Turistika: model scenario's 2008-2012
(part IV)

seo economisch onderzoek

Turistika: model scenario's 2008-2012 (part IV)

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1   Overview of the 'Turistika' project

The tourism sector is one of the most important sectors for the Curacao economy. Firstly, because tourism is a relatively labour intensive sector, it gives the opportunity to help relatively low skilled people into a job. Secondly, tourism also induced many investments, especially the last years. And last (but not least) it generated a lot of foreign capital for the island, in times where other foreign capital generating sectors like financial services had hard times.

While tourist arrivals in the Caribbean have more than tripled in the last 30 years (from 6 million stayover tourists to over 20 million) the market share of Curaçao has dropped. This suggests that a growth potential is still present, even after the large increases in 2007 and 2008. To realize and accommodate this growth it is important for the island to have a tool which calculates, in a consistent manner, the economic effects of the current tourism policy intentions. By using such a tool discussions can be fuelled with rational arguments, and it becomes possible to compare different solutions with each other by using scenario's.

Since 1995 the Dienst Economic Affairs (DEZ) of Curaçao has such an instrument (the model called 'Turistika') and uses it to analyze the different policy intentions of the Curaçao government. But a model is a dynamic instrument that needs regular updating to accommodate changes in the tourism sector. Therefore DEZ decided to cooperate with SEO Economic Research to revitalize and update the model. In the year 2005 this instrument was updated and restructured into Turistika version 2'. The model was designed to meet the following three goals:

- The model should translate the composition of tourist groups from different regions and travelling purposes into expenditures, for 15 different sectors of the economy.
- By modelling the different tourism demand patterns the model should calculate the differences in employment and expenditures caused by changes in (projected) tourism inflow.
- The model should also look at the supply side, to produce early warnings if capacity restraints are to be expected, and to prevent unrealistic growth scenario's.

In version 2 the following improvements have been made:
- the horizon of the project has been extended towards 2012,
- the improvement of the internal structure of the model, especially the supply side,
- updates of the behavioural relations of the consumer groups, based on new expenditure surveys,
- interaction between demand and supply side through signaling of supply restraints to demand projections,
- many different scenario's have been constructed, estimated and compared with for example the CTB-Masterplan, and with a baseline projection,
- a tourism price index has been constructed,
- rough indirect economic effects of tourism have been calculated,
- seasonal patterns have been implemented, for the Dutch and American market.

Next to that we also investigated the relation between tourism arrivals in Curaçao in the last 30 years and economic factors like GDP of the origin country, exchange rates & prices. The

conclusion was that there is no price effect, and only a small income effect. Non-economic factors (special promotional campaigns, historic relations) seem to be much more influential when making the decision to come to Curaçao

In the year 2006 the Curacao Tourist Board (CTB) together with DEZ have assigned SEO Economic Research to further develop the 'Turistika' model, in order to better equip the government and the tourist board to analyze the impact of tourism on the economy of the island. In the new design we focused on increasing the practical use of the model, thereby addressing the demands from not only DEZ but also from CTB. The third version of Turistika became a more transparent and user-friendly instrument that could not only calculate the economic effect of tourism expenditures for the different sectors of the Curaçao economy but also present them in easy-to-read tables and figures. It produces information in terms of employment, government revenues, expenditures per sector and capacity.

In 'Turistika v3' we addressed the following issues:
- modelling seasonal patterns for all the origin regions,
- implement a new classification for accommodations, to better represent important differences,
- split up some product categories in more detail where relevant, for example taxi's, food at accommodation etc.,
- allow differences in expenditure patterns for each of the 49 relevant groups, at detailed product level,
- update model estimations for stayover and cruise tourists based on more recent data,
- recalculate the indirect effects with a more recent I/O-table, for Curaçao alone (not the Antilles as was the case in the former version),
- and last but not least: make the instrument more known to the tourism stakeholders on the island.

At the end of 2008 we presented the results of this phase of Turistika in a workshop in Willemstad, and during a road show visiting CTB, CBS, Casha, Car rental companies, Curaçao Airport Partners & Chata. We wish to thank all the participants for their valuable time and input.

The island of Curaçao now has an instrument available that is more user friendly and more compact. It is also more reliable thanks to the incorporation of more recent expenditure surveys from both cruise tourists and stayover tourists. It is able to distinguish between the expenditure patterns of fifty different types of tourists, making it a useful tool to show the different effects of different marketing scenario's.

