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1. Introduction

Cuba has a long tradition as a Caribbean tourist destination. But the current configuration and economic importance of the Cuban tourism industry were defined by the fall of the Iron Curtain and consequent end to subsidised trading with the USSR, and the tightening of the United States' economic embargo following the Cuban Democracy Act. These events led the Cuban economy to collapse in the early 1990s, when its GDP fell by 36%. This is the context in which the international tourism sector has been seen since 1989 as one of the few productive alternatives able to partially compensate for the income lost from the breakdown of the Cuban economy and of the sugar sector in particular – hitherto one of its main engines (Fitzgerald, 1994; Simon, 1995; Martín de Holan and Phillips, 1997; Mundet and Salinas, 2000; Pérez-López and Murillo, 2003).

The available information shows that in the mid-1990s the incipient tourism sector managed to attract around 800,000 international tourists. Today it is five times larger, even without counting the nearly 800,000 excursionists, almost all of whom are cruise passengers (UNWTO, 2018; Xinhuanet, 2019). This economic activity accounted for almost 11% of GDP in 2018 and close to 10% of total employment in the Cuban economy, and two-point growth is expected in these relative weights in the next decade (World Travel & Tourism Council, 2019). However, the tentative liberalisation of US tourist flows begun in President Obama's second term was cut short when President Trump announced the revival of Title III of the Helms-Burton Act in 2019. The sanctions on foreign companies operating on property confiscated from Americans during the Cuban Revolution are particularly damaging, and the act puts most cruises and some tourism from the US at risk. Indeed, as of November 2019 the number of visitors (both tourists and excursionists) had fallen by 8.5% (ONEI, 2019).

In these conditions, the structural health of one of the country's key economic sectors becomes relevant. Indeed, the Cuban economy's economic growth over coming decades may hinge on it (Brundenius, 2003).

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Regardless of internal conditions, international tourism operates as a large market in which various destinations seek to leverage their particular advantages and attractions to attract greater numbers of tourists. It therefore seems appropriate to analyse the competitiveness of the Cuban international tourism sector compared to other destinations around the world and particularly those in its Caribbean neighbourhood. The result is an initial comparative view of Cuba's competitive strengths and weaknesses in this activity.

The reality is that many middle-income countries and a large majority of those located in the Caribbean area in particular have made the tourism sector the fulcrum of their economic transformations. Notable among its positive effects on economic growth is tourism's global significance: considered the largest productive sector, its increasing importance derives from higher rates of growth than the average in the economy. It also contributes to external sustainability, as its contribution to domestic income and above all domestic savings means the growth process hinges on it. All of this seems to validate the tourism-led growth hypothesis (Balaguer and Cantavella-Jordá, 2002; Brida et al., 2016).

Nevertheless, other work questions this central role of the tourism sector in the economic development of countries as it is a low-productivity activity whose growth is limited by the resources it absorbs, a product of its low capacity for innovation. The levels of pay and qualifications required for its workers consequently tend to be relatively low. It is also worth noting that ownership, revenues and access to consumers tend to be highly concentrated, particularly in the international market. Combined with low levels of regulation, this prevents it from operating in conditions that resemble free competition. The sector's major environmental impact has also become clear.

All these aspects are important, but more significant is the fact that international tourism is subject to more pronounced economic cycles than the economy as a whole. As its high growth rate is more related to demand factors than to supply, this means that tourism in a destination depends on the situation in its tourists' economies of origin. Nevertheless, in recent years, technological advances in the sector, the ageing of the population, and the greater preference for spending on leisure activities are changing many of these negative aspects (see the growth prospects for the international tourism market over the coming years in UNWTO, 2011).

For better or worse, today the tourism sector is undoubtedly an essential part of Cuba's economic jigsaw and its possibilities for growth over the coming years. This work aims to analyse the competitive situation of the Cuban tourism sector based on the recent behaviour of its tourist flows, particularly tourist numbers.

Analysing the competitiveness of international tourist destinations is a complex task. Numerous theoretical models have been developed and some have even tried to capture these ideas empirically. The best known is probably the World Economic Forum's *Travel and Tourism Competitiveness Report*, which applies the methodology and many of the indicators from the *World Competitiveness Report* to the international tourism sector (see, for example, the latest edition: WEF, 2019).

But analysing a destination's tourism competitiveness with such methodologies usually requires a significant amount of information. First, because a broad set of elements must be considered that are not always easy to quantify and analyse, meaning synthetic indicators need to be constructed. Second, because they must be compared to other economies. This work therefore does not seek to perform a detailed analysis of all the elements that contribute to tourism competitiveness. It aims to diagnose the behaviour of international tourist flows. That no prior examples exist of results-based destination analysis makes any subsequent comparative examination difficult. As stated in De la Peña et al. (2019 and 2020), something is clearly – and surprisingly – missing from all the literature on international tourism competitiveness: indicators based on the behaviour of tourist flows in each destination.

In the two articles mentioned, a specific tool is proposed for analysing international tourist flows. The verification of a depletion in the appeal of the different tourist destinations allows their trajectory to be estimated with a convex (downward) equation similar to the expression of conditional beta-convergence. Specifically, these types of equations allow an upward growth path to be estimated, but with decreasing growth rates that tend to zero, giving a maximum that will be called tourism potential. The proposal also allows us to take into account country size, the destination's level of maturity and other idiosyncratic elements.

However, not all international tourist destinations have the same tourism model or mix and therefore show different growth patterns. A modification to the proposed tool allows each destination to adjust the evolution of its tourist flows to a specific parameter of convexity: in other words, a parameter that indicates its speed of convergence towards its tourism potential, or what is equivalent, the exhaustion of its growth. Whichever version of this instrument is chosen, it certainly makes it possible to analyse the competitive situation of a tourist destination by comparing real tourist flows with a counterfactual obtained from the flows predicted by the model. The comparison is not therefore made with the trajectory of other destinations, but with the counterfactual constructed for the destination itself, with estimates of all its idiosyncratic effects. To be sure, information from all global estimates is used to estimate the base model on which the counterfactual is built: this is the comparative element that any competitiveness analysis must include.

