



# SELECTED PROCEEDINGS

## THE ISLAND AND THE PLANE: FROM THE TECHNICAL CONSTRAINT TO THE ECONOMIC CHOICES OF THE TOURIST ISLANDS OF THE INDIAN OCEAN (REUNION ISLAND, MAURITIUS, SEYCHELLES, MALDIVES)

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# **THE ISLAND AND THE PLANE: FROM THE TECHNICAL CONSTRAINT TO THE ECONOMIC CHOICES OF THE TOURIST ISLANDS OF THE INDIAN OCEAN (REUNION ISLAND, MAURITIUS, SEYCHELLES, MALDIVES)**

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## **ABSTRACT**

Air transport has become determining in the international opening of island territories remote from outgoing tourism markets. Air transport so became a tool of opening more or less strongly appropriated by States and island possessions, and which they more or less put in the service of the tourism development. The improvement of accessibility allowed the apparition of new destinations and we notice, during their stake in tourism, similarities concerning the policies organized by States. But we observe today among the flows of passengers varying degrees of international tourists and of travels of the islanders. To these issues is added the question of the strategies of airline companies in a context of globalization of their model and aggravated competition. The proposed analysis of the studied spaces (Maldives, Seychelles, Mauritius and Reunion Island) allows to put the milestones of a typology of the links between air access and tourism and propose three types of destinations which tourism performances and strategies are different.

*Keywords: Air access, tourism, islands, Indian Ocean, Maldives, Seychelles, Mauritius, Reunion Island.*

## **INTRODUCTION**

There are relatively few studies on the link between transport and tourism. These two fields do not use the same vocabulary, does not have the same definitions and are not interested in the same aspects (Landre and Peeters, 2011; Papatheodorou, 2011; Duval, 2012). However, these authors show the importance of looking at these links in particular to improve the attractiveness of tourist destinations.

Concerning the relationship between air transport and tourism, the importance of the first is shown about long distance travels and island territories (Forsyth, 2006, 2008). The strategic choices of States in terms of air accessibility and more or less opening to the concurrence meet both economic and political reasons (Iatrou and Tsitsiragou, 2008). Tourism development in tropical islands remote from the continents supposes improved air access. None of the three major world basins escapes this model, but the Caribbean islands, because of the geographical proximity of the United States, have developed earlier than the tourist islands of Indian and Pacific Oceans. An efficient access to these two basins came after World War II thanks to advances in aviation.

The coupling between quality of accessibility and tourism development is more or less strong and successful: the choice of tourism is more claimed in some cases than in others, even from an island to an other of the same region. The area studied here corresponds to the western part of the Indian Ocean and includes Reunion, Mauritius, the Seychelles and the Maldives. Its distance from the continents makes the matter of air access a common condition of development. We observe, in fact, the combination of three parameters that lead to the development of tourism: island territories accessible almost only by plane, air services provided by the major European and Asian scheduled airlines, but also by companies belonging to States and insular possessions, and enthusiasm on the part of tourists with high purchasing power.

This conjunction of conditions for tourism development meets yet a variety of situations and strategies. In this context, how and to what extent air services and strategies that are related to them are involved in the choices made by different tourist islands? The issue of accessibility by air appreciates all the best when associating the factor of political status to the evolution of the decision makers concerning economic choices, whether local or international, and related to tourism or more strictly to air transport.

After studying the respective common constraints of these islands and their evolution yet separate, the analysis of the role played by tourism in their economies today will finally bring us to measure the complexity of arbitrations in the field of an air accessibility serving more or less tourism.

## **I. GEOGRAPHICAL CONSTRAINTS, AIR ACCESS AND TOURISM DEVELOPMENT**

Transport improvements, integrating island ensembles to the tourism globalization, have offered those territories new opportunities for extrovert development. The islands are no more than other areas subject to physical determinism.

### **1. The three constraints: smallness, fragmentation, distance**

The four insular areas (Reunion, Mauritius, Seychelles, Maldives) have certain common characteristics. The tourism development occurs in a restrictive environment in which we can identify three main difficulties. The small size of territories and their crumbling into multiple islands complicate planning choices. There are 115 islands in the Seychelles and more than 1 100 islands in the Maldives for total areas of only 455 and 298 km<sup>2</sup>. The distances between the islands in a same archipelago are also very important, the Seychelles and the Maldives extend respectively 1 000 and 800 km from north to south. Even Reunion island and Mauritius, with 2 512 and 1 866 km<sup>2</sup> figure confettis when compared for example to Madagascar (587,000 km<sup>2</sup>).

Moreover, the geographical remoteness of outbound markets, mainly European countries, is a major difficulty that air access has partly solved. Like the other islands in the world, these areas have experienced a significant change in their tourist flows parallel to the development of air transport. The successive improvements of aircrafts have allowed to cross greater distances in a reasonable time with more passengers. The beginning of jet aircrafts in the 1950s doubled the flight speed and capacity. These technological innovations have opened to tourism areas away from outbound markets. However, this notion of distance should be relativised: a constraint, it can become a selling point to promote isolation, a withdrawal from the world which would ensure "authenticity" and a break from the daily life (Nicolas, 2007). Thus, if air transport has been instrumental in making scope of these islands for tourism markets issuers thousands of miles away, the attractiveness of Western societies for the idealized image of the withdrawal in the sun in a supposed preserved nature adds to this technological condition. This image, resulting in a long building (Nicolas, 2007, Maillard, 2006, and Dehoorne Saffache, 2008), still finds a favorable response from the populations of industrialized countries. Moreover, the cost of tourist stays in the considered islands is quite high and those destinations are positioned rather high-end, with the exception of Reunion Island.