2 Baseline projection 2008-2012 and scenarios

2.1 Introduction

During the presentation we showed the results of several scenarios. First of all we presented the results of the so-called baseline projection, in which some assumptions are made regarding macro-economic variables (inflation and labour productivity) and the development of tourism by region of origin. In this baseline projection the growth of tourism is set on realistic levels whereby both the historic trends as well as recent economic developments were taken into consideration.

Table 2.1 gives an overview of the main parameters for the model regarding the base scenario. The assumptions behind these numbers are as follows:

- Labour productivity within the tourist sector grows yearly by 1 percent. Historic data from CBS shows that the yearly growth of labour productivity was on average – between 1996 and 2004 - around 2%. Regarding the fact that the productivity of the currently unemployed will be lower than the productivity of the currently employed, we use 1% for the base scenario.
- The consumer price index of Curacao will grow – as for the period 1996-2004 – by approximately 2 percent;
- Due to the financial and economic problems in the USA, we assume no growth in 2008 and a modest growth in the number of tourists for the period 2009-2012.
- Recent growth of Dutch tourism was double digit. For the coming years we assume a somewhat lower but still substantial growth.
- The growth in the number of tourists from Venezuela was extremely high in 2007 and 2008. For the coming years we assume only marginal growth. Firstly because airlift capacity is currently at its peak, secondly because we consider the last two years as incidental growth.
- From the other South American countries we assume stable growth.
- With regard to the countries in the Caribbean we only assume that growth in the number of tourists will be coming from Aruba. From other countries in the Caribbean we expect low growth.
- The increase of cruise tourism will be 4% on average, but more from the Southern American ports than from the US.
- We also assume that the USA airlift remains on the same level, the Dutch and European airlift remains on the same or a somewhat higher level. The will not grow, there are no (commercial) airplanes anymore.
- We assume that the CTB continues to put sufficient marketing effort to accommodate the projected growth of the target tourism groups.

In the baseline projection as well as in the scenarios we also use information on capacity development of accommodation, restaurants and car rental. For the development in capacity of accommodation we use input from the CTB regarding information of tourist accommodation

that has been built recently or will be opened the coming years. We only take into account projects that are already under construction, not projects that are still under development The capacity growth of restaurants and car rental has been put on yearly 10 percent. Table 2.1 also shows the assumptions of the various scenarios that we will calculate. We consider several scenarios: three in which we add additional tourists – for each of the three continents Europe, Latin America and Northern America - on top of the baseline projection and one in which we assume airline outfall in the USA. The results of the model show the impact of each of the scenario's in terms of number of tourists, number of tourist days, expenditures, employment and occupancy rates. The results of the scenarios will be discussed in separate sections.

Table 2.1   Baseline projection and scenario's

	2008	2009	2010	2011	2012
Baseline projection 2008					
Inflation (yearly growth; %)	4.3%	3.4%	2.0%	2.0%	2.0%
Labour productivity (yearly growth)	1%	1%	1%	1%	1%
USA & Canada	0%	2%	2%	2%	2%
Netherlands	12%	5%	5%	5%	5%
Europe (excl. NL)	6%	6%	6%	6%	6%
Aruba	10%	10%	10%	10%	10%
Caribean	-1%	1%	1%	1%	1%
Venezuela	60%	4%	4%	4%	4%
South America (excl. VZ)	10%	5%	5%	5%	5%
Other	0%	0%	0%	0%	0%
Cruise: USA	5.5%	3%	3%	3%	3%
Cruise: other	5.5%	7%	7%	7%	7%
Development capacity					
Hotels-1	3%	22%	21%	0%	0%
Hotels-2	3%	5%	6%	11%	0%
Bungalowresorts	16%	54%	20%	0%	0%
Apartments	0%	39%	15%	0%	0%
Restaurants	10%	10%	10%	10%	10%
Car rental	10%	10%	10%	10%	10%
Sunny Europeans					
- Netherlands		base + 10,000	base + 10,000	base + 10,000	base + 10,000
- rest Europe		base + 20,000	base + 20,000	base + 20,000	base + 20,000
Latin Flow					
- Venezulela		base + 20,000	base + 20,000	base + 20,000	base + 20000
- rest South America		base + 10,000	base + 10,000	base + 10,000	base + 10000
Americans are coming (again)					
- USA & Canada		base + 30,000	base + 30,000	base + 30,000	base + 30000
Airline outfall					
- USA & Canada		base - 15,000	base - 15,000	base - 15,000	base - 15,000

2.2   Results baseline projection

Table 2.2 provides the results of the model for the baseline projection. These results also serve as a reference point for the scenarios that will be discussed in the following sections. The results of the baseline projection show that in total 844 thousand tourists will visit Curacao in 2012. They will stay on the island for more than 3,4 million days and they will spend US$ 428 million. In terms of employment this translates into 11,3 thousand employees.