The procedure used also allows tourism potential to be estimated. More than a prediction, this proposes the maximum number of tourists a destination could reach if nothing in its model changes. A bigger gap between the real flow and the tourism potential should be interpreted as greater capacity for growth in this destination and, consequently, a lower level of exhaustion of the tourist activities currently taking place in it. In this sense, this indicator becomes a qualitatively differentiating element between destinations that helps us understand not just the sector's past or present, but its potential in the near future in each specific destination. Specifically, the evolution of this tourism potential in recent years can be read as a measure of the technical change that has taken place in the international tourism sector, or of

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how changes of all kinds in this sector have affected the potential chances of attracting tourists to a specific destination. So, calculating these competitiveness indicators for the Cuban economy and its surroundings will facilitate a comparative diagnosis that allows an assessment to be made of how the Cuban tourism sector's changing course in recent years has impacted on its competitive situation, as well as assessing its strength to face the near future.

To meet this objective, the following section presents a brief discussion of both the concept and the approaches to measuring tourism competitiveness, as well as the need to use the mentioned tool. It also reviews the main features of the underlying theoretical model and its empirical implications. The third section presents the database used in this work. As any measure of competitiveness – and especially the one used here – must have a comparative aspect, data for a broad set of countries was obtained from the United Nations World Tourism Organization (UNWTO). The fourth section gives the results from the estimates of the proposed models and discusses the specific results for Cuba and its immediate Caribbean neighbourhood, especially the three other major destinations in the area – the Dominican Republic, Jamaica and Puerto Rico. The chapter ends with conclusions and final considerations, as well as some implications of the results presented here for tourism policy.

2. Measuring tourism competitiveness

A simple definition of tourism competitiveness, taking in a range of visions, would be: a destination's capacity to attract tourists, the determining factors of that attraction, and the impact on the level and quality of life of the economy in question. As stated in De la Peña et al. (2019), this definition unites three different but interconnected aspects: results or behaviour, determinants and impacts.

Initially, there was a temptation to analyse tourism sector competitiveness as if it were a good and to apply the theoretical models and indicators used for international goods markets, focussing on studying determinants and results. But many aspects differentiate the tourism and manufacturing sectors from one another, and two above all. The first is tourism's problem of being segmented into different subsectors and, by extension, its large size. The second is that the final consumer travels to the country of production to consume the tourism product, generating an impact on its economy and environment that may influence the determinants of tourism and condition future destination attractiveness.

A particular group of works marks the beginning of a new integrated conception of tourism competitiveness analysis. Crouch and Ritchie (1999) and Ritchie and Crouch (2000) proposed a conceptual model of analysis of difficult empirical application. It was Dwyer and Kim (2003) who began the task of making this analysis materialise in a tangible set of indicators. However, Enright and Newton (2004 and 2005) are considered to be the true architects of tourism indicators that can be evaluated.

All these models include indicators for determinants, results and

impacts, although under different names and above all with an almost total predominance of determinants, marginalising impacts and all but ignoring results. An obvious example of the advance of this type of approach to analysing tourism competitiveness can be found in the development of indicators proposed by the OECD (Dupeyras and MacCallum, 2013), the culmination of which are the influential reports by the World Economic Forum (2019) called the *Travel & Tourism Competitiveness Report*.

These analyses are undoubtedly very complete and complex, but they give a surprisingly marginal role to tourism results as manifested in tourist flows to each destination, despite such flows providing clear evidence of how these determinants of competitiveness end up affecting destination attractiveness. Seen over the long term, at least, tourist flow behaviour reveals each specific destination's attractiveness, in other words, its revealed competitiveness. Without dismissing composite tourism competitiveness indices, the following analysis focuses on obtaining indicators from the trajectory of these flows, specifically the number of international tourists the destination receives.

The basic idea of the results-based tourism competitiveness analysis presented in De la Peña et al. (2019; 2020) is the verification of the existence of a generalised inverse relationship between the volume of tourists a tourist destination receives in one year and the growth rate of that flow in the following year. Figure 1 shows this relationship for the specific case of Cuba. As a structural feature, tourist flows could be said to follow a trend that can be captured by a convex (downward) expression similar to that shown by the expression of conditional convergence. Each country or destination under consideration is permitted to present a different convexity coefficient, although an attempt is made to group the destinations into m -groups of apparently similar behaviour:

$$\ln F_{imt} - \ln F_{imt-1} = \alpha_0 + \beta \ln F_{imt-1} + \sum_m \rho_m d_m \ln F_{imt-1} + \sum_i \gamma_i d_i + \sum_t \delta_t d_t + \varepsilon_{it} \quad [1]$$

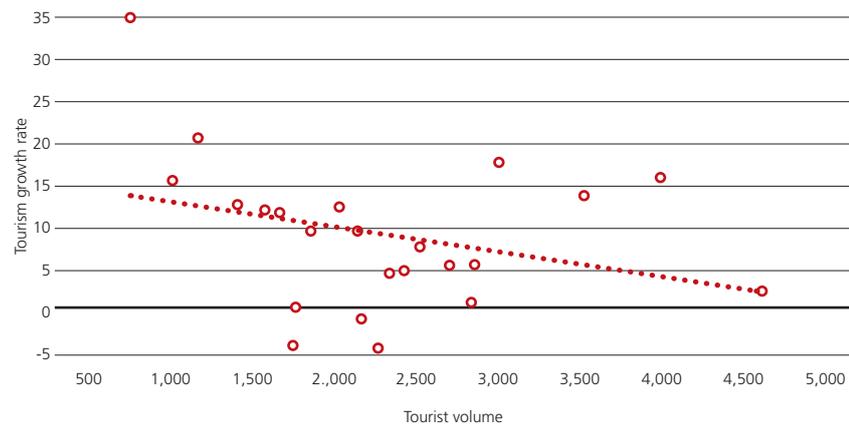
Where F_{it} is the tourist flow of destination i , which belongs to group m in period t ; α_0 is a constant term that is equal for all tourist destinations; and d_i and d_t refer to tourist destination and year dummies, respectively; and, therefore, parameters β and ρ_m capture the individual effects of tourist destination and time, eliminating one of them from each of the groups of dummies to avoid perfect multicollinearity with the constant term and between them. ρ_m is the homogeneous convexity coefficient between countries that indicates the relationship between tourist flow level and tourist flow growth, estimated using the logarithmic difference between the flows. Finally, γ_i represents the dummies for international tourist destination i belonging to tourism model m . As such, the convexity parameter for tourist destination i that belongs to tourist model m is $\rho_m \gamma_i$.