There is therefore no physical determinism: in spite of the geographical constraints, tourism has developed. In addition, beyond the attractiveness to customers of the fantasy of paradise island isolation (Cohen, 1995) and that islands know how to play for their promotion, a look at the human occupation of these territories can moderate the idea of pressure from tourism.

## 2. Development of tourism

To understand the link between tourism flows and progress of air access, it is necessary to go back to the historical development of these two elements.

This is to compare the respective changes in tourism of each island (Fig. 1), identify recurrences in the tourism development of these areas, and highlight specific developments in each of these destinations. The figure clearly makes appear two periods and the year 1985 is pivotal because it is from this date that the gaps are to lead to very different situations.

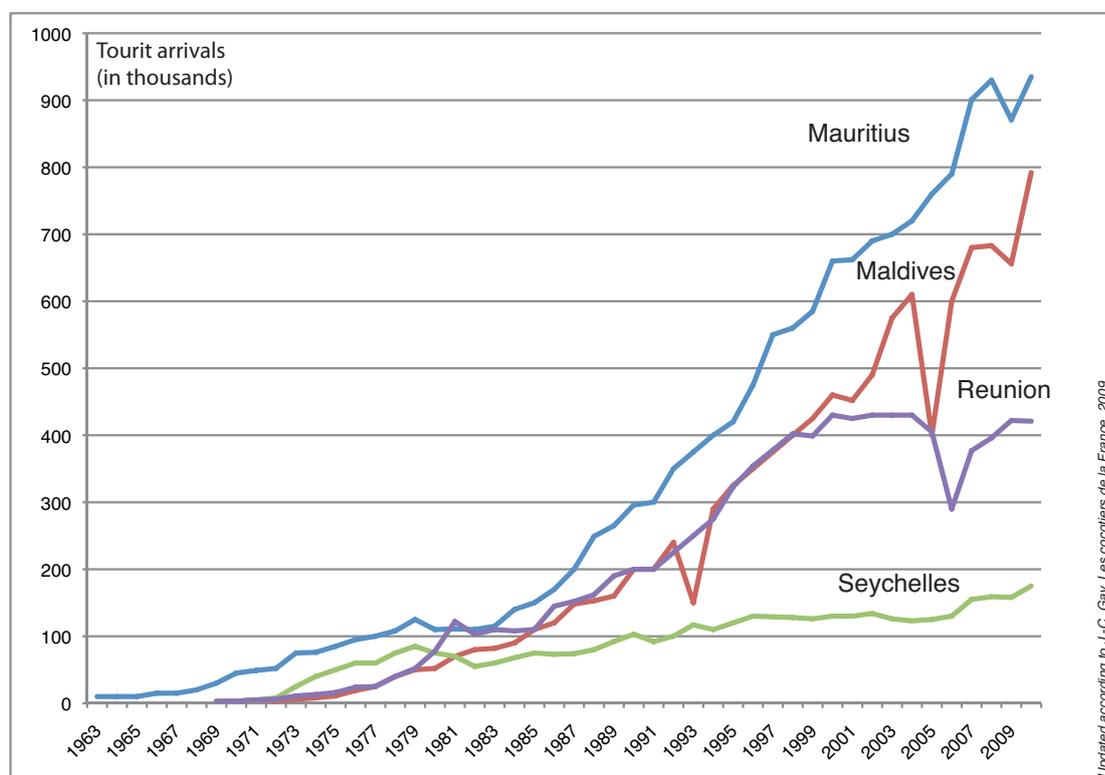


Figure 1 - Evolution of tourist arrivals between 1963 to 2010

The four areas studied experience contrasting situations, the number of tourists received in 2010 ranging from 175 000 to Seychelles to 935 000 to Mauritius (Table 2). Until the late 1970s, the number of tourists in Mauritius and the Seychelles followed the same growth while the Maldives hosted a number of tourists weaker than the Seychelles (Gay, 2004).

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Reunion island experienced an unusual situation because it is the only one of four destinations which tourists' arrivals declined in 2010 (-0.4% compared to 2009, IEDOM).

Two sets differ. First, we can associate Mauritius and Seychelles experiencing tourism development the earliest, in the 1970s, when it was not until the 1980s in the case of Maldives and Reunion. But Seychelles are very quickly overtaken by the other destinations: in 1980 and 1981, Reunion and Maldives receive more tourists. Reunion, overtaking at the end of the seventies Mauritius, fails to follow the growth of the latter and is overtaken by the Maldives from 1999. In addition to the recent episodes of the 2004 tsunami in the Maldives and chikungunya in Reunion in 2006, which impact made strongly decline tourist arrivals, Reunion is still left behind by the Maldives.

### **3. How do the islands register in the tourist globalization?**

Air services network analysis coupled with that of the origin and nature of tourists, identifies the types of flows and destinations.

If we consider the four destinations in terms of international tourism trends, we can again reject a deterministic idea that would make distance a handicap difficult to overcome. As stated by the WTO (2011), "The vast majority of international visitors do not leave their region in a proportion of about four out of five arrivals worldwide. Markets of origin of international tourism remain highly concentrated in the industrialized countries of Europe, the Americas and Asia-Pacific. However, with the increase in disposable income, many emerging economies are growing rapidly in recent years (...). Europe is currently the first market for outbound tourism, producing a little more than half of international tourist arrivals worldwide, followed by Asia-Pacific (21%), the Americas (16%), Middle East (4%) and Africa (3%)."