Table 2.2 also presents occupancy rates for accommodation, restaurants and transport. The rates for hotels-I are relatively high in 2008 but decrease sharply in 2009 and 2010. An occupancy rate of 73 percent reveals that there is even some overcapacity. This is even more so for bungalow resorts and apartments, where occupancy in 2012 will be respectively 52 percent and 59 percent. The explanation for these low occupancy rates is the strong increase in the number of hotels, bungalow resort and apartments that have recently been built and that will be built the coming years. For example, the number of beds in larger hotels will grow by 22 percent in 2009 and another 21 percent in 2010. Bungalow resorts will increase their total capacity by 54 percent in 2009 whereas for apartments a growth of 39 percent is expected.

Table 2.2   Results baseline projection 2008-2012

	2008	2009	2010	2011	2012
Number of tourists (total)	712	743	775	809	844
* stay over (x1000)	353	368	383	400	417
* cruise (x1000)	360	375	392	409	427
Number of tourist days (x1000)	2866	2992	3123	3261	3407
Expenditures (current prices, mln US$)	332.7	357.9	379.9	403.4	428.5
Employment (employees, x1000)					
* total (direct & indirect)	9,104	9,696	10,189	10,711	11,262
* in the tourist sector	7,581	8,074	8,484	8,918	9,377
Occupancy rates (yearly average)					
* Hotels-I	92%	79%	68%	71%	73%
* Hotels-II	85%	84%	82%	77%	80%
* Bungalow resorts	79%	54%	47%	49%	52%
* Apartments	79%	60%	54%	56%	59%
* Restaurants	78%	74%	70%	67%	63%
* Car rental	98%	93%	88%	84%	80%
* Taxi's	106%	110%	114%	119%	124%
* Busses	100%	104%	108%	113%	117%

Source: Turistika (2008).

2.3   Supply side restrictions?

During the workshop in October 2006 the results of the baseline projection showed that in 2012 the occupancy rate for hotels would be around 95 percent whereas for bungalow resorts the

occupancy rate would be 84 percent. The current baseline shows much lower occupancy rates, particularly due to the fact that a lot of new accommodation has been built recently and will be built the coming years. This raises the question how much yearly growth is possible to achieve occupancy rates around 95 percent (for hotels). To calculate this we focused on the markets that are most important for Curacao tourism, i.e. the Netherlands and the United States.

First we designed a scenario in which the yearly growth of tourists from the USA remained constant while we tested the Dutch market for a yearly growth of 25 percent. The growth rates in all other regions are kept as in the baseline projection. Would this unrealistically high growth still fit in, can it be accommodated? The answer is yes: with the NL market growing 25 percent per year we find occupancy rates for hotels of just over 98 percent, with 91 percent for bungalow resorts and 87 percent for apartments.

When we assume the growth rate for Dutch tourists to be zero and test a yearly growth rate of 25 percent we find an occupancy rate of 92 percent for hotels-I. Even when we use a growth rate of 30 percent the occupancy rate for hotels I is only 99 percent.

The conclusion that can be drawn form these results is that even in a situation where the growth rates are unrealistically high, the model does not show any supply side restrictions with regard to accommodation.

2.4   Main markets compared

2.4.1   Sunny Europeans

This section discusses the results of the scenario 'Sunny Europeans'. In this scenario we assume that on top of the baseline projection an additional 30 thousand tourists from Europe will visit Curacao. We have chosen for this 'growth-scenario' since the results of the previous section showed that there is more than enough accommodation capacity for additional tourists. In our scenario we accommodate, on top of the baseline projection, 10 thousand Dutch tourists and 20 thousand tourists from the other European countries. Growth rates for all other regions will remain as in the baseline projection.

The outcomes are presented in Table 2.3. In this scenario 453 thousand stayover tourists will visit Curacao in 2012 (plus 427 thousand cruise tourists), totalling over 3.7 million of tourist days. They will spend together 466 million US$. In this scenario there will be jobs for almost 12,3 thousand employees. Compared to the results of the baseline projection that is an increase of almost 1.000 employees. Table 2.3 also presents the occupancy rates of accommodation, restaurants and transport. The occupancy rates of hotels-I are relatively high in 2008 but will decrease sharply in 2009 and 2010. In 2011 and 2012 the occupancy rates for hotels-I increase slowly again.

