Small island tourism economies and the tourism area lifecycle
Why Aruba and Sint Maarten have exceeded their carrying capacity
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2. Immigration-dependent extensive growth in Small Island Tourism Economies: the cases of Aruba and Sint Maarten

Introduction

Aruba and Sint Maarten are two of the six islands in the Caribbean that form part of the Kingdom of the Netherlands. Aruba left the former Netherlands Antilles’ constellation first, to attain the status of a separate country within the Kingdom in 1986. Since the dissolution of the Netherlands Antilles on 10 October 2010, Sint Maarten now carries the same autonomous constitutional status as Aruba. The two countries distinguish themselves from the other four Dutch Caribbean territories by their strong and predominant orientation on tourism as the driving force of their economic development strategies, and by their very high levels of immigration. Their common institutional and constitutional framework, combined with their shared and distinct commitment to the tourism industry, justifies viewing the two territories as applying a common development model.

While Aruba and Sint Maarten at first sight constitute successful, fast-growing island economies, this article assesses the merits of their apparent success by investigating some aspects of the quality and sustainability of their model. The central question of this article is to explore to what extent the strategy pursued by Aruba and Sint Maarten has resulted in intensive growth, measured by indicators such as increasing labor productivity and increased contribution to GDP per unit of tourism product. Additionally, the question of whether per capita wealth has increased in real terms is addressed. At the same time, to the extent that the economic growth is achieved by growing volume rather than increased productivity, the obvious island limitations of space and environment have to be taken into account.

Furthermore, given the limitations of the Aruba/Sint Maarten model, some indications are given to answer the question why this specific growth model has been perpetuated for so long. Finally, with reference to the influential article ‘The concept of a tourist area cycle of evolution’ by Richard Butler (1980), some strategic lines of development are proposed that might evolve the Aruba/Sint Maarten model into a more tenable, qualitative direction.

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Methodology

The development model implemented by Aruba and Sint Maarten is placed in a historical context by investigating whether it is in line with, or dependent upon, the characteristics of ‘globalization’ that became dominant in the 1980s. Furthermore, the place of the Aruba/Sint Maarten model in the taxonomy of different island development models is assessed by comparing its characteristics with those of the MIRAB, PROFIT and SITE models established in island development literature, and described below. The central question in the island development debate – whether island economies are intrinsically vulnerable or resilient – is addressed for Aruba and Sint Maarten by evaluating the characteristics and experiences of both economies over recent decades. To establish the level of immigration-dependence of the Aruba/Sint Maarten model, the cumulative net migration is shown in comparison to the natural population increase over the period since the adoption of the high-intensity tourism development.

Based on the premise that both economies are almost exclusively dependent on the tourism industry as the engine of growth, selected tourism volume indicators are set off against the development of real GDP. A rising productivity level would be indicated by a real GDP growth index that exceeds the increase in tourism service volume indicators such as numbers of cruise ship visitors or visitor nights spent. Real per capita GDP of both countries is used as a proxy for labor productivity. The development of real per capita GDP over time is measured for Aruba as well as Sint Maarten to provide an answer to the question of which direction labor productivity has developed. At the same time, real per capita GDP can be used as an indicator for average income and provides an indicative answer to the question of whether average wealth has increased over the period under review. The limitations of GDP as a measure of development or even economic growth, as pointed out in the 2009 report by the ‘Sarkozy-commission’ (Stiglitz, J. E., Sen, and Fitoussi 2009), are acknowledged here. It is important to recognize that growth of real per capita GDP is probably a necessary, but certainly not a sufficient condition for increase in well-being. Conversely, however, under conditions of stagnant or declining real per capita GDP, it is theoretically possible, but highly unlikely that general well-being would have increased.