A specific and more restrictive case of the previous model would be if all of the countries in the world followed a single tourist model, making the previous expression:

$$\ln F_{it} - \ln F_{it-1} = \alpha_0 + \beta \ln F_{it-1} + \sum_i \gamma_i d_i + \sum_t \delta_t d_t + \varepsilon_{it} \quad [2]$$

In this sector, the final consumer travels to the country of production to consume the tourism product, generating an impact on its economy and environment that may influence the determinants of tourism and condition future destination attractiveness.

Figure 1. Relationship between tourist volumes and tourism growth rates Cuba (1995-2018)



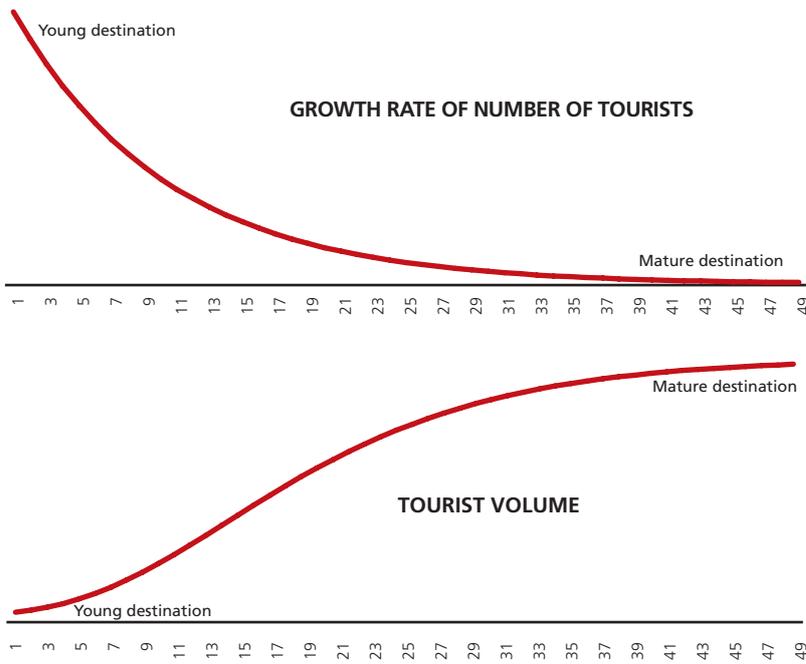
The model described establishes a relationship between the tourist flow in one year and the growth rate for the following year. If, as expected, some loss of destination appeal occurs, the convexity parameter will be different from zero and negative, as the possible cyclical effects produced in the tourism market with temporary impact have been isolated. Figure 2 is a stylised presentation of the evolution over time of the relationship between tourism growth rate and tourist flow for a prototypical tourist destination. However, even where this negative relationship exists, it permits each country to be at a different stage of this process of losing attractiveness based on individual destination effect and deviations from the path caused by the economic cycle are captured by year effects. A higher convexity parameter therefore indicates a faster loss of destination attractiveness and, as a result, lower growth potential. Being a structural parameter, it would be possible for each tourism model or tourism mix to be characterised by a different value.

The existing “pure models” of tourism – sun and beach, urban, culture, nature, health, congresses, and so on – will not be used. What is proposed is a more abstract definition, in which the countries are to be grouped according to the convexity parameter of expression [2]. This way of grouping tourist destinations has one major advantage: a significant amount of information is not needed, simply the evolution of international tourist flows. Obviously, this is also its main weakness: the grouping ends up being “statistical” rather than being based on the variables of its tourist attractiveness. Moreover, the grouping formed could be the basis of an ex post explanation of the tourism mix present in each of the resulting *m*-groups.

After estimating expressions [1] and [2], counterfactuals can be constructed for tourist flow to set against the real data and enable an assessment to be made of whether the tourist flows in a certain destination perform better or worse than expected. As explained in De la Peña et al. (2019) this counterfactual can be constructed in the short, medium or long term, depending on the period taken as a reference for constructing the scenario (the previous one, five or ten years). Once the counterfactual has been obtained, it is possible to compare the real flows against these hypotheticals and obtain indicators of tourism com-

petitiveness with short, medium or long-term results. The longer-term indicators are more structural and, as a result, more reliable and less affected by cyclical situations. The short-term indicator may also have a mean reversion problem.

Figure 2. Stylised evolution of tourism growth rates and tourist volume for a prototypical tourist destination



The indicators obtained from the two counterfactuals – from equations [1] and [2] – offer an additional aspect of analysis. The comparison of the real flow a particular tourist destination presents versus the counterfactual obtained after estimating equation [1], $IC_{it}^{(1)} = \frac{F_{it} - F_{it}^{(1)}}{F_{it}^{(1)}}$, gives an idea of the destination's competitiveness compared to the tourism model of the countries with which it was grouped. By contrast, comparison with the counterfactual calculated from [2], $IC_{imt}^{(2)} = \frac{F_{it} - F_{imt}^{(2)}}{F_{imt}^{(2)}}$, is interpreted as a comparison against the global average. The difference between the competitiveness indicators derived from both cases therefore also quantifies the extent to which a country's competitive situation is conditioned by its tourism model and the extent to which it generates a "premium" or "penalty" $IC_{imt}^{(m)} = IC_{it}^{(1)} - IC_{imt}^{(2)}$.

$$IC_{it}^{(1)} = \frac{F_{it} - F_{it}^{(1)}}{F_{it}^{(1)}} \quad [4a]$$

$$IC_{imt}^{(2)} = \frac{F_{it} - F_{imt}^{(2)}}{F_{imt}^{(2)}} \quad [4b]$$

$$IC_{imt}^{(m)} = IC_{it}^{(1)} - IC_{imt}^{(2)} \quad [4c]$$

$IC_{it}^{(1)}$ and $IC_{imt}^{(2)}$ are the competitiveness indicators compared to the world tourism model and the specific tourism model followed by the mentioned destination, respectively. Therefore, $IC_{imt}^{(m)}$ is the premium or penalty this tourist destination receives in the competitiveness indicators calculated against its current model. The interpretation is clear: destinations

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with better values in $IC_{imt}^{(2)} = \frac{F_{it} - F_{im}^{(2)}}{F_{im}^{(2)}}$ than $IC_{it}^{(1)} = \frac{F_{it} - F_{it}^{(1)}}{F_{it}^{(1)}}$ have a better relative situation compared to the countries that share its tourism model than compared to the global average. In other words, the tourism model is limiting its growth capacity – the limitation is the opposite of the premium.