Thus, the four destinations studied perform double performance, on the one hand to be more frequented by distant outbound markets despite the global very large majority trend for intra-regional travels, and on the other hand, to capture a flow predominantly European and therefore the first outbound tourism market in the world. This does not prevent these destinations to focus on diversification of outbound markets, especially from Asia, further evidence of their responsiveness to current tourism globalization.

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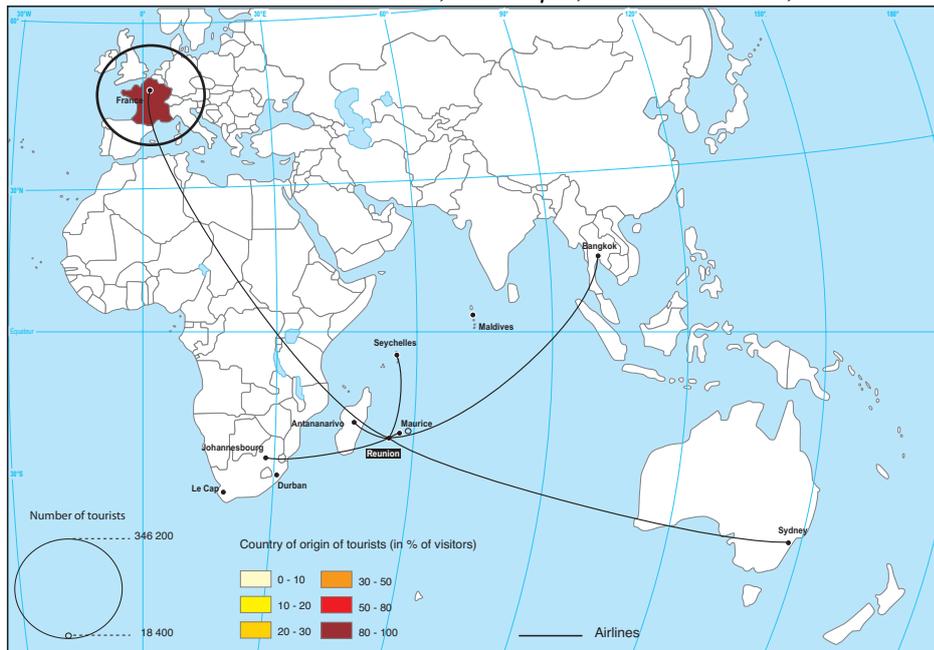


Figure 2 - Origin of visitors and airlines in Reunion in 2010 (6 first outbound markets)

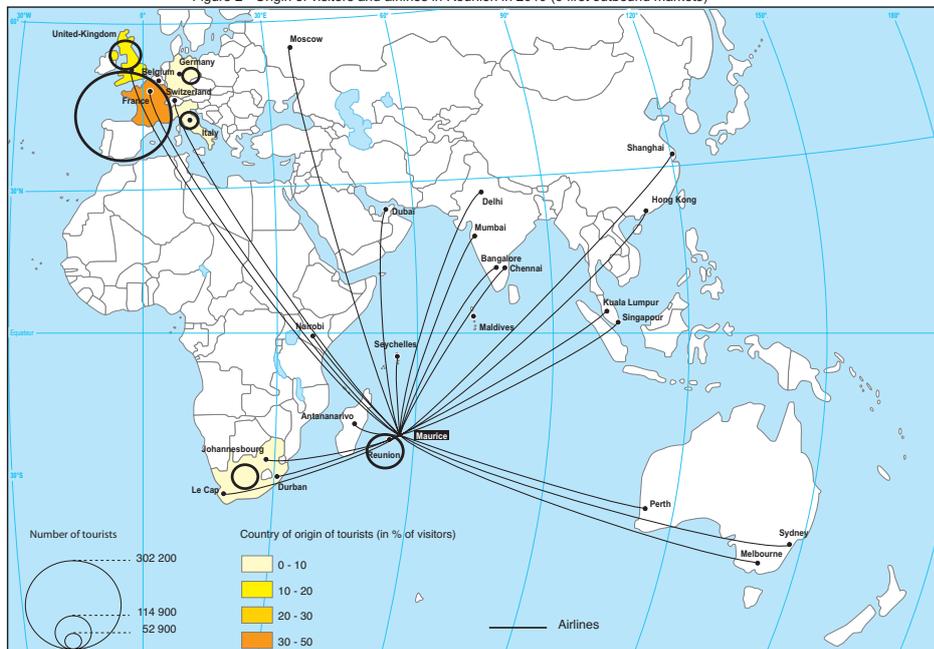


Figure 3 - Origin of visitors and airlines in Mauritius in 2010 (6 first outbound markets)