Aruba and Sint Maarten catching the wave of tourism globalization

Aruba as a tourism destination developed gradually and modestly during the 1960s and 1970s, while the oil industry still constituted the main economic pillar. When the introduction of cheap jet transportation opened the Caribbean for mass tourism from the US, tourism was recognized as an alternative source of economic activity in Aruba (Vanegas and Croes 2003). The attainment on 1 January 1986 of
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constitutional separation by Aruba from the Netherlands Antilles, known locally as status aparte, came on the heels of the final closure of the Lago refinery. The demise of the oil industry made the GDP collapse, losing over a quarter of production. However, a sharp tourism-driven reversal caused the GDP to overtake the previous high as early as 1988 with Afl. 1,130 million, continuing double-digit real growth in the next two years (Haan 1998, p.91).²

Through a crash program of hotel construction, actively and purposefully aided by government stimuli, as Vanegas and Croes put it, in addition to improving infrastructure ‘the government provided direct support through hotel loan guarantees to assist private investors, tax holidays and other fiscal incentives’ (Vanegas and Croes 2003, p. 316). Under these conditions, the tourism sector developed rapidly during the late 1980s and 1990s, settling into a more moderate growth rate around the turn of the century. Of the two countries, Sint Maarten relies more heavily on day visitors brought in by cruise ships. The start of tourism-driven economic development on Sint Maarten took place earlier and initially somewhat more gradually than on Aruba. Sint Maarten’s economy during the oil industry boom of Curacao and Aruba between 1930 and 1970 had been the mirror image of the larger Dutch islands; many Sintmaarteners migrated to Curacao and especially Aruba to find employment. They typically transferred part of their earnings to their relatives back home, giving rise to the branding of their home island as a ‘postwisseleconomie’ (money order economy) (Hartog 1964, p. 567). Total population reached a low point of around 1,500 persons in 1951 (Johnson, W. 1987, p. 47).

The stability offered by the Netherlands Antilles and later on Aruba separately, as part of the Dutch Kingdom, attracted foreign investments in hotels and other services. Foreign direct investment, initially subsidized by tax holidays and financial government guarantees, created hotels built or operated by US hotel chains, themselves increasingly globalizing to the specifications expected by the American tourist.

In that era, the hospitality industry started looking for overseas relocation possibilities in the same manner. Aruba and Sint Maarten tapped into this trend, and both became concentrated pockets of high-intensity tourism facilities, guided by knowhow mainly embedded in the franchises of foreign hotel chains. Aruba and Sint Maarten from the onset developed their tourism industry relying on immigrant labor from nearby islands and from the South American mainland. The engagement of foreign labor was initially seen as rotating, seasonal, or both. However, in effect, both islands created their own permanent sub-regional

² Note that the official currency used in Aruba up to and including 1985 was the Antillean Guilder (Naf.). As of 1 January 1986, with the attainment of the status aparte, the Aruban florin (Afl.) was introduced as the sole official currency. Both currencies were and are pegged to the US dollar at an equal rate of 1.79 to 1 US$ for the entire period under review in this article.
division of labor, to the extent that this labor supply mechanism became an integral and indispensable attribute of their development strategy.

**MIRAB, PROFIT, or SITE? Two islands in the taxonomy of small island development models**

Aruba and Sint Maarten, as Small Island Developing States (SIDS),\(^3\) are not alone in their development of strategies that cope with their ‘islandness’ and that search out opportunities available in a globalizing world. In the era of globalization, a number of distinct island development models have been recognized in the literature. Small island models focus on the specific and unique circumstances of small island economies as determinants of their development possibilities. Therefore the MIRAB, PROFIT and SITE models described below do not so much describe alternatives or counterpoints to globalization, but indicate locally applied consistent strategies by small island jurisdictions in successfully carving out niches in the global economy.

The taxonomy of island development models took off in the 1980s with the description of a strategy adopted by a number of Pacific island territories. Bertram and Watters (1985) define the ‘Migration, Remittances, Aid and Bureaucracy’ model or MIRAB. The strategy of rotating temporary emigration that gives rise to a steady stream of remittances as an important source of income in the home island is also recognizable as the mainstay of Sint Maarten’s development between 1930 and 1970. Nowadays, Aruba and Sint Maarten are on the receiving end of migration from MIRAB-classified Caribbean islands like Haiti and Dominica. The aid and bureaucracy aspects of the MIRAB model are also highly relevant in the context of the (former) Netherlands Antilles as a high level of Dutch aid co-existed with an inefficient two-layered government apparatus (Haan 1998). Presently, however, the MIRAB model is of limited relevance to Aruba or Sint Maarten.