For example, a country specialised in sun and beach tourism may have a positive competitive position compared to the group of countries in this segment of the tourism market and negative compared to the global group, indicating that the destination has a problem caused by the tourism model it follows, notwithstanding some success with it. This difference is important when it comes to guiding tourism policies. If the problem is specific to the country – in other words if the result compared to its model is negative – policies will have to be oriented towards improving tourist attractiveness. On the contrary, if it is found that competitiveness problems are caused by the tourism model pursued – when the country performs well against its model but poorly against the global model – the tourism mix should be modified by promoting other types of tourism.

On the other hand, two expressions can be obtained from [1] and [2] for the tourism potential in both cases, simply by assuming that the growth rate is zero (the left part of each equation) and that the flow therefore remains unchanged between $t-1$ and t .

This tourism potential should not be interpreted as a prediction, but rather as the maximum number of tourists a particular destination could receive if none of the factors that influence its evolution change over time. However, it is known that tourist attractions change over time, strengthening, deteriorating or incorporating new ones. Added to all this are changes to demand, both in the type of tourism model, as well as in the propensity to travel, both of which affect the number of potential tourists. All of the changes within the tourism sector that modify the tourism potential over time will be called “technical change”.¹

To quantify this technical change, expressions [1] and [2] are estimated, but for different time periods. In other words, if we have a sample with information for T periods, estimates are made for $T-q$, $T-q+1$, $T-q+2$ first periods and so on. They are then used as the basis for calculating the different tourism potentials.² The growth rate of the potential flows achievable by each destination will be attributed to the existence of this technical change in the sector. The existence of this movement in each destination’s tourism potential may mean that, despite the growth (decrease) in tourist flows, the growth potential of each destination does not decrease (increase) by the same amount, but may even increase faster than the flows themselves.

3. Data

The basic information used for this work comes from the UNWTO. In this case the number of international tourists is used as the most representative measure of tourist flow. Broader physical definitions exist, such as visitor numbers, as well as those of a different nature, such as overnights or tourist income. But, despite its relevance, tourist number was excluded because it also includes excursionists who, although significant in some destinations (e.g. cruise passengers), are different in nature

1. The term is used slightly differently to how it is with economic growth, where it focuses exclusively on changes in supply and is technological in nature.
2. For reasons relating to the construction of competitiveness scenarios and indicators, which are detailed in De la Peña et al. (2019), a sample period is required with information for at least 15 years.

both because of the temporary nature of the stay – they do not stay overnight – and because in some countries they may reflect cross-border tourism. In relation to overnights, the information is of poorer quality than that relating to tourists, both in terms of quantity and in the variety of definitions.³ On the other hand, De la Peña (2019) uses the income from international tourism as well as tourist numbers. That work concludes that this variable, while of great relevance, offers results similar to those obtained from using tourist flows. It has therefore been decided that income may be dispensed with in this work to avoid potential problems with exchange rate fluctuations and currency deflation.

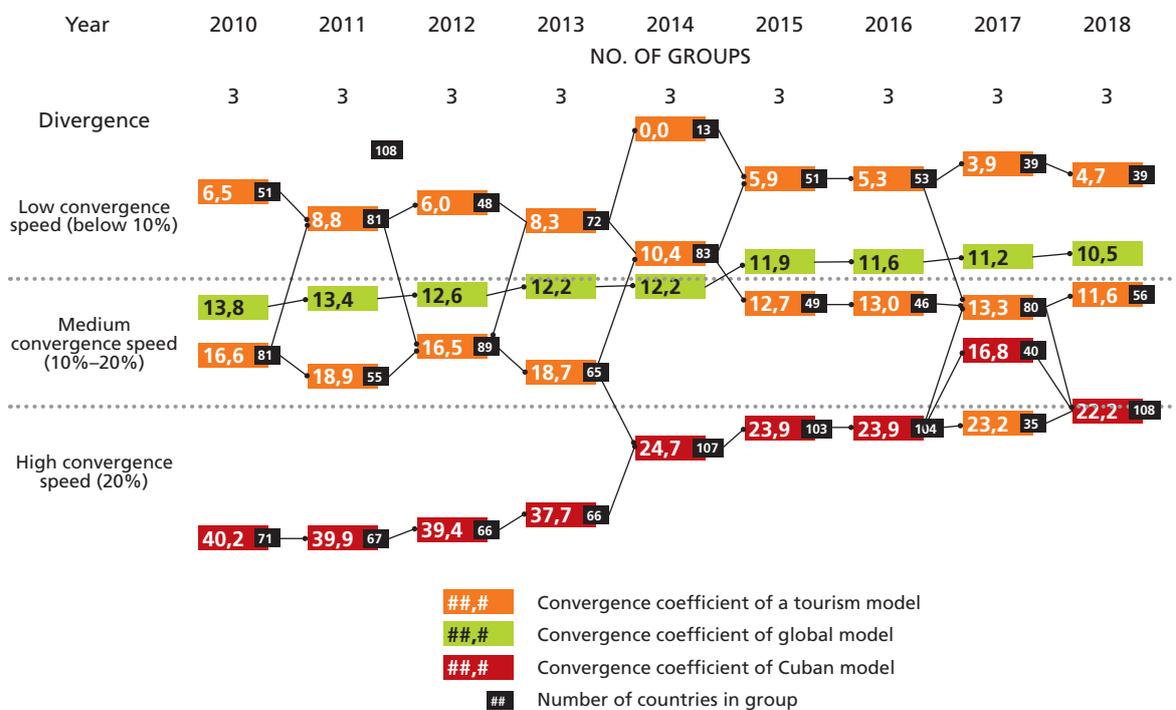
UNWTO provides information for a total of 222 tourist destinations of which 19 have been excluded for lack of information.⁴ The information covers 1995 to 2018.⁵

4. Results

Equations [1] and [2] are estimated using weighted least squares. The weighting for each observation is the average weight of that destination in the international tourism market for the period covered by each sample. It is presumed that equal convexity parameters exist for of the all countries in the world or for groups of countries (tourism models), as explained above. Both estimates are made for different sample periods, all of which begin in 1995. The first finishes in 2010 and each of the different samples incorporates an additional year until 2018, meaning for each of the equations up to nine different estimates are obtained.

