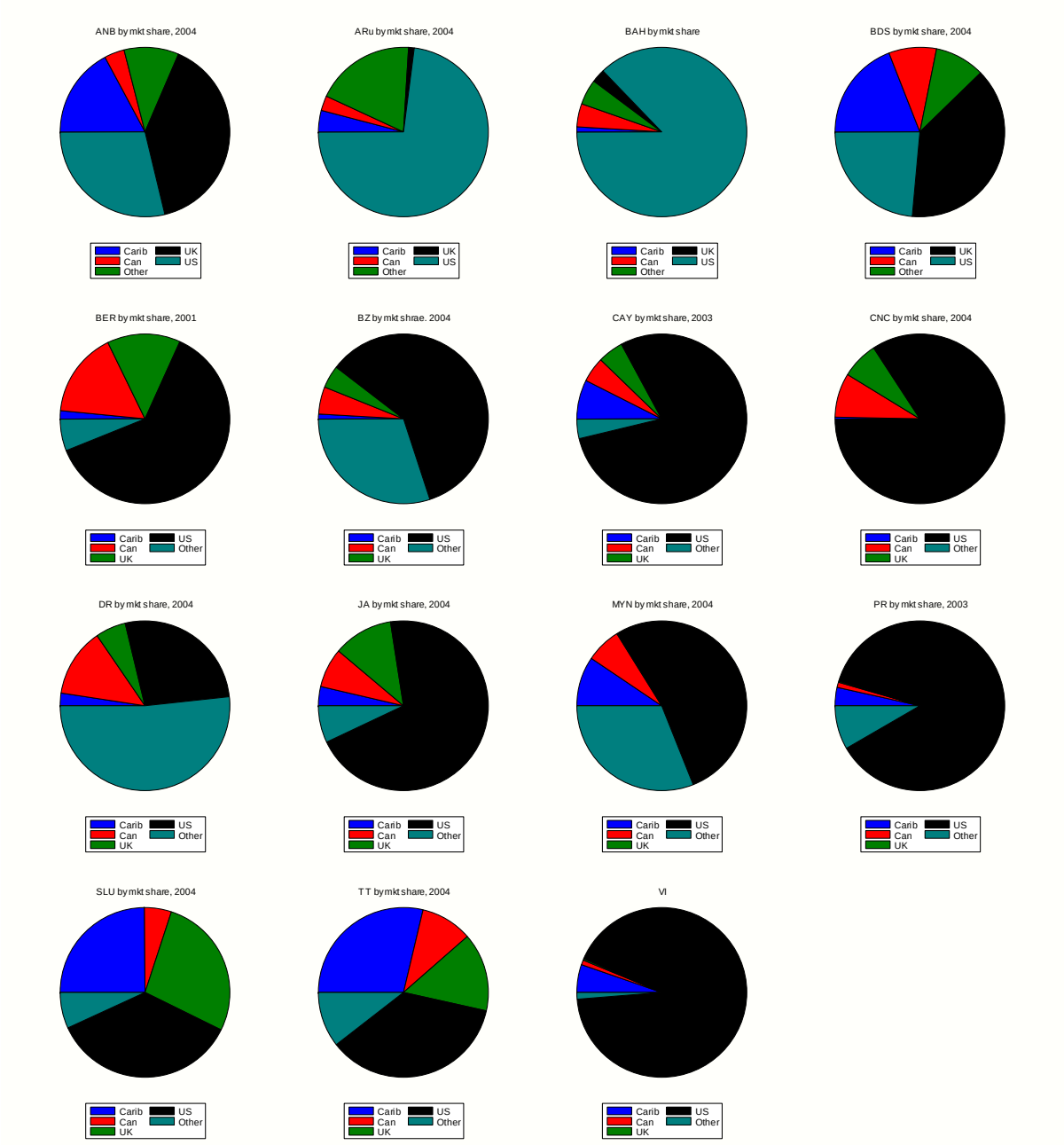
Figure 2. Growth in the Number of Rooms in Caribbean Destinations



Source: Caribbean Tourism Organization

Note: ANB = Antigua and Barbuda; ARU = Aruba; BAH = Bahamas; BDS = Barbados; BZ = Belize; BER = Bermuda; CNC = Cancun; CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; MTN = St. Maarten; TT = Trinidad and Tobago and VI = U.S. Virgin Islands.