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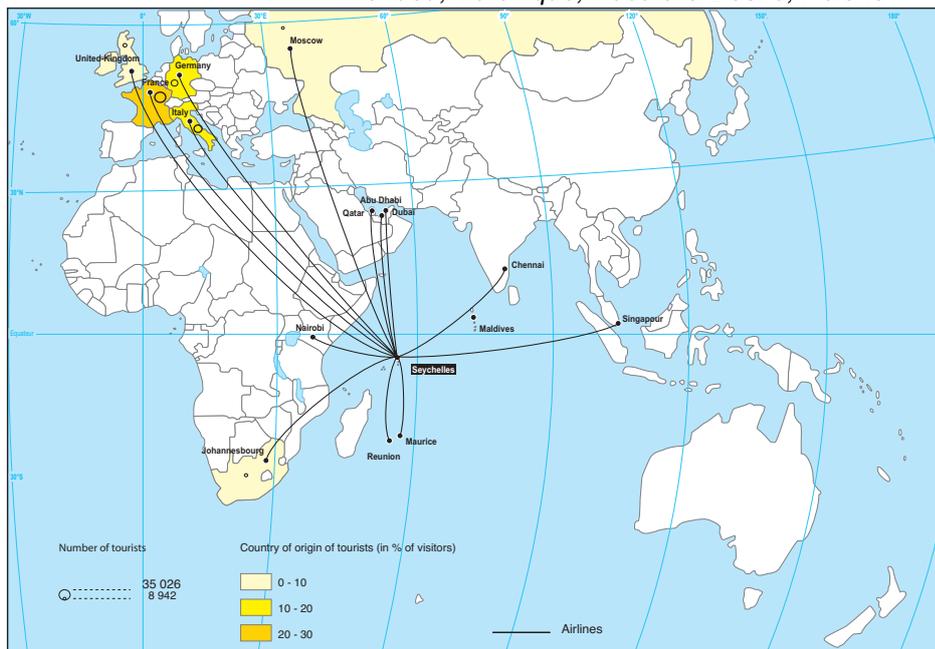


Figure 4 - Origin of visitors and airlines in Seychelles in 2010 (6 first outbound markets)



Figure 5 - Origin of visitors and airlines in Maldives in 2010 (6 first outbound markets)

Table 1 – Origin of the airlines by destination in 2013

Destination	Airline	Origin of the airline
Reunion	Air Austral	France (Réunion)
	Air Caraïbes	France
	Air France	France
	Air Madagascar	Madagascar
	Air Mauritius	Mauritius
	Corsair	France
	XL Airways	France
Mauritius	Air Austral	France (Réunion)

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	Air France Air Italy Air Madagascar Air Mauritius Air Seychelles British Airways Comair Condor Corsair Edelweiss Air Egypair Emirates Lufthansa Meridiana Fly Malaysia Airlines South African Airways Transaero	France Italy Madagascar Mauritius Seychelles United-Kingdom South Africa Germany France Swiss Egypt Dubai Germany Italy Malaysia South Africa Russia
Seychelles	Air Austral Air France Air Seychelles Condor Emirates Etihad Kenya Airways	France France Seychelles Germany Dubai Abu Dhabi Kenya
Maldives	Aeroflot Air India Alitalia Bangkok Airways British Airways China Eastern Airlines China Southern Condor CSA Edelweiss Air Emirates Etihad Hainan Airlines Hongkong Airlines Flydubai JAL Malaysia Airline Meridiana Fly Neos Oman Air Qatar Airways	Russia India Italy Thailand United-Kingdom China China Germany Czech Republic Swiss Dubai Abu Dhabi China China Dubai Japan Malaysia Italy Italy Oman Qatar

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	Sichua Airlines	China
	Singapore Airlines	Singapour
	SpiceJet	India
	Sri Lankan Airlines	Sri Lanka
	Thomsonfly	United-Kingdom
	Transaero	Russia
	Turkish Airlines	Turkey

However, again, concerning the origin of tourists and the performance of the four destinations studied, clear distinctions are noteworthy. Firstly, the map of Reunion island (fig. 2) shows the overwhelming domination of tourists from mainland, France (82% in 2010) and the small number of destinations by plane. For the other three destinations (fig. 3-5), the number of tourists is better distributed between different markets, even if there is a French domination in Mauritius (32% of tourists from metropolitan France in 2010 and 12% from Reunion) and, to a lesser extent, the Seychelles (where the French are the first customers, but only 20% of visitors). In the case of Maldives, the "dependency" from the market is even less clear, since the first market, British, represents only 16% of arrivals in 2009, closely followed by the Italian and German markets.

European domination is real, but there is a relative success in diversifying the origin of visitors, except for Reunion. Thus, while South Africa is the fourth largest market for Mauritius in 2010, diversification is even clearer for the Seychelles (with, in 2010, 6% of South African visitors, 5% of Russians and 3% of Emiratis), and is fully affirmed in Maldives that recorded in 2009, 24% of visitors from Asia (especially 39% from China, more than the number of tourists from France, and 24% from Japan).

In the case of Maldives, the diversity of outbound markets is accompanied by a variety of airlines (Table 1), with no less than ten European and eighteen Asian companies. This finding is less valid for the Seychelles, which certainly diversify their lines to the Gulf, but mainly for the benefit of European customers. In Mauritius, there is still a strong desire of the government to preserve the national airline Air Mauritius which provides most of the tourist service, with the exception of the recent opening to Corsair in 2006 concerning the French market, and to Transaero for the connection with Moscow.

These four island destinations so today prefer a tourism policy that strives to preserve the main tourism market, Europe, while growing from new markets. Do the strategies in the airline and tourism industries fit to do so?

## **II. STRATEGIES OF DEVELOPMENT OF THE ISLANDS**

### **1. Economies depending on tourism?**

Many island areas in the world have experienced economic growth thanks to the development of tourism, a major provider of foreign currency. Weaknesses of the industrial and agricultural sectors pushed the island States to rely on the service sector, especially on

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tourism, to build a strategy for economic development (Wilkinson, 1989). The current figures reveal differentiated development strategies by countries on which we will return later.