3. Using this information would have drastically reduced the destination sample. On the other hand, Cuba only provides this information for tourists staying in tourist establishments.
4. The countries excluded are: Afghanistan, Bangladesh, Bonaire, Djibouti, Equatorial Guinea, Gabon, Iraq, North Korea, Liberia, Libya, Mauritania, Nauru, Pakistan, Saba, St. Eustatius, Somalia, South Sudan, Syria and Turkmenistan.
5. For the vast majority of destinations, data for the 1995–2017 period come from the *Compendium of Tourism Statistics* (UNWTO, 2018). Those for 2018 were taken from the UNWTO Barometer, September 2019 edition (UNWTO, 2019).

Figure 3. Estimated convergence speeds for average global tourism model and for each country group (tourism model) (samples run from 1995 until the year indicated)



The first thing observed is that the convexity parameters⁶ for the international average model (green bubbles) have decreased from 13.8% to 10.5% (around 24%), as Figure 3 shows. This result could be caused by a number of phenomena: (a) greater divergence between the different tourism models, meaning countries presented higher heterogeneity and therefore less convergence; b) slowdown in the process of reaching tourism potential as a result of the process of exhaustion of the international tourism model; or (c) the international tourism sector modifying its model and organisation to enable greater tourism potential.

Of the three possible explanations mentioned above, the first (greater divergence between models) must be ruled out because a degree of stability is noted in the number of country groups with homogeneous behaviour, as well as a greater concentration in the past five years than the previous ones, depending on their convexity parameters. The second reason given (slowdown due to exhaustion) also seems not to explain this behaviour because tourist flows were on an upward curve in this period: between 2009 and 2018 the aggregate number of tourists grew by around 5.5% annually (cumulative average annual rate), significantly higher than the 3.6% of the previous 10 years (1999–2009). It therefore seems that the cause of this development is the technical change that has taken place in the tourism sector, which has increased the global tourism potential.

For its part, Cuba presents some negative and other more hopeful results (the bubbles of Cuba's group have brown edges). Among the first is that for most years (except for the outlier of 2017) its convexity parameter places it among the countries with the highest value. This group is characterised by tourism models that are clearly showing symptoms of exhaustion and high degrees of maturity in their tourism product. This is probably a consequence of the dominance of the sun and beach model in the Cuban tourism mix. These two rather negative character traits contrast with others that are extremely positive. Thus, in the period of analysis, Cuba seems to be moving towards reducing the convexity parameter, well beyond even the global average (45% reduction), with its group falling from 40.2% to 22.2%. This result shows the significant effort made in the Cuban tourism sector to modify its tourism mix towards a greater presence of urban and cultural tourism (especially around the city of Havana), and of high quality and other types of tourism (congresses, ecotourism, health tourism, etc.), which can attract tourists with higher purchasing power. Sun and beach tourism nevertheless continues to predominate. The literature is extensive, but a summary of the various gambles and shifts in the Cuban tourism model may be found in Goodrich (1993), Bailey (2008), Taylor and McGlynn (2009) and Babb (2011).

Table 1 shows the groups containing the various tourist destinations in the Caribbean area and their American surroundings. Most destinations are in the same group as Cuba, probably indicating a continuing similarity in their tourism specialisation and possibly the lack of differentiation between them.

6. Here, what we call the convexity parameter is the convergence speed calculated as the parameter obtained in each equation multiplied by -100. Consequently, a positive (negative) convexity parameter implies a negative (positive) parameter and therefore the existence of a process of convergence (divergence) towards the tourism potential.

Table 1. Countries grouped by convergence speed (tourism models 1995–2018)

Country group	Convergence speed LOW	Convergence speed MEDIUM	Convergence speed HIGH	
	4.7	11.6	22.2	
Caribbean countries	Bahamas	Curaçao	Antigua and Barbuda	Turks and Caicos Islands
	Bermuda (UK)		Puerto Rico	Jamaica
	Guadeloupe		Montserrat	Dominican Republic
			Aruba	Saint Vincent and the Grenadines
			Saint Martin	Barbados
			Anguilla	Virgin Islands
			Cayman Islands	Martinica
			Cuba	Saint Kitts and Nevis
			Dominica	Saint Lucia
			Granada	Trinidad and Tobago
		Haiti	Virgin Islands	
Other American countries surrounding the Caribbean	Mexico	Colombia	Guatemala	
		Guyana	Honduras	
		Costa Rica	Brasil	
		Panama	El Salvador	
		Nicaragua	Venezuela	
		French Guiana	United States	
		Suriname		
	Belize			

Using both the estimated coefficients for the global model and those for its country group, in both cases for the full sample of years (1995–2018), it is possible to calculate the respective counterfactuals for international tourist flows and, using the methodology set out in the second section, obtain the short, medium and long-term indicators of tourism competitiveness (Figure 4). Thus, Cuba shows remarkable improvement in international tourism competitiveness indicators in both cases. Compared to its tourism model (that of the group of countries within which it fits) its medium and long-term indicators – the most structural and of greatest interest – show a positive competitive situation (i.e. the flow of tourists received is greater than what would be expected from its tourism model) since midway through the last decade (since 2015 in the medium-term indicator and 2016 in the longer term). By contrast, when compared to the results that would be obtained using the global model the situation appears much worse. In fact, in the long term, despite the improvement, the value remains negative. One reading of these results is that, while Cuba is experiencing a clear competitive improvement, its main problem is its tourism mix, which has, predictably, a preponderance of sun and beach tourism.