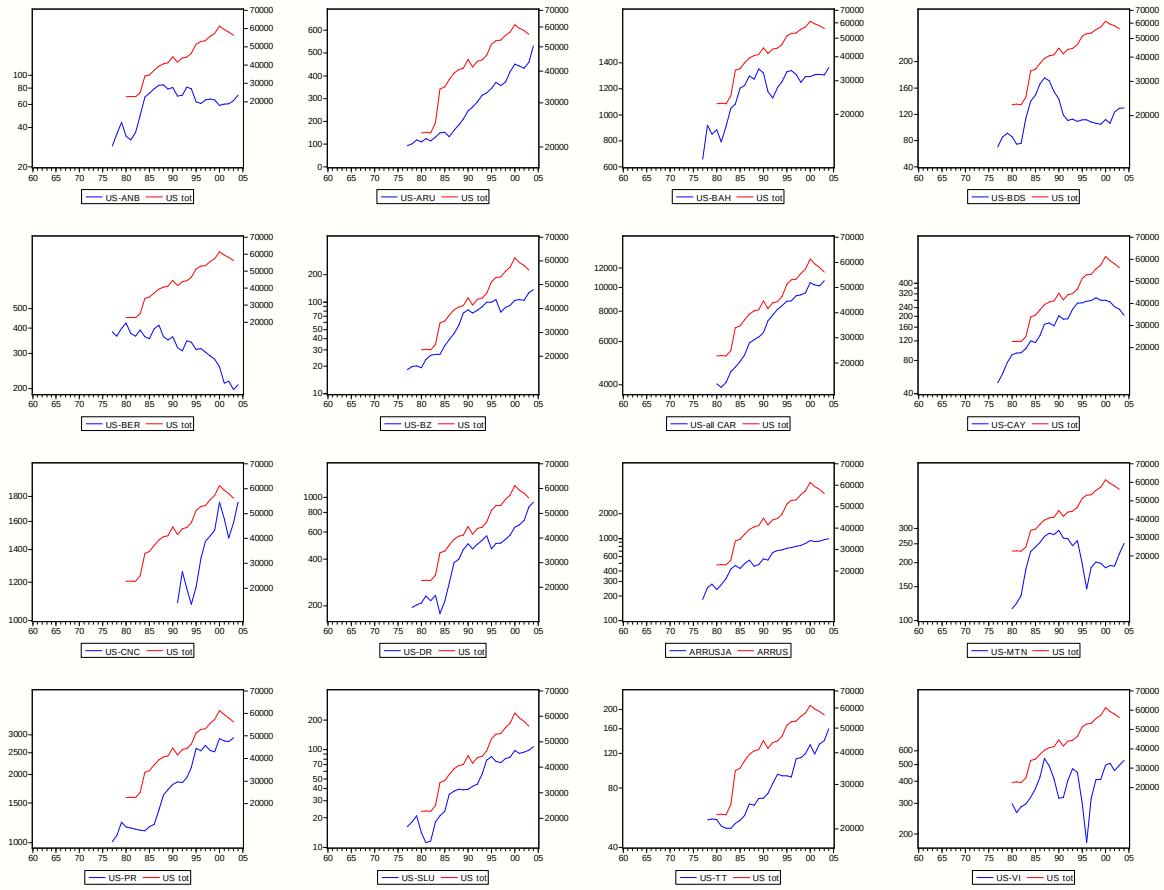
Figure 3. Market Shares for Caribbean Countries



Source: Caribbean Tourism Organization

Note: ANB = Antigua and Barbuda; ARU = Aruba; BAH = Bahamas; BDS = Barbados; BZ = Belize; BER = Bermuda; CNC = Cancun; CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; MTN = St. Maarten; TT = Trinidad and Tobago and VI = US Virgin Islands.