Table 2 - Number of tourists and tourism share in GDP

Islands	Number of tourists in 2010 (in thousands)	Tourism share in GDP in 2007 (%)
Maurice	935	23
Maldives	792	58
Reunion	421	3
Seychelles	175	45

Source: Maldives Monetary Authority, Central Statistics Office of Mauritius, INSEE, National Bureau of Statistics Seychelles, WTO, IEDOM

The share of tourism receipts in GDP (Table 2) is indicative of the greater or lesser diversification of local economies. Replace tourist activity throughout the national economy allows to measure its weight and its centrality in economic operation. Proportions of 10% of export revenues or 5% of gross domestic product linked to tourism side, according to several authors (Wilkinson 1989), States and island possessions concerned with the "tourist economies".

The studied islands still face a variety of situations. According to Mac Elroy J. and Morris L. (2002, p. 51-52) we can speak of "a cluster of development experiences. These includes: (1) the traditional 'paradise' or tourist-dependent model of (...) Maldives ; (2) a combination of TOURAB case of Reunion, and (3) the Balanced Diversification model of Mauritius (...) and Seychelles".

The islands studied do not correspond to the MIRAB model, no more to the one put forward by Bertram in 1986, and which did not really include tourism, than to its recent updating (Bertram G. 2006). Reunion is an exception since its development relies heavily on economic transfers from the mainland (Gay, 2012), the MIRAB model can in this case be qualified of TOURAB to take into account the development of tourism (Guthunz and U. Von Krosigk, 1996).

Maldives and Seychelles appear as the States most dependent on tourism, with more than half of GDP in tourism. And this situation is not new, proving the strong and sustainable participation of tourism in the local economies: "The Seychelles (...) owe 90% of their currency receipts to tourism, and tourism provides for about 40% of the GDP and about 20% of total employment (...), so that in 1989 about 6000 of 27,000 employees worked in the tourism sector" (Guthunz U. Von Krosigk, 1996).

Mauritius is in an intermediate situation. As it receives the most tourists, the textile and sugar cane, even if they are activities that have experienced a recession, relativize the importance of tourism. After gaining independence in 1968, Mauritius has decided to diversify its economy and to get out of the mono sugar industry to add to the agricultural production an industrial one through the creation of a free trade zone and a strengthening of the services sector through the development of tourism and offshore banking. The Mauritian model of economic diversification has been challenged since 2000 with the end of the ACP (Africa,

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Caribbean, Pacific) agreements which assured Mauritius of being able to sell its sugar production in the European Union, as well as facing, in the textile sector, a fierce Chinese competition. Third pillar of the economy, tourism has become the first in the last ten years and this strengthening seems inevitable in view of the difficulties experienced by other economic sectors.

Reunion is different from the other cases, with a very low part represented by the tourism, and an economy structurally different from other island territories studied because of its political status. French department status makes it less necessary the development of a productive economy and services in so far as transfers between the mainland and the island are at the center of economic operation. Links with the mainland clearly predominate over any other type of link, and tourism and air services do emphasize this almost exclusive relationship.

We are therefore faced with complex situations where the only tourist flows are not sufficient to understand the choices made by the destinations. The evolution of air access gives some precious indications to understand the key role of the States.

## **2. The link between air access and first steps in tourism**

Growth of tourist arrivals is punctuated by events: political events, benchmarks related to the hospitality business and air transport.

The review of each destination highlights the importance of effective air service as a starting point for the tourism development. In the case of Seychelles, it was until the early 1970s (the international airport was opened in 1971) four to five days by boat from London, with only two ships per month (Gay, 2004).

In Mauritius, the Second World War played a major role in providing the island with an airstrip, which recalls the situation of colonized other islands in the Indian Ocean and the Pacific. Mauritian firm Rogers is at the origin of the first flight of the French network airlines (RLAF) (became Air France in 1947) arrived in 1945. Air France, in 1947, put into service a Douglas DC 4 44 passengers on the Paris-Plaisance (path three days). In 1948, the British company Skyways launched a weekly service Plaisance-Nairobi. In 1952, Mauritius became a stopover for the Australian airline Qantas on the route between Johannesburg and Perth. The presence of transit passengers made necessary the creation of a hotel, thereby signing the kickoff tourism development of the island (Pébarthe, 2003).

However, the flow growth is after effective air service. It is characterized by direct flights possible by improvements in aircrafts, but also infrastructures. Thus, the extension of the runway of the airport of Hulule in the Maldives in 1981 avoided a stopover in Sri Lanka with a change of aircraft and allowed to increase the flow (Gay, 2000).

If the initial connections are often made by foreign airlines, governments quickly seize this tool and national companies are created. The Seychelles were primarily served by foreign companies, initially by British Airways (1972), a company belonging to the colonial power, and Air France and Lufthansa opened lines in 1974 (Gay, 2004).

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Table 3 - Key moments of the development of tourism and air services

Islands	First regular international airlines	Political independence	Creation of the national airline	First international hotel	Disappearance of the national airline	Significant opening to new foreign airlines
Mauritius	1945	1968	1967 Air Mauritius	1952	Still operating	2006 Corsair
Maldives	1981 (opening of international airport)	1965	1974 Air Maldives		2000	2000. 17 foreign airlines in 2010
Seychelles	1972	1976	1977 Air Seychelles	1973	Still operating but in code share with Etihad	2009 Emirates Etihad Qatar Airways
Reunion		Status of French departm ent since 1946	1933 RLAF (Air France) + Réunion Air Service (1974) become Air Austral		Still operating	

### 3. National airlines as motors of tourism development

Once the plane has become the hegemonic mode of transport, the States quickly understand the benefits of being autonomous from foreign companies. Access to independence and the creation of airlines are concomitant in Mauritius and Seychelles. However, before proposing long-haul international flights, these companies are making regional services, to Rodrigues and Reunion in the case of the first, and between the islands of Seychelles in the case the second.