A different distinguishable class of island development is proposed by Baldacchino, with islands exploiting certain economic niches based on a strategic toolset, consisting of a purposely managed (in)migration policy (People); leveraging control over natural resources such as oil, fishing rights or strategic location (Resource management); carving out a high degree of autonomy while remaining part of a larger national entity (Overseas engagement); a distinctive regime in the field of banking and insurance, with a related favorable tax regime (Finance); and powers over air and sea links (Transportation). This island

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\(^3\) The concept of Small Island Developing States as a distinct category of countries sharing common environmental and developmental issues goes back to the 1992 United Nation Conference on Environment and Development (UNCED), which subsequently lead to the Barbados Programme of Action in 1994 (United Nations, 1994).
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development model, or syndrome in the words of Baldacchino, spells PROFIT
(Baldacchino 2006b, p. 48).

The PROFIT model suggested by Baldacchino and Milne (2000), and described
earlier, is certainly relevant to Aruba and Sint Maarten. Specifically the straddling
of the fence by the Netherlands Antilles and its successors, consistently striving
for a maximum level of autonomy, while steadfastly remaining within the
Kingdom and rejecting any suggestion of independence, is a recognizable PROFIT
attribute. The constitutional link to the Netherlands remains an integral part of
the investment climate as well as the ‘bridging’ role the Dutch dependencies
nowadays envision between the Caribbean and Latin America on the one hand
and Europe on the other. Being overshadowed by tourism as the main pillar of
development, neither Aruba’s nor Sint Maarten’s offshore financial sector have
been able to prosper in the new era of weeding out doubtful financial practices,
most clearly represented by the Financial Action Task Force (FATF) established in
1989.

Somewhat surprisingly, the SITE model came to the scene relatively late (McElroy
2006) although it is based on work from the 1990s which introduced the idea of the
‘Tourism Penetration Index’ (TPI) as a measure of the dominance of tourism
in an island economy (McElroy and de Albuquerque 1998, p. 151). The SITE model,
originally mainly applied to Caribbean cases, is predated by an earlier
Tourism-focused variety of the Pacific MIRAB model, postulated in 1996 as ‘TOURAB’
(Guthunz and von Krosigk 1996, p. 18). Useful efforts at delineating definitions
and classifying and categorizing different islands are found in Bertram (2006),
and Baldacchino and Bertram (2009). Of all small island models, the SITE category
is the most relevant to Aruba and Sint Maarten. As a measure of SITE-ness, the
TPI is used by combining and adapting existing tourism-intensity indicators.
McElroy and Hamma (2010, p. 40)\(^4\) show that St Maarten (0.935) and Aruba
(0.525) occupy the first and third positions respectively in terms of TPI,
‘outperforming’ Caribbean tourism frontrunners such as Bermuda, the Cayman
Islands and the US Virgin Islands, based on 2006 values.

\(^4\) See McElroy and Hamma (2010) p. 40 for a full ranking of SITE’s according to the tourism
penetration index (TPI) in 2001 and 2006. Tourism penetration index is calculated as the unweighted
average of three indices of numerical indicators: 1) tourist spending per year per resident 2) year
average tourist density per 1,000 residents 3) the number of rooms per km\(^2\). Each index is calculated
as (indicator value − minimum)/(maximum−minimum). Hence, the highest index value, as well as the
highest TPI value is the one closest approaching the value of 1.
Table 2.1. Selected 2006 tourism statistics and density indicators for Aruba and Sint Maarten

<table>
<thead>
<tr>
<th></th>
<th>Aruba</th>
<th>Sint Maarten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land area (km²)</td>
<td>193</td>
<td>34</td>
</tr>
<tr>
<td>Population</td>
<td>103,000</td>
<td>30,000</td>
</tr>
<tr>
<td>Tourists (stay-over visitors)</td>
<td>694,000</td>
<td>486,000</td>
</tr>
<tr>
<td>Day visitors (cruise passengers)</td>
<td>591,000</td>
<td>1,438,000</td>
</tr>
<tr>
<td>Average stay (nights)</td>
<td>7.9</td>
<td>5</td>
</tr>
<tr>
<td>Room capacity</td>
<td>9,062</td>
<td>3,532</td>
</tr>
<tr>
<td>Tourist spending per year (US$ mln.)</td>
<td>1,076</td>
<td>652</td>
</tr>
<tr>
<td>Spending per resident (US$)</td>
<td>10,447</td>
<td>21,733</td>
</tr>
<tr>
<td>Tourists per 1,000 residents (avg/ year)</td>
<td>162</td>
<td>345</td>
</tr>
<tr>
<td>Rooms per km²</td>
<td>47.0</td>
<td>103.9</td>
</tr>
</tbody>
</table>

Source: (McElroy and Hamma 2010, p. 40) adapted.