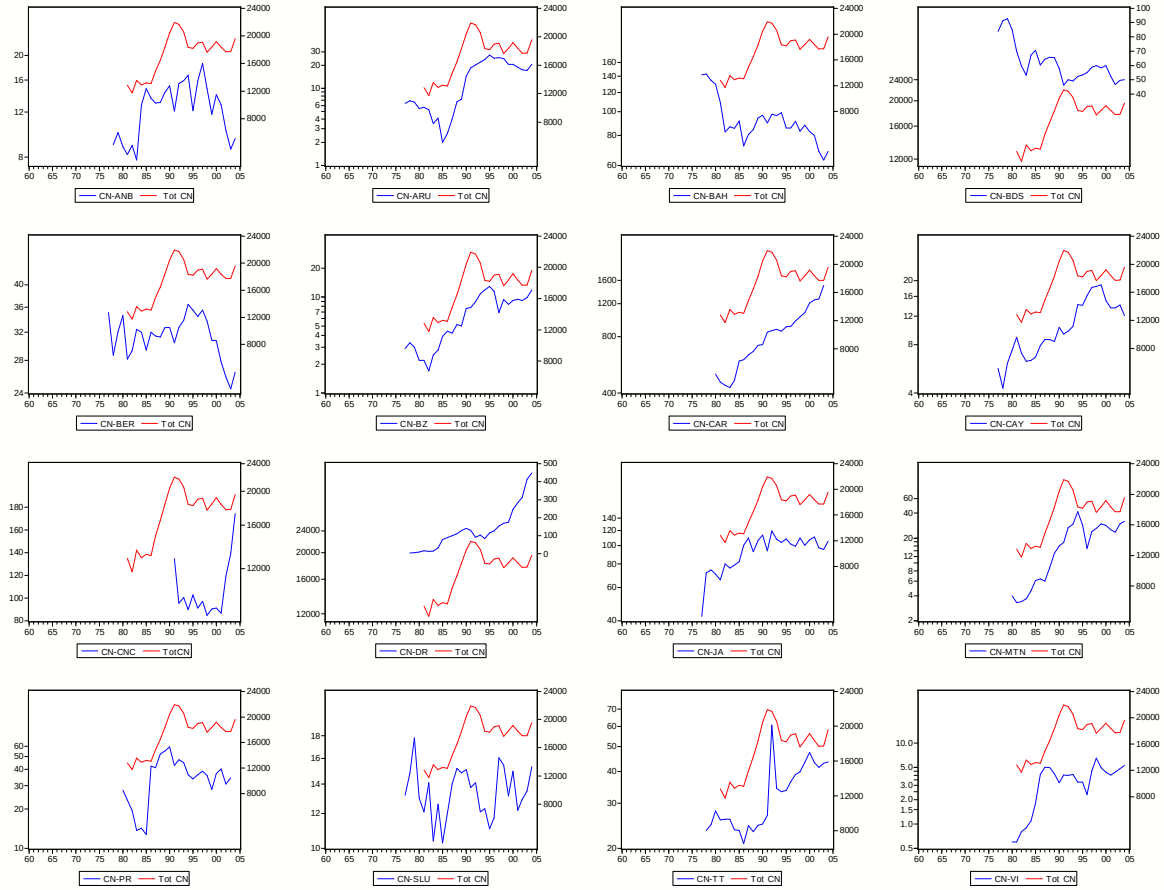
Figure 4. U.S. Arrivals in the Caribbean (Thousands)



Source: Caribbean Tourism Organization

Note: ANB = Antigua and Barbuda; ARU = Aruba; BAH = Bahamas; BDS = Barbados; BZ = Belize; BER = Bermuda; CNC = Cancun; CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; MTN = St. Maarten; TT = Trinidad and Tobago and VI = U.S. Virgin Islands.