In Mauritius, the creation of Air Mauritius is the main event in terms of air access and affirmation of the tourist vocation of the island. The first flight of the company, however, occurred in 1972 only. From this date, the first links provided show the historical ties of Mauritius with some countries (England, France, India) and, in the case of Paris and London are not direct flights. The network is diversifying to Europe and Asia in the 1980s, for the purposes of tourism on the one hand, and of the free trade zone on the other (flights to Hong Kong and Singapore). Flights to Australia (taken mainly by Mauritians settled in this country and by business customers), Chennai and Dubai are more recent.

In the case of Air Seychelles, it is only since 1983 that the company acquires long-haul aircrafts, five years after the launch of the company (Gay, 2004). The inter-island service, even if it is primarily designed as a tool for territorial continuity, will also be used for tourism purposes since, unlike in the Maldives islands where hotels are primarily concentrated around the airport Hulule, the tourist islands of Seychelles can be hundreds of kilometers away from the international gateway.

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Maldives follow a different pattern, even if the starting point is near. It is, in fact, foreign investors, first Italian in the early 1970s, who launched the tourism activity in this archipelago and it is at the beginning Air Ceylon which serves the destination after a stopover on its own territory (Sri Lanka). But very quickly, the government seizes this activity and creates in 1974 the national airline, Air Maldives, founded with the objective of making accessible the territory to European tourists. For the sake of political and economic control of tourist flows, the “hotel-islands” are first created near the capital island, Male, which is located near the airport. In addition to the international gateway formed by Male airport since 1981, the archipelago has four regional airports. The introduction of motor boats, helicopters (in 1989) and seaplanes (in 1994) to carry tourists helped to expand access to more remote areas (UbiFrance, 2010). Thus, the airtransport activity only serves to capture tourist flows, which are then redistributed to the “hotel-islands” (Gay, 2001). In an increasingly competitive context, Maldives have chosen efficiency in the field of air services with 17 international airlines serving their country in 2010, while the national airline, Air Maldives, went bankrupt in 2000.

Reunion is an exception compared to the other cases: political status of course has an impact on the territorial development choices. At the moment of the creation of the local company (Réunion Air Service, which becomes later Air Austral), Air France is involved in this company and remains so until 2005 when Air Austral develops a strategy for long-haul flights to France. Reunion does not choose the opening to international tourism as the Seychelles or Mauritius.

Mechanisms of air service reveal various development strategies. If the air accessibility is essential and all territories have created national companies, the respective changes highlight a variety of positions. We guess here already clear distinctions between island territories.

### **III. IS AIR ACCESS PUT AT THE SERVICE OF TOURISM?**

Finally, the cross-analysis of air services, tourists origins and stakeholders strategies can lead to a typology taking into account air flows in all their diversity and the constraints posed to tourism development.

The analysis of the composition of passengers’ flows to the islands studied allows to understand better the actual share of tourism. Three types of flow organization appear (Fig. 6), responding to differentiated practices in the mobility of populations, causing themselves economic impacts within each destination.

Passengers’ flows combine the mobility of local population, non-tourist mobility and mobility for the development of inbound tourism in these islands. Tourism itself can be split in two between tourism we call “commercial” (directly benefit the tourism industry, including hotel industry) and “relative and friends” tourism (responding to logic visiting relatives and friends) and largely escape the commercial tourist industry, especially in terms of accommodation and local inbound Tour operators.

## 1. Fragmentation and narrowness in perspective

Insist on the idea of smallness of the considered territories is of little interest in itself. It is reduced to the occupation of the island territories by the two populations, resident and tourist, that the spatial constraint makes sense. The calculation of the tourist density and pressure reinforces the idea that behind the apparently neighboring situations, the demographic realities differ.

If we compare the number of tourist arrivals in the destinations (Table 4), only the Maldives displayed in 2010 a high tourist density with 2 650 tourists per km<sup>2</sup>. The other destinations are experiencing much lower densities ranging from 168 for Reunion to 501 for Mauritius.

Table 4 – Tourist density and pressure in 2010

Destination	International tourist arrivals (000)	Areas in km <sup>2</sup>	Tourist density (nb arrivals / km <sup>2</sup> )	Population (000)	Tourist pressure indicator
Maldives	792	298	<b>2 658</b>	313.9	<b>2.52</b>
Maurice	935	1 866	<b>501</b>	1 281.7	<b>0.73</b>
Reunion	421	2 512	<b>168</b>	808.2	<b>0.52</b>
Seychelles	175	455	<b>385</b>	88.3	<b>1.98</b>

Sources : Maldives Monetary Authority, Central Statistics Office of Mauritius, INSEE, National Bureau of Statistics Seychelles.

The number of tourists is an indicator that makes sense when it is reported to the national population, to calculate the indicator of tourist pressure: less than 1, it means that the number of tourists is less than the number of inhabitants. Table I shows two different situations. On the one hand the Seychelles and Maldives for which the indicator is greater than 1, and on the other hand Reunion and Mauritius, which have a population higher than the tourist arrivals. This is especially true for Reunion Island where the ratio is 1 to 2.