Table 2.3   Results 'Sunny Europeans'

	2008	2009	2010	2011	2012
Number of tourists (total)	712	773	807	842	879
* stay over (x1000)	353	398	415	433	453
* cruise (x1000)	360	375	392	409	427
Number of tourist nights (x1000)	2,866	3,266	3,413	3,567	3,730
Expenditures (current prices, mln US$)	332.7	387.6	411.9	437.9	465.7
Employment (employees, x1000)					
* total (direct & indirect)	9,104	10,513	11,061	11,641	12,256
* in the tourist sector	7,581	8,753	9,209	9,692	10,202
Occupancy rates (yearly average)					
* Hotels-I	92%	87%	75%	78%	81%
* Hotels-II	85%	91%	89%	83%	86%
* Bungalow resorts	79%	63%	55%	57%	60%
* Apartments	79%	67%	61%	64%	67%
* Restaurants	78%	82%	78%	74%	70%
* Car rental	98%	102%	97%	93%	88%
* Taxi's	106%	117%	121%	126%	131%
* Busses	100%	106%	110%	115%	119%

Source: Turistika (2008).

2.4.2   Latin Flow

This section discusses the results of the scenario 'Latin Flow'. In this scenario we assume that on top of the baseline projection an additional 30 thousand tourists from Latin America will visit Curacao. The underpinning of this 'growth scenario' is similar as in the scenario 'Sunny Europeans'. These 30 thousand tourists consist of 10 thousand Venezuelan tourists and 20 thousand tourists from other Latin American countries. The growth rates for all other countries and regions will remain as in the baseline projection.

In this scenario tourists will stay almost 3.6 million tourist days and spend US$ 458 million (see Table 2.4). In terms of employment, in 2012 there will be work for just over 12 thousand employees. Compared to the scenario 'Sunny Europeans', in the 'Latin Flow' scenario employment will be around 200 employees less.

Table 2.4 also presents the occupancy rates of accommodation, restaurants and transport. The hotels-I occupancy decreases sharply, towards 72 percent in 2010. In 2012 it will be 78 percent, while hotels-II have an 89 percent occupancy. The occupancy rate for bungalow resorts is 52 percent which is lower than in the previous scenario: Latin American tourists are less likely to go to bungalow resorts than European tourists.

Table 2.4   Results 'Latin Flow'

	2008	2009	2010	2011	2012
Number of tourists (total)	712	773	806	841	878
* stay over (x1000)	353	398	415	433	451
* cruise (x1000)	360	375	392	409	427
Number of tourist nights (x1000)	2866	3153	3291	3437	3590
Expenditures (current prices, mln US$)	332.7	382.5	406.1	431.3	458.1
Employment (employees, x1000)					
* total (direct & indirect)	9,104	10,364	10,893	11,453	12,044
* in the tourist sector	7,581	8,629	9,069	9,534	10,025
Occupancy rates (yearly average)					
* Hotels-I	92%	83%	72%	75%	78%
* Hotels-II	85%	94%	92%	86%	89%
* Bungalow resorts	79%	54%	47%	50%	52%
* Apartments	79%	62%	56%	59%	62%
* Restaurants	78%	80%	75%	72%	68%
* Car rental	98%	98%	93%	88%	84%
* Taxi's	106%	122%	127%	132%	137%
* Busses	100%	106%	110%	114%	119%

Source: Turistika (2008).

2.4.3   Americans are coming (again)

In this section the results of the scenario 'Americans are coming (again)' will be discussed. In this scenario we assume that on top of the baseline projection an additional 30 thousand tourists from USA and Canada will visit Curacao. As in the other scenarios, the growth rates for all other countries and regions will remain as in the baseline projection.

In this scenario tourists will stay almost 3.6 million of tourist days and they spend together 464 million US$. In terms of employment, in 2012 there will be work for just over 12 thousand employees.

Table 2.5 also presents the results of the occupancy rates for accommodation, restaurants and transport. The occupancy rates for hotels-I decrease sharply in 2009 and 2010, and will be 84 percent in 2012. That is higher than in the scenario 'Sunny Europeans' since Americans are more likely to go to hotels-I than Europeans. Consequently the occupancy rate for bungalow resorts in Table 2.5 are lower (at 54 percent) than in the scenario 'Sunny Europeans' (at 60 percent).