As the figures show (Table 2.1), Sint Maarten leans more heavily towards cruise tourism, while Aruba’s focus is on the hotel and timeshare industry. In Sint Maarten, the stay over sector developed rapidly at first but met with the obvious space constraints of its 34 km² surface area compared to Aruba’s 179 km². In 1997, stay over versus cruise visitor proportion was 65:35 for Aruba against 40:60 for Sint Maarten, (Island Government Sint Maarten 1997, p. 15). In 2007 the proportions had diverged even more; the Aruban ratio stabilized at 62:38, while that of Sint Maarten developed to 25:75.

Aruba as well as Sint Maarten fall squarely into the SITE category, with some recognizable PROFIT attributes. Baldacchino and Bertram (2009, p. 152) even place Aruba in the PROFIT/SITE overlap, probably by virtue of its (dwindling) offshore financial and trade sector. The SITE model however offers few analytical tools in terms of recognizing motives and instruments of strategic choices made by island states. In the cases of Aruba and Sint Maarten, it is worthwhile investigating how and why the SITE model was followed so successfully, what the ensuing bottlenecks are, and what possible avenues for improvement might exist.

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5 McElroy and Hamma (2010) mention a surface area for Sint Maarten of 54 km². This is possibly the result of a mix-up with the French side of the island. Reality for the Dutch side is even smaller: 34 km². Correcting for this error elevates the room density as well, from the value of 65.4 calculated by McElroy and Hamma to 103.9 as mentioned here.
Aruba and Sint Maarten: vulnerable or resilient island economies?

This section further analyses the Aruba and Sint Maarten model in terms of the main factors of production; labor, capital and technology, taking into account the institutional framework in which they operate. Starting like Sint Maarten with no significant indigenous production sectors and being almost depopulated, or in the case of Aruba, with a recently collapsed oil industry, there was hardly a question of tourism driving out other types of employment or industry. The risk of a ‘Dutch disease’ situation with one dominant sector crowding out existing alternative economic sectors did not materialize on these islands. Bertram and Poirine (2007, p. 330) argue, therefore, that in this sense ‘Dutch disease’ is treated by the islands as an evolutionary opportunity rather than a threat.

Labor supply plays an unconventional role at the macro-economic level in Aruba and Sint Maarten, being in effect highly adaptable to national economic development. Each phase of expansion by (foreign) direct investment in the tourism industry has been matched by an increase in labor supply through immigration. Moreover, some immigrant labor supply is temporary, so labor supply can even be modified to match short-run cyclical or seasonal changes in demand (CBS Aruba 2002, p.68-70; CBS Aruba 2004, p. 34). In general, however, according to a comparative study into immigration into Caribbean micro-states including Sint Maarten ‘there is nothing more permanent than temporary workers’ and policy objectives to keep large portions of immigrant labor supply continuously rotating are bound to fail (ECLAC 1998, p. 4).

Contrary to many open-economy developing countries, especially around the time of the take-off of Aruba’s and Sint Maarten tourism bonanza, the two island economies cannot be readily qualified as ‘resource-based’. Resource-based economies suffer certain economic development issues not because of the provenance of their product, but rather because of where their product is located in the production chain. In contrast to exporters of products like minerals, oil and agricultural raw materials, Aruba and Sint Maarten deliver a service directly to end users in the global North or in one of the emerging economies. The classic issues of declining barter terms of trade, vulnerability to changes in production techniques, and other downstream dependencies do not apply.

In the present debate on island development economics, the ‘vulnerability’ thesis is under fire. The concept of smallness and remoteness being intrinsically connected to economic vulnerability has been rejected as empirically unsound. In fact, following the definition of ‘vulnerability’ it turns out that islands with higher vulnerability indicators also have higher per capita GDPS (Baldacchino 2006a, p. 862; Bertram and Poirine 2007, p. 329; Baldacchino and Bertram 2009, p. 142). As in many cases, small island economies are doing remarkably well; hence, in spite of or even by virtue of their islandness, an alternative ‘resilience’ paradigm is
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proposed, supported by the concept of ‘strategic flexibility’ (Baldacchino and Bertram 2009, p. 141). Baldacchino and Bertram argue that it is the capability to quickly adapt to changing opportunities in the globalized marketplace that makes an island economy resilient. Success in this respect is promoted by multifunctionality, not with the aim of concurrent diversification – which would be prohibited by diseconomies of scale – but with the goal of being able to quickly switch from one branch or variety of production or service to the other.