Considering Cuba's competitive situation in the long term – the most logical period for assessing its tourism model – by comparison with the other three major tourist destinations in the Caribbean and the aggregate of the area (Figure 5), its situation and evolution are clearly better than those of its peers. Indeed, in 2009 Cuba had the worst competitiveness indicator of all the destinations analysed, which was indicative of a very poor competitive situation (real tourist flows

below 15% of those estimated in the respective models). However, from that point on, an improvement began that has been especially strong since 2014, culminating in a clearly improved structural situation compared to the rest, with an upward trend replicated (and only partially) by the Dominican Republic. This competitive situation is obtained using the current tourism model: compared to the global average these four countries' levels decrease in a similar curve, although the difference is particularly strong in the Cuban case. A possible interpretation of all these results indicate that the change in the tourism model towards the global average might benefit Cuba more than any of the other destinations indicated.

Figure 4. International tourism competitiveness indicators for Cuba (1996-2018)

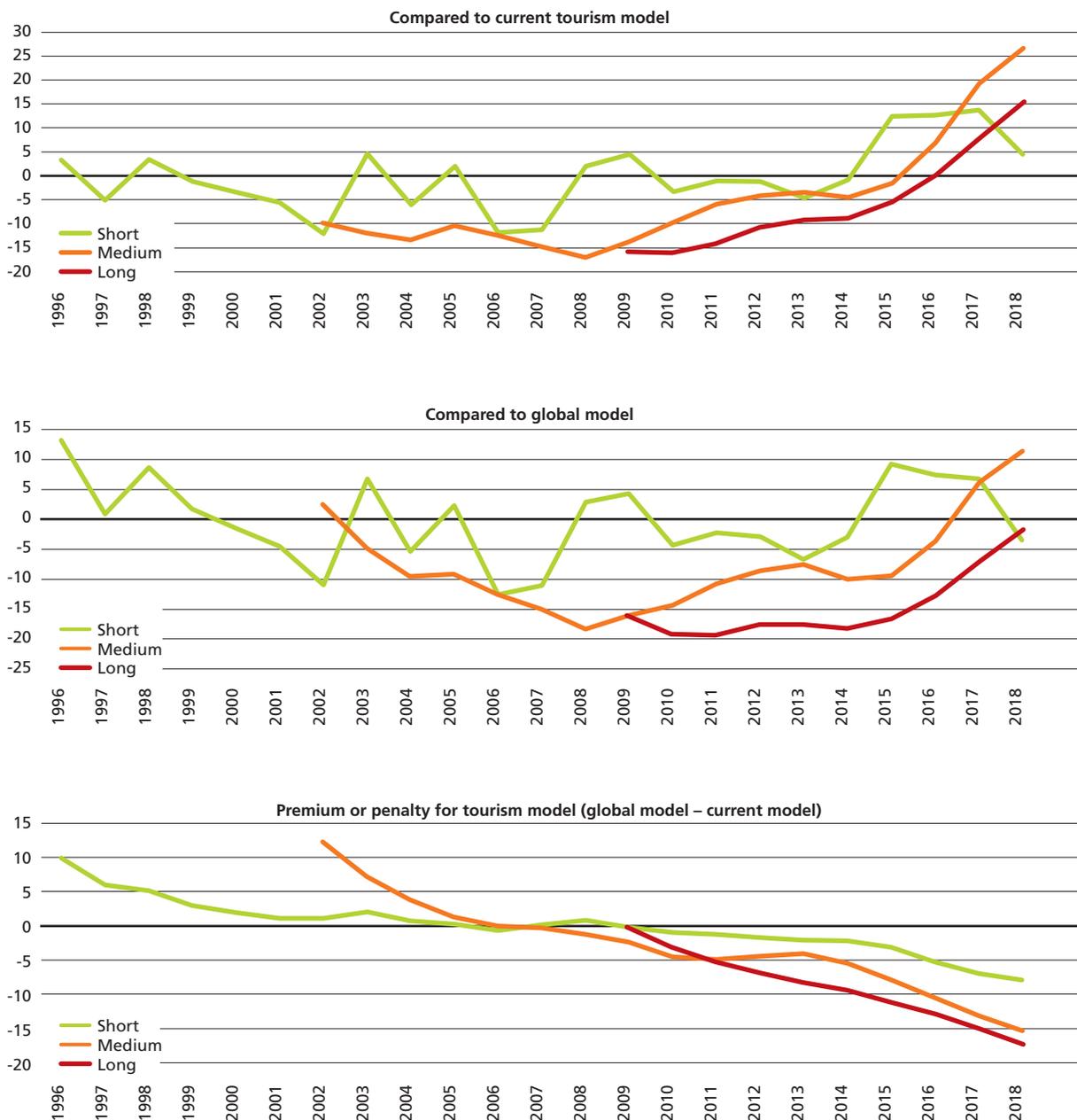
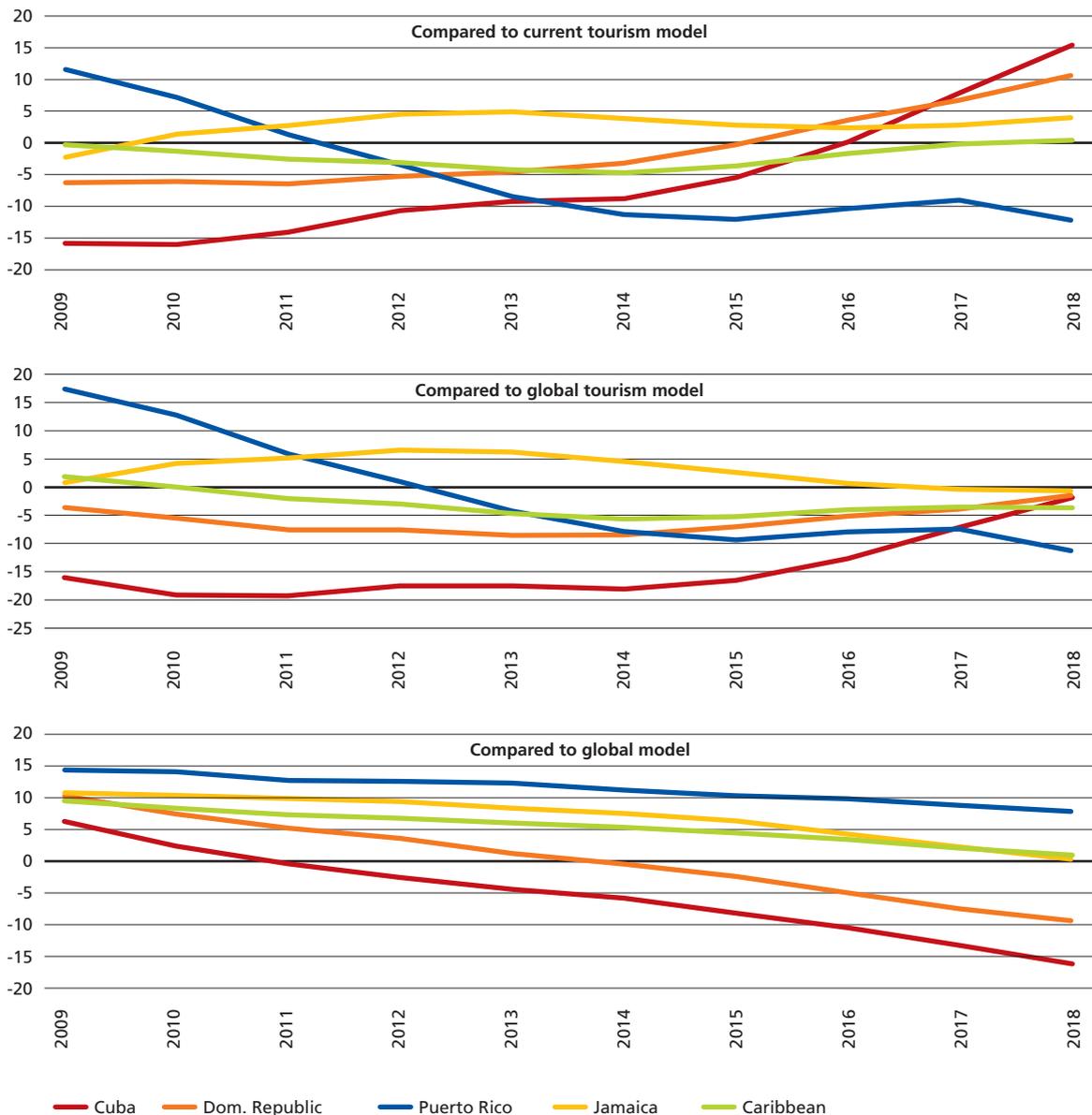