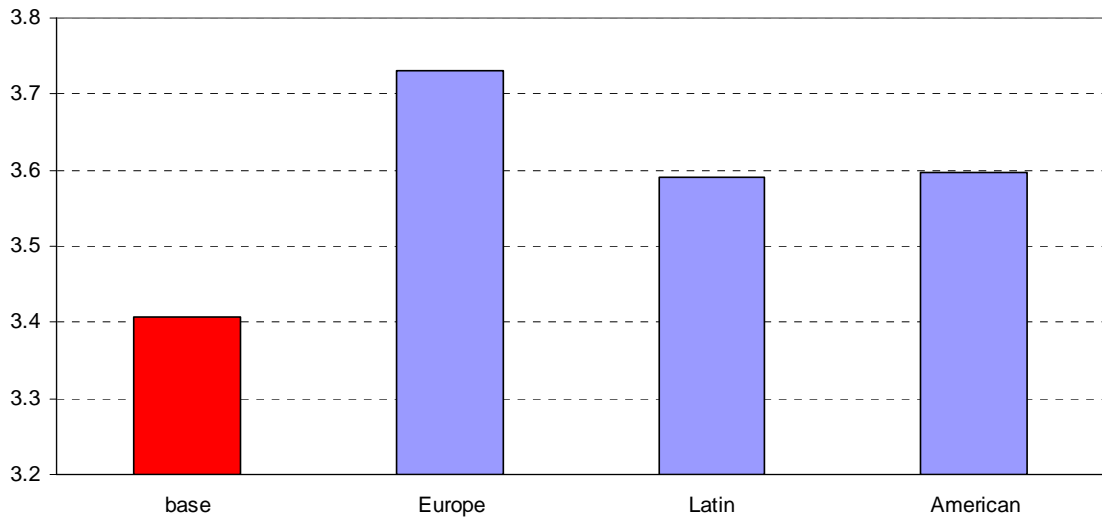Table 2.5   Results 'Americans are coming (again)'

	2008	2009	2010	2011	2012
Number of tourists (total)	712	773	806	840	876
* stay over (x1000)	353	398	414	431	449
* cruise (x1000)	360	375	392	409	427
Number of tourist nights (x1000)	2866	3172	3308	3449	3598
Expenditures (current prices, mln US$)	332.7	389.9	413.2	438.1	464.5
Employment (employees, x1000)					
* total (direct & indirect)	9,104	10,587	11,107	11,657	12,237
* in the tourist sector	7,581	8,816	9,248	9,705	10,188
Occupancy rates (yearly average)					
* Hotels-I	92%	90%	78%	81%	84%
* Hotels-II	85%	87%	86%	80%	83%
* Bungalow resorts	79%	57%	50%	52%	54%
* Apartments	79%	64%	58%	60%	63%
* Restaurants	78%	81%	76%	72%	68%
* Car rental	98%	100%	95%	90%	86%
* Taxi's	106%	118%	123%	128%	133%
* Busses	100%	107%	111%	116%	121%

Source: Turistika (2008).

2.4.4   Comparing the scenario's: total effects

When we put the results from the three scenarios into one graph, interesting comparisons can be made. For example, Figure 2.1 shows that an additional 30 thousand European tourists on top of the baseline projection leads to over 3.7 million tourist nights. Compared to the baseline projection that is an increase of 320 thousand. The same amount of Latin American or Northern American tourists adds only an extra 190 thousand tourist nights. The obvious explanation is that on average the Europeans stay more days than the Latin American- and Northern American tourists.
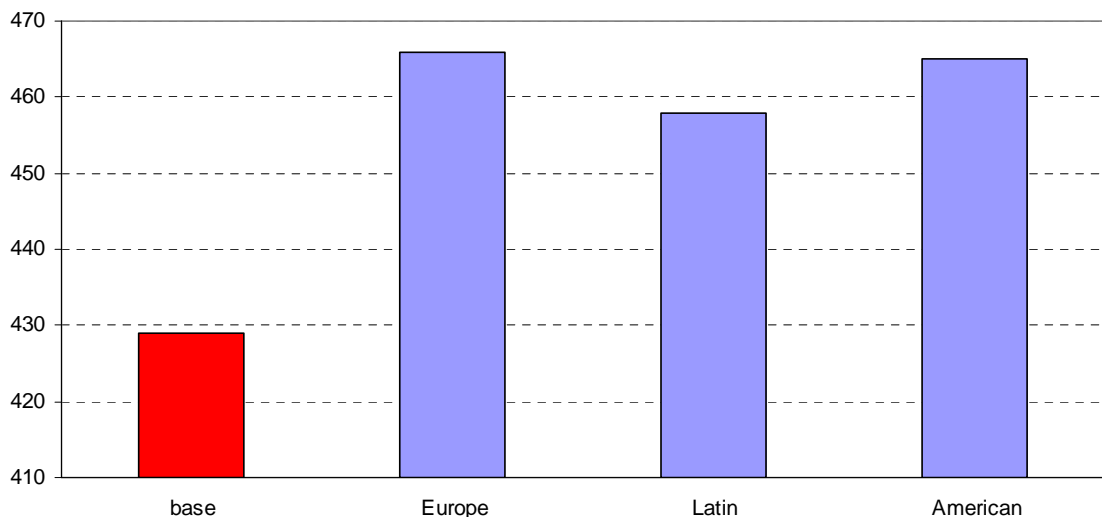
Source: Turistika (2008).