Certain institutional factors promote resilience. For instance it appears that many non-sovereign island jurisdictions fare better than those that gained independence (Baldacchino 2006a, p. 853), a circumstance of special relevance to Aruba and Sint Maarten with their continued ties to the Dutch Kingdom.

For the type of hyper-specialization that stems from the absence of economies of scale and the ensuing non-feasibility of risk-spreading through diversification, Bertram and Poirine coined the term ‘speciation’:

“Speciation refers to the sort of specialization in which an entire community takes advantage of a niche of evolutionary opportunity by adopting a particular economic ‘personality’ with its own distinctive set of institutions, policy imperatives, and mutual understandings amongst the participating population.” (Bertram and Poirine 2007, p. 327)

The resilience of these one-pillar economies to external shocks has been illustrated convincingly over the past decade. Shocks like the impact of the 9/11 terrorist attacks on global aviation, the 2005 Natalee Holloway disappearance in Aruba, or the 2008 global financial crisis have affected both economies measurably, but none of these incidents have had a profound or lasting impact. This is mainly due to rapid and extensive reactive marketing efforts from the governments and private sectors alike.

In terms of factors of production, some bottlenecks in the model can be readily predicted. Most obviously, the natural resources in terms of available coastline on both islands are intrinsically limited, and the trend to fill each length of ocean front with tourist accommodation is visible, with the logical consequence of increasing high-rise construction. More indirectly, the surging population fills both islands at the cost of natural surroundings and places both territories at the top of the list of population density in the Caribbean.

Aruba and Sint Maarten as regional migration nodes

Given the intertwined nature of Aruba and Sint Maarten and their neighboring states and territories in terms of migration, it is useful to see their development model as a regional rather than a national one. Intra-Caribbean migration as such
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is hardly new; labor demand-driven migration between the islands has occurred in the region for centuries, with peaks in demand ranging from the seasonal demand of the sugar cane industry to projects like the construction of the Panama Canal. The trend we see nowadays is more structural however. The movement from being a net exporter of labor to a net importer in the Caribbean is described by McElroy and Albuquerque (1988, p. 30) as a ‘migration transition’.

Current structural migration movements have probably changed the Aruban and Sint Maarten societies irreversibly. The extent of tourism development in Aruba as well as in Sint Maarten almost immediately outgrew the supply on the local labor markets. This is remarkable in the Aruban case, as their tourism development was initially intended to compensate for the loss of jobs following the closing of the Lago refinery. Figure 2.1 clearly shows the population dip following the 1985 closing of the refinery followed by the rapid take-off of the late 1980s and the consistent population growth thereafter. As a point of reference, the cumulative net migration from 1980 onwards is shown in the same graph, making it clear that some 24,000 of the more than 40,000 population growth after 1980 may be attributed to structural immigration.

Although the new hotel industry absorbed a great number of local workers, new immigrant labor was employed from the start, hailing from the Latin American mainland and the larger Caribbean islands. The vast majority of new positions was filled by immigrants. According to CBS Aruba (2004, p. 85), over the period 1991–2000:

> “the new jobs created by Aruba’s growing economy were increasingly filled by foreign workers; [...] Approximately 12,700 jobs were added to the labour force. Natives represented only a small share of this labour market growth: 10.8 per cent” (out of a total growth of 43.4 per cent over this 10-year period, ed.).