In the case of Seychelles and Maldives, if there is a relatively high pressure, mainly in the case of Maldives, it should be put into perspective: it is actually very low because the State of the Maldives, with an authoritarian islamic regime, has chosen tourism development away from local life and the development of a hundred “hotel-islands”, uninhabited before the implantation of hotel facilities (Gay, 2000, 2001). This clear dissociation of functions allows local population not to mingle with the tourists who need special permissions to visit inhabited islands (except Male). In Seychelles, we can also qualify this tourist pressure: the tourists mainly stay on the three most populated islands of Mahe, Praslin and La Digue, but fall into any of a dozen islands in total.

Finally, tourist density and pressure reveal clear shades between Reunion and Mauritius on the one hand, mono and densely populated island, and Maldives and Seychelles on the other, crumbled and sparsely populated. They do not reach so far very high level, because of the choices of tourist facilities that correspond to three logics. In Maldives, hotel settlements take the form of “hotel-islands” to avoid contact between tourists and locals. Government

from the coup of February 2012 has hardened its position on the desired separation between tourists and population. The Seychelles offers dual presence of hotels on the main islands and “hotel-islands” to play the card of Robinson Crusoe. “Both island states (Seychelles and Maldives) favour the development of selective luxury tourism on segregated islands close to the international airports” (Guthunz U. Von Krosigk, 1996). The successful development choices lead to a more or less clear separation between tourists and locals, especially in the case of “hotel-islands”. In Mauritius, the hotel also provides a retrenchment in the form of seaside “counters” (“comptoirs littoraux”, Equipe MIT, 2002).

## 2. Three types of flows and destinations

If the Maldives and the Seychelles, States which are sparsely populated and little subject to the mobility of a small diaspora, are able to focus on the development of a commercial inbound tourism, directly retributive for their economies, the situation in Reunion is very different while Mauritius is a kind of intermediate type with more composite flows (fig. 6).

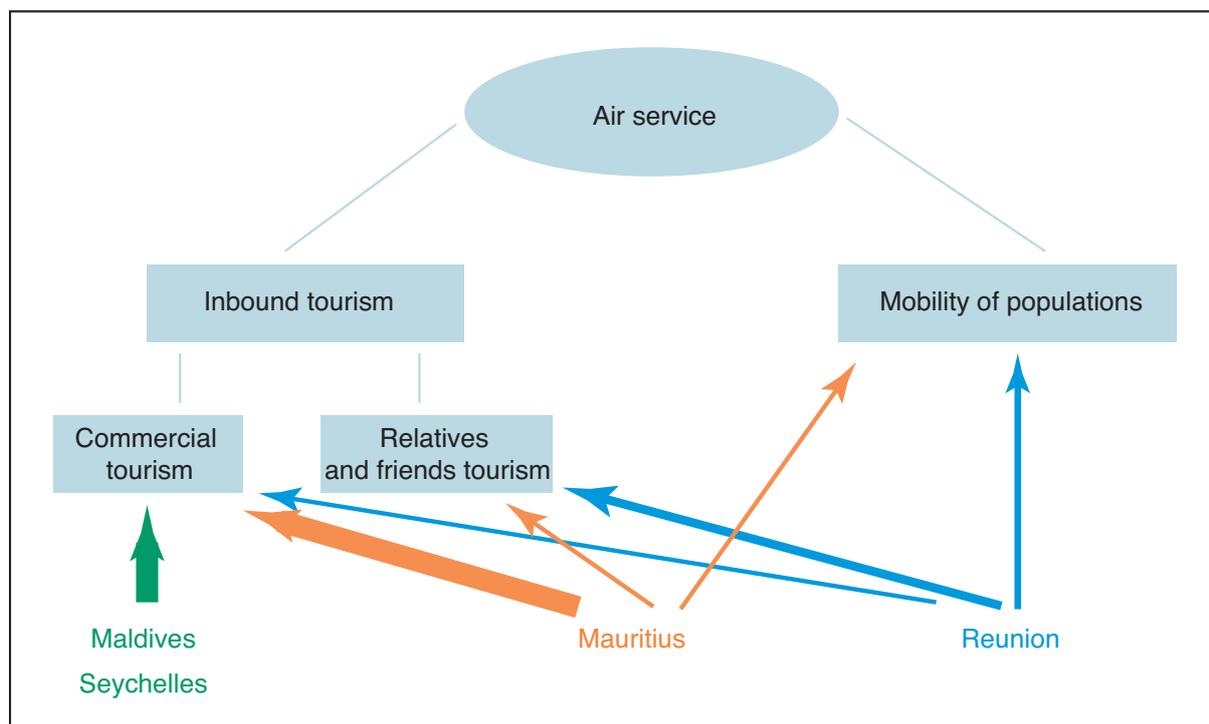


Figure 6 - Typology of flows

In the case of Reunion Island, the level of “commercial tourism” stays fell below the level of “relatives and friends” tourism stays since 2004 (2011 INSEE survey and IRT). Even the improvements of 2009 and 2010, years of increase of leisure stays in the commercial accommodation, are not enough to make commercial tourism dominant.

For Mauritius, the diversity of mobility is a sign of, one the one hand, a fairly large diaspora, scattered in Europe and Australia and which monopolizes some air capacity, and, one the other hand, a certain maturity of the destination which also knows some “relatives and

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friends” flows. These are the result of repeated stays of tourists who constitute networks of contacts allowing them to use alternative modes of accommodation. The majority of tourists, however, still come through packages including flights and hotel.