Figure 2.2 shows the impact of the different markets on total expenditure. An additional 30 thousand European tourists - on top of the baseline projection - lead to US $ 466 million of expenditures. That is an increase of US $ 37 million as compared to the baseline projection. When we put an additional 30 thousand Latin American or Northern American tourists – on top of the baseline projection – we observe an increase of respectively US $ 29 million and US $ 36 million. This means that although the Northern American tourists stay fewer days as compared to the Europeans – they spend the same amount of money.

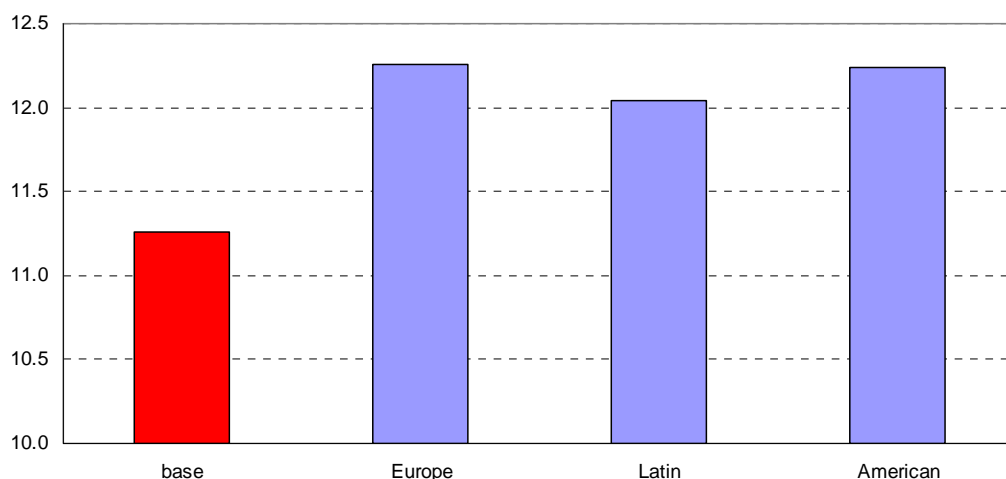Figure 2.2   Increase in expenditures by scenario (2012)

Source: Turistika (2008).

Figure 2.3 shows that an additional 30 thousand European tourists on top of the baseline projection lead to employment for almost 12.260 people. Compared to the baseline projection

that is an increase of almost 1.000 employees. For the scenario 'the Americans are coming (again)' the results are similar. This can be explained by the fact that there is a strong relationship between expenditures and employment. The 30 thousand additional tourists from Latin American countries lead to extra employment for around 800 employees which can be clarified by the fact that these 30 thousand additional tourist also led to a lower expenditure growth as compared to the Europeans and Northern Americans.

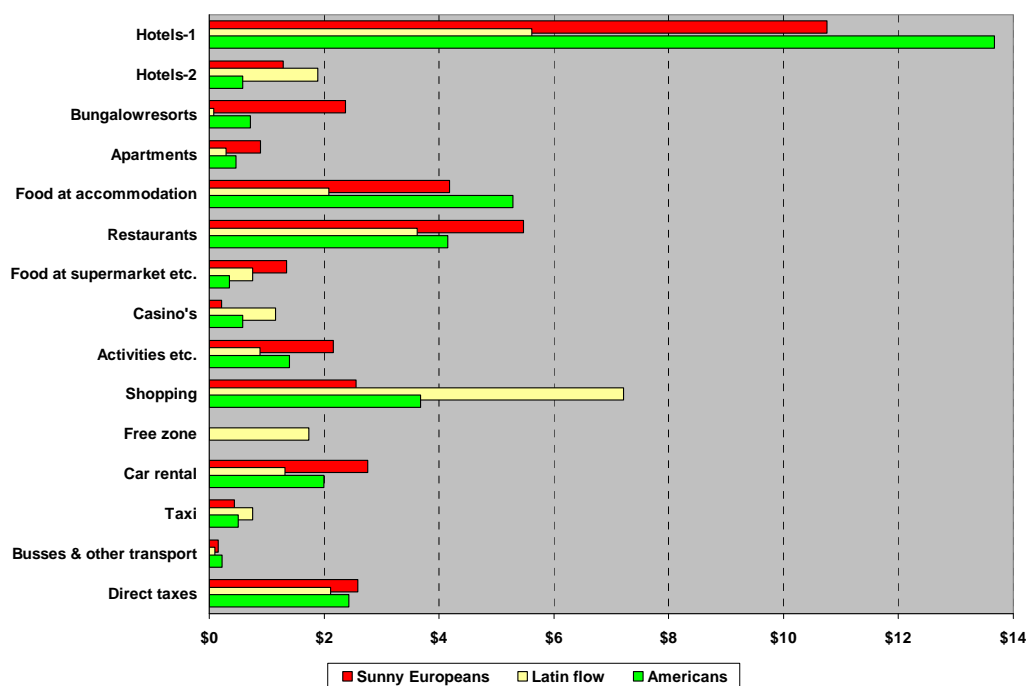Figure 2.3   Increase in number of employees by scenario (2012)