Figure 5. Long-term competitiveness indicators for the major Caribbean destinations (2010–2018)



Now, using each of the models and the data for each country, we calculate each destination's tourism growth potential by comparing the real data with the tourism potential calculated. Of course, this measure should not in any way be interpreted as a prediction. It is simply the potential growth capacity of a given tourism model if no change occurs to global tourism supply and demand. The results (Figure 6) show that the tourism sector growth potential in all of the Caribbean countries analysed is lower with the model they follow than if they adopted the global model. In both cases, Cuba leads the ranking. Thus, with its current model, Cuba's growth potential is 23%, higher than the Dominican Republic's 16% and some way above the 9% of Jamaica. With the global model, the figures notably increase, multiplying by almost four in the case of Cuba, and by three in Jamaica and the Dominican Republic.

Figure 6. International tourism growth potential in Cuba and the major Caribbean destinations (2010–2018)

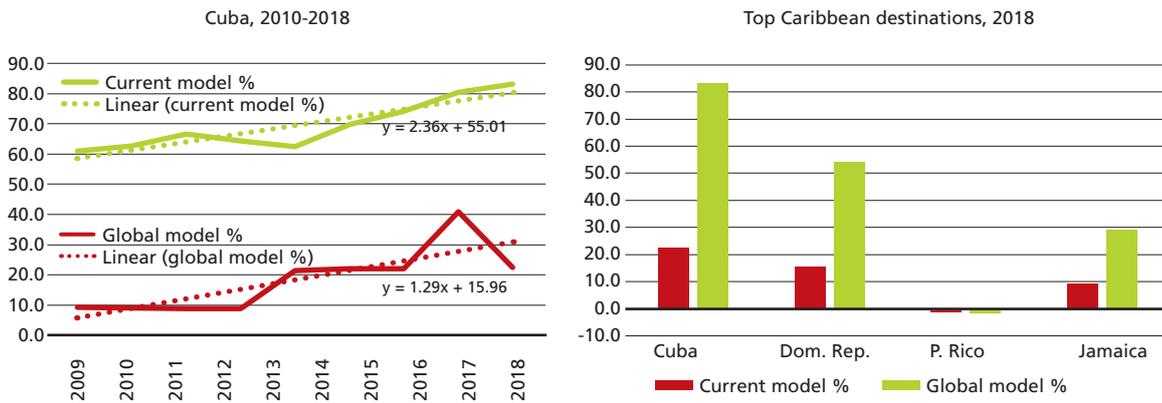
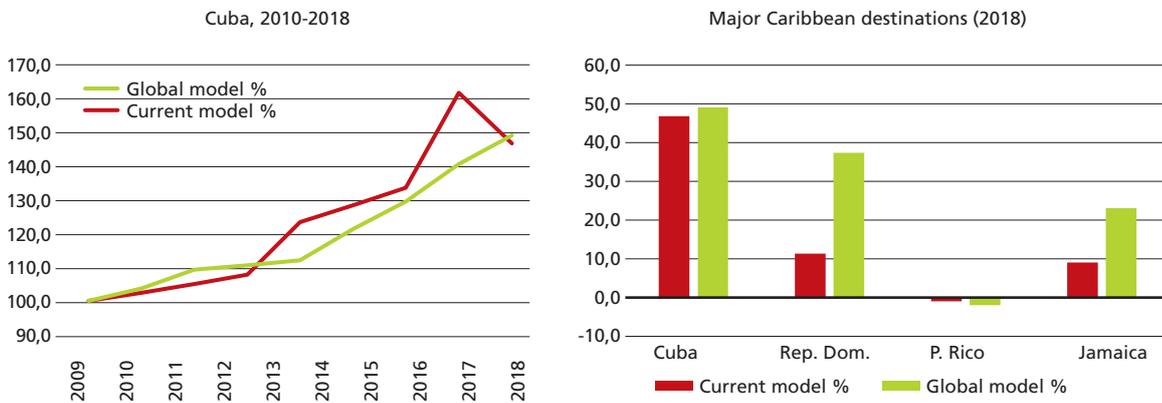


Figure 7. Quantification of technical change in the international tourism sector in Cuba and the major Caribbean destinations (2010–2018)



This significant potential increase in tourism in these countries is occurring in an international context of growing tourist flows, which is due to the significant change, in absolute terms, of tourism potential itself in recent years. Specifically, as Figure 7 shows, in the case of Cuba the increased potential was almost 47% (somewhat higher if the global model is taken into consideration). Once again, Cuba leads the ranking of countries, with both the Dominican Republic (significant increases of between 11% and 37%, depending on the model followed) and Jamaica (between 9% and 23%) some way behind, despite also showing significant changes.