The maps (Figs. 2-5) corroborate this analysis of a service more or less dedicated to tourism. While flights to China and Russia appear, in the Maldives, as direct providers of tourists, flights operated by Air Mauritius to China and Australia are occupied mainly by business flow for China, and, for Australia, by relatives and friends flow, because of a large and recent emigration of Mauritian people to this country. However, the flights operated to Asia by Air Mauritius show the strong political will of the government in recent years to strengthen the Indian and Chinese tourism markets, with, for the moment, more success concerning India.

Finally, the Maldives and the Seychelles have reached air service at the service of tourism, with a particularly effective integration of the tourism industry in the Maldives. Reunion Island begins to have with Air Austral, a tool now profitable and powerful enough for the flights with metropolitan France and Mauritius. But this tool is designed by its leaders as obeying a very “air transport oriented” logic. There is not yet in Reunion, despite an emerging political will coming from the Region since 2010, a strong synergy between the players of air transport and of tourism industry, which could allow a real take off of the destination. The air service is also Franco-French and “captured” largely by “relatives and friend” flows not sufficiently profitable for the tourism sector.

In the case of Mauritius, the situation is more complex finally. The destination has to compromise on the one hand between commercial flows and “relatives and friends” flows and, on the other hand, between a national airline and the tourism sector needs encouraging greater opening to foreign operators, opening that would allow to increase the flow of visitors. Maurice proposes an intermediate situation between the Maldives or Seychelles cases and the Reunion case with, for the most crucial sector of the economy, a binding composition of passengers’ flows at certain periods of the year.

### **3. Differentiated strategies of players in the air transport and tourism industries**

The destinations studied must both ensure the profitability of the airline industry and tourism performance which is essential to their economic development and the scope is narrow. Thus, Mauritius has experienced since the early 2000s an adjustment problem, especially during peak tourism periods (December and August), between the number of aircraft seats and the number of hotel rooms. Indeed, this destination refuses charter flights and regular airlines are not sufficient since a decade to allow optimum hotel rooms’ occupancy. This issue, called the relationship between room capacity and seat capacity explains largely the opening to Corsair in 2006 accepted by the Mauritian authorities. This appeared then inconsistent with the high-end tourism positioning claimed by the destination, but this arrival of Corsair was at the same time appreciated by the hoteliers who ask regularly the authorities to bring more tourists to the island. The government concern is more not to create competition likely to challenge Air Mauritius (Mondou and Pébarthe-Désiré, 2009). To a lesser extent, some French tourists to Mauritius don’t take Air Mauritius and choose to transit by Reunion on Air Austral, because the company now holds Boeing 777 and a French provincial service quite efficient (Lyon, Marseille, Toulouse). This creates competition for Air

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Mauritius without actually improve the performance of Reunion tourism in terms of stays. In the case of Maldives, the diversity of private companies that serve the destination responds perfectly to the strategy to put air transport at the service of the tourism industry. The system of “hotel-islands” provides indeed a significant integration of the tourism industry, with a chain shared between foreign airlines for international flights, tour operators selling this or that island, and hotel groups operating in each island. The link of the inter-island air service, between the international airport and the “hotel-islands” is provided meanwhile by Maldivian private companies.

The Seychelles have finally chosen a middle way: the State has not sacrificed its national airline, but do not practice protectionism either. The international context of global air transport has become extremely competitive and a company of modest size as Air Seychelles can hardly resist the ambitions of its competitors. The Seychelles government has given access to the territory to Emirates Airlines (Dubai), Etihad (Abu Dhabi), Qatar Airways (Qatar): these companies today concentrate much traffic and bring a growing number of European tourists. Thus, the growth of the flights to European cities by companies of the Gulf, with a stopover in the UAE and in Qatar strengthens tourism while weakening Air Seychelles. Etihad's involvement goes beyond a simple service since the company came up 40% stake in Air Seychelles in February 2012. The two companies are now code shared what has helped to increase the flights between Seychelles and Abu Dhabi. The investment by Etihad (in addition to \$ 20 million to buy a stake, Etihad is committed to a loan of \$ 25 million) has avoided the bankruptcy of Air Seychelles and has discouraged many competitors. Two French companies, XI Airways and Air Austral have pushed their decision to open a Paris-Mahe.

## **CONCLUSION**

The four island areas studied experience common constraints, but these destinations also differ in other aspects that explain more than geographical constraints the diversity of situations.

Air access has been vital to the development of tourism. We have noted the importance of the creation of national companies and their relationship with the strengthening of tourism. A recent divergence has also appeared in terms of type of air service and travel choices: in the cases of Maldives and Seychelles, the international air access is now in the hands of foreign operators, while Mauritius shows itself anxious to preserve its national airline, and Reunion its regional airline (Air Austral).

But if an efficient and diversified air service serves tourism development, especially its launch, the key to the success of tourism is more to be sought in political and socio-economic games which stake out the path of these territories, finally very different today from one to another concerning their approaches and results. In these games, players of air transport and of tourism are not the same and do not always understand each other. This situation is detrimental to the inbound tourism of a low commercial destination as Reunion, and to the one of a mature destination like Mauritius.

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The multiplicity of needs of air transport is related to the level of population, wealth and economic diversification of islands considered. Diversity of economic activities, student and diasporic mobilities, importance of outbound tourism are likely to disturb inbound tourism. Identify ways for multiplication of routes, represents an investment beyond the means of small island States, and even of possessions of the rich countries. Destinations considered are moving slowly towards a model of extrovert development of air transport and tourism in the case of the Seychelles and the Maldives, and more focused on national and local players in the cases of Mauritius and Reunion.

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