Source: Turistika (2008).

2.4.5   Comparing the scenario's: distributional effects

After studying the total effects, it is also important to study the distributional effects. Because not every sector is affected in the same way, some will gain more from one type of tourist while others will gain more from other types of tourists. Figure 2.4 shows from what kind of tourists (Europeans, Latin Americans and North Americans) each sector benefits most. Looking at total expenditure, hotels-I benefit most from the additional tourists. What can be observed is that hotels-I benefit more from an additional Northern American tourist than from an additional European tourist. However, for bungalow resorts the opposite holds. Figure 2.4 also shows that the shopping sector benefits more from the additional tourists from Latin American than from Europeans and Northern Americans. The shopping sector benefits even more from these Latin American tourists than the hotel sector.

Figure 2.4   Extra expenditures in 2012 (in US $) by scenario

Source: Turistika (2008).

Finally, we also discuss the changes in occupancy rates for each scenario. Table 2.6 displays the results for the baseline projection and shows the increase in occupancy rates for each scenario.

Table 2.6   Comparing the occupancy rates (2012) by scenario

	Baseline	Sunny Europeans	Latin Flow	Americans are coming
Hotels-I	73%	+ 8%	+4%	+11%
Hotels-II	80%	+ 6%	+9%	+3%
Bungalow resorts	52%	+9%	0%	+2%
Apartments	59%	+8%	+3%	+4%
Restaurants	63%	+7%	+4%	+5%
Car rental	80%	+8%	+4%	+6%
Taxi's	124%	+8%	+14%	+9%
Busses	117%	+2%	+1%	+4%

Source: Turistika (2008).

Some results are highlighted. For example, the 30 thousand additional Northern American tourists cause an increase of 11 percentage points in the occupancy rate for hotels. Compared to the 'Sunny Europeans' (+ 8 percentage points) and the 'Latin Flow' (+4 percentage points) this is considerably higher. The 30 thousand additional Latin American tourists cause an increase of 9 percentage points in the occupancy rate for the smaller or standard hotels. Compared to the 'Sunny Europeans' (+ 6 percentage points) and the 'Americans are coming (again)' (+3 percentage points) this is clearly higher. Bungalow resorts are almost exclusively used by Europeans: an additional 30 thousand Europeans causes an increase in the occupancy rate with 8 percentage points whereas for Northern Americans and Latin Americans this increase is respectively 2 and 0. Another interesting results regards the 14 percentage point increase in

occupancy rate for taxi's when 30 thousand additional Latin Americans – on top of the baseline projection – are visiting Curacao.

2.5   Airline outfall in the USA

Here we discuss the results of the scenario 'Airline outfall in the USA'. In this scenario we assume that on top of the baseline projection, an airline company from the USA decides to reduce it's number of flights. Although other airlines will probably fill in part of the resulting gap, total airline capacity will drop, let's suppose with 15.000 tourists per year.

The outcomes in terms of employment and expenditure per sector are presented in Table 2.7 below, for the next four years. It shows that the number of tourist days in this scenario will be 3,3 million in 2012, almost 100 thousand less than in the baseline projection. Expenditures will be US $ 410 million which is US $ 18 million less. In terms of employment, in 2012 there will be jobs for 10.775 employees.

Table 2.7   Results 'Airline outfall USA'

	2008	2009	2010	2011	2012
Number of tourists (total)	712	728	760	793	828
* stay over (x1000)	353	353	368	384	401
* cruise (x1000)	360	375	392	409	427
Number of tourist nights (x1000)	2,866	2,901	3,031	3,167	3,311
Expenditures (current prices, mln US$)	332.7	341.9	363.3	386.1	410.5
Employment (employees, x1000)					
* total (direct & indirect)	9,104	9,250	9,730	10,238	10,775
* in the tourist sector	7,581	7,703	8,102	8,524	8,971

Source: Turistika (2008).