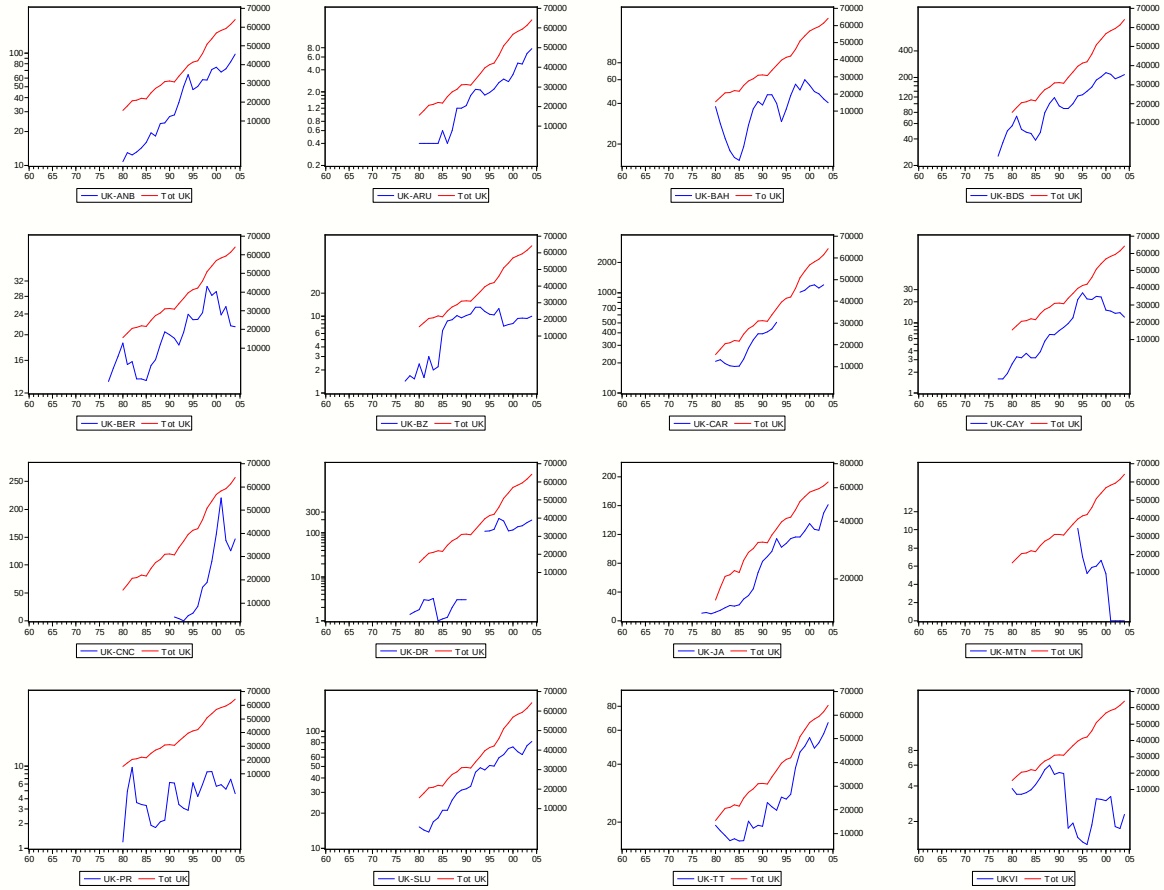
Figure 5. Canadian Arrivals in the Caribbean (Thousands)



Source: Caribbean Tourism Organization

Note: ANB = Antigua and Barbuda; ARU = Aruba; BAH = Bahamas; BDS = Barbados; BZ = Belize; BER = Bermuda; CNC = Cancun; CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; MTN = St. Maarten; TT = Trinidad and Tobago and VI = U.S. Virgin Islands.

Figure 6. U.K. Arrivals in the Caribbean (Thousands)



Source: Caribbean Tourism Organization

Note: ANB = Antigua and Barbuda; ARU = Aruba; BAH = Bahamas; BDS = Barbados; BZ = Belize; BER = Bermuda; CNC = Cancun; CAY = Cayman Islands; DR = Dominican Republic; JA = Jamaica; PR = Puerto Rico; SLU = St. Lucia; MTN = St. Maarten; TT = Trinidad and Tobago and VI = U.S. Virgin Islands.