Finally, it should be noted that the results for Puerto Rico should be viewed with caution. Hurricane María, which hit in 2017, seriously affected Puerto Rican hotel infrastructure and caused tourist arrivals to fall by more than 18% in 2018 compared to 2016. This conditions the entire analysis and only when its effects are fully resolved or become structural can the destination's competitive situation be analysed with greater rigour.

5. Conclusions and final considerations

This work has presented the results obtained for Cuba and the Caribbean area from the application of a set of tools developed in De la Peña et al. (2019; 2020) for the diagnosis of the competitive situation of international tourist destinations based on analysis of the flows of international tourists received by each destination.

Applying these tools has produced a set of results that describe the competitive situation of the Cuban and Caribbean tourism sector in comparison with the rest of the world and with the countries that share their tourism models, which can be summarised in the following points:

- The undoubted improvement registered in the Cuban tourism sector's competitive situation is notable, especially since 2010, leading the indicators to change from showing a poor competitive situation to a good one since the middle of the last decade.
- The results show Cuba's improved competitive situation compared to its Caribbean environment: in fact Cuba's trajectory is the best in the group. This is the result of the changes undertaken in the Cuban tourism mix towards the development of tourism segments with greater added value and tourism potential, as well as the introduction of other types of tourism in which Cuba has a competitive advantage.
- Meanwhile, despite the significant increase in tourist flows received by Cuba, its growth potential is shown to have markedly increased, well above the potentials of its Caribbean competitors.
- This is a consequence of the strong increase in the absolute potential of the Cuban tourism sector. "This technical progress has made it possible to maintain, and even increase, the gap between tourism potential and the current situation"
- In all of the above indicators, Cuba shows greater capacity for improvement when the results obtained with its current tourism model are compared with the potential results if it followed the global average. This shows the capacities of the Cuban economy, as well as its comparative and competitive advantages, which, if properly used, could significantly improve its tourist flows.

As stated in the opening sections of this chapter, the tool used enables relevant results to be obtained for carrying out a competitive diagnosis. However, a full assessment of tourism growth potential and tourism models should analyse many of these results alongside the other determinants and effects of tourism in the host economies.

It is true that the recent changes undertaken by the Cuban authorities seem to be oriented towards giving scope for the participation of private initiatives, allowing a greater presence of foreign capital and creating a job market of sorts. They are therefore able to promote the production of more hotel supply, increase its variety and, above all, that of ancillary tourism services. It should not be forgotten that, sometimes the tourism offer itself can become a very important tourist attraction (competitive advantages). Nevertheless, serious economic uncertainties produced by geostrategic issues still affect Cuba and its political-economic regime remains idiosyncratic. This sometimes acts as a hindrance to attracting the foreign capital that is so necessary for economic growth in general and the expansion and

Results show the significant effort made in the Cuban tourism sector to modify its tourism mix towards a greater presence of urban and cultural tourism (especially around the city of Havana), and of high quality and other types of tourism (congresses, ecotourism, health tourism, etc.), which can attract tourists with higher purchasing power.

Despite the significant increase in tourist flows received by Cuba, its growth potential is shown to have markedly increased, well above the potentials of its Caribbean competitors.

improvement of tourist infrastructure in particular. The recent measures adopted by the United States administration, tightening the economic embargo, may affect the sector's evolution at least in the short and medium term, especially cruise tourism.

The results of this study place Cuba at the vanguard of the changes in the tourism sector in the Caribbean. An undoubted factor in this was the tentative liberalisation of tourist flows from the United States begun in 2014 which, if the restrictions were removed, could double Cuban tourist flows. However, as mentioned, the US position on Cuba has shifted. The economic embargo has been stepped up, scuppering any chance of higher tourist flows from the country. The changes implemented to expand and improve the sun and beach hotel offer – the introduction of a diversified tourism offer in Havana, with the reconversion of architectural jewels from the colonial era into hotels or restaurants, the offer of ecotourism and health tourism, and the authorisation granted to small restaurants and other businesses run by the self-employed – have notably improved the tourism offer and have created space for high-quality tourism.

However, the considerable rise in the renting of rooms in private homes, protected by the new government measures, has led to an uncontrolled supply on the market that sometimes lacks the necessary quality guarantees. So, while this new supply creates opportunities for both Cuban citizens and visitors, it may produce unwanted reputational effects if the offer does not meet the standards of quality tourists expect. It would be advisable to create a quality classification for this new offer – similar to stars for hotels – based on certain standards and evaluation through inspections, as a way to solve potential consumer uncertainty.

This problem of standards of quality also applies across the tourist offer, although perhaps to a lesser degree. A commitment to quality and reputational aspects, an essential ingredient in the shift towards a different type of tourism, imposes greater demands on organisational and management systems, the treatment of clients, the levels of upkeep of tourist infrastructure, the diversification and innovation in the supply of services, and so on. In this sense, attention should be paid to the sometimes excessively hierarchical and rigid protocols that give workers in the sector little room for manoeuvre, as they, ultimately, are the visible face of the tourism service.

Finally, it should be noted that, although the results presented in this work may be read positively, the correct interpretation is one that is hopeful but highly dependent on the policies and measures implemented in the coming years. Cuba has a long way to go if it wants to remodel its tourism sector to make its productive structure and growth potential permanent. In tourism, as in other productive activities, fashions and preferences change quickly. In good times necessary changes must be implemented, because in the bad times there is only scope to tackle what is urgent.

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