Less tourists also means lower occupancy rates. Table 2.8 shows the occupancy in the 'Airline Outfall' scenario, as the deviation from the baseline projection in percentage points. Most striking is the 5 percentage point drop in the occupancy rate of the larger and more luxurious hotels in the Hotels-1 category. This is of course due to the fact that American tourist favour this type of accommodation more than the other types. A decrease of American tourists will therefore have less impact on bungalow resorts or apartments, as these are more popular among European tourists.

The difference in expenditure per sector are presented in Table 2.9, as the deviation from the baseline projection. Total expenditure will be 16 million US dollar less in 2009, increasing to 18 million dollar less in 2012.

Table 2.8   'Airline outfall' occupancy rate

	2009	2010	2011	2012
Occupancy rates (deviation from baseline projection)				
* Hotels-I	-6%	-5%	-5%	-5%
* Hotels-II	-2%	-2%	-1%	-1%
* Bungalow resorts	-1%	-1%	-1%	-1%
* Apartments	-2%	-2%	-2%	-2%
* Restaurants	-3%	-3%	-3%	-3%
* Car rental	-4%	-4%	-3%	-3%
* Taxi's	-4%	-4%	-4%	-5%
* Busses	-1%	-2%	-2%	-2%

Source: Turistika (2008).

Table 2.9   'Airline outfall' expenditures: deviation from baseline (US$, mln.)

	2009	2010	2011	2012
Hotels-1	-6.1	-6.3	-6.6	-6.8
Hotels-2	-0.3	-0.3	-0.3	-0.3
Bungalow resorts	-0.3	-0.3	-0.3	-0.4
Apartments	-0.2	-0.2	-0.2	-0.2
Food at accommodation	-2.3	-2.4	-2.5	-2.6
Restaurants	-1.8	-1.9	-2.0	-2.1
Food at supermarket etc.	-0.2	-0.2	-0.2	-0.2
Casino's	-0.3	-0.3	-0.3	-0.3
Activities etc.	-0.6	-0.6	-0.7	-0.7
Shopping	-1.6	-1.7	-1.8	-1.8
Free zone	0.0	0.0	0.0	0.0
Car rental	-0.9	-0.9	-1.0	-1.0
Taxi	-0.2	-0.2	-0.2	-0.3
Busses & other transport	-0.1	-0.1	-0.1	-0.1
Direct taxes	-1.1	-1.1	-1.2	-1.2
Total expenditure	-16.0	-16.6	-17.3	-18.0

Source: Turistika (2008).

3   Concluding remarks

All the exercises with Turistika as presented in the workshop and in this report, lead to the following remarks:

- Supply side restrictions are not existing anymore in the model.
- Growth in the number of tourists is possible and necessary:
- The impact of 30 thousand extra tourists gives similar results, for each of the three main tourist origin markets. However, extra tourists coming from Europe show a somewhat bigger impact on the total number of nights. On average, Europeans stay a longer.
- When we look into expenditures by detailed category, some interesting differences can be observed. Europeans spend more on bungalow resorts, Latin Americans – in particular the Venezuelans - spend more on shopping and the free zone, Northern Americans spend more on the larger, luxurious hotels.
- However, so far we were not able to take into account the supply of airlift, and the capacity of Hato airport. Any growth should also be accommodated by the airport (handling) and the airlines (seats).

An economic model is never complete. It needs maintenance and updating of the model parameters to reflect empirical changes (for example the Venezuelan 'dollar tourist'). During the last years the research team from SEO Economic Research and the daily users of the model (DEZ and CTB) noted some topics which could be improved. Also the public workshops often come up with new insights that could be translated into a new model structure: for example seasonal patterns and classification of accommodation. Thanks to these remarks we were able to improve Turistika and make it more realistic step by step. Usefulness was increased considerably in the last three years. The main omission is currently a signalling of capacity restrictions in airlift. That is the main point we want to address in the coming year.

Summing up, the most interesting topics for inclusion in future phase of the model would be:

- Inclusion of an airlift module into Turistika will give an extra practical value. This will not only be a useful but even a necessary addition.
- Implementation of seasonal patterns for cruise tourism.
- Improve accuracy estimation of model parameters through the use of more recent information on expenditure, employment and productivity.
- Construct a new baseline scenario, incorporating the uncertain effects of the current financial crisis.

We hope to present the results of the next phase of Turistika in a future workshop, hopefully in the autumn of 2009.

seo economisch onderzoek

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