The rest of the growth (32.6 per cent) can be attributed to new immigrants. As the Sint Maarten tourism industry took off somewhat earlier, the demographic transition took place sooner as well. According to Johnson (1987, p. 103), it started as early as 1980: ‘The uncontrolled growth of the island has led to a massive influx of workers, the majority of whom come from other Caribbean islands’. According to Haan (1998, p. 87), in 1981 40 per cent of the Sint Maarten population was born on the island, 20 per cent in other islands of the Netherlands Antilles, and 40 per cent were immigrants, mainly from the surrounding region.
From being close to depopulated during and after the Second World War, the economic development associated with tourism brought Sintmaarteners back from the dwindling oil industries of Aruba and Curaçao and attracted numerous immigrants from the wider Caribbean. Figure 2.2 shows the extremely high contribution of immigration to Sint Maarten population growth in the tourism-dominated era. Clearly visible as well are the effects on population numbers of the devastation and economic downturn caused by hurricanes Luis in 1995 and Lenny in 1999. More than in the case of Aruba, however, official population statistics pertaining to Sint Maarten should be handled with caution. According to Haan (1998, p. 87), as early as 1995 the number of undocumented residents was estimated at more than 10–12,000, an estimate consistently mentioned in the years since. In 1995 this constituted roughly 25 per cent of the actual population.
As well as directly tourism-related employment, there has also been a large growth in the construction sector. In the case of Aruba, indigenous workers on balance actually moved out of the hotel sector and into other areas of occupation. CBS Aruba (2004, p. 87) reports that in 2000, about 60 per cent of all persons born in developing countries were either working in the sector’s hotels and restaurants, wholesale and retail trade, repair or construction. The distribution of foreigners from developing countries in Aruba over the different industries displays only slight changes between 1991 and 2000. In the same period, employment of persons born in Aruba increased strongly in the highest categories (senior administrators, managers, professionals) and actually shrank in the lower categories. Clearly, the indigenous population moved into the positions of higher pay and responsibility, while the labor market was resupplied at the base with immigrant labor. Data of comparable quality on the Sint Maarten situation is not

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*Source: STAT Sint Maarten/CBS Curaçao/CBS Netherlands Antilles. It should be noted that the volatility of the natural growth line in the population statistics is mainly due to frequent retroactive corrections of (previously estimated) population statistics over the years, upon the availability of population census results. Although the year-to-year consistency of the historic data is poor, a long-term trend can be discerned.*
readily available, but there is an over-representation of those with Dutch citizenship in civil service and in better-paid positions in the private sector.

**Aruba and Sint Maarten: rapid extensive growth in an island setting**

At first glance, Aruba as well as Sint Maarten is a shining example of successful, fast economic growth based on a commitment to the tourism industry, as is apparent from GDP numbers, the TPI index and the SITE classification, as discussed above. This section will focus on a number of questions regarding labor productivity and average income. Did the volume growth in tourism activities result in an equal or perhaps higher growth in real GDP in either country? Allowing for population growth, did real per capita GDP show any significant increase in Aruba or Sint Maarten since the onset of large-scale tourism? After all, with the development of the tourism industry over the years, we would expect labor productivity to have grown as well. A certain evolution in the type and nature of hospitality products offered, economies of scale, increased linkages, and positive improvements in infrastructure might all have contributed to a higher value added per worker indicated by a rising real per capita GDP.

However, immigrant workers are typically not immediately accompanied by their families, and even less by retirees. This effect increases the proportion of the economically active to the total population, which in turn leads to an overstatement of productivity when measured through real per capita GDP. In other words, under circumstances of steady immigration of economically active persons, with actual labor productivity assumed constant, we should see a steadily increasing real per capita GDP.
Figure 2.3. Aruba: indices of selected tourism indicators and real GDP (1990=100)

Source: CBS Aruba, indices calculated by author, base year 1990

Figure 2.3 shows that in Aruba, since the firm establishment of the tourism sector in its present form in 1990, volume has grown more than 60 per cent in terms of stay over capacity and almost doubled in visitor nights. Real GDP however, is only just keeping up with the number of rooms and visitor nights. Taking into account the contribution of cruise tourism growth and the absence of significant other economic sectors, these indicators point to a stagnant or even decreasing impact of tourism volume on economic growth, where an increase in value added per unit of volume would have pointed to increasing product quality and labor productivity.
Figure 2.4. Sint Maarten selected tourism indicators and real GDP indices (1991=100)

Sources: Haan (1998), CBS Netherlands Antilles, STAT Sint Maarten, Harbour Group of Companies (Sint Maarten), Tourism department (Sint Maarten), indices calculated, base year 1991.

Figure 2.4 shows that cruise tourism has become an even more dominant source of activity in Sint Maarten over the past decades. Over the same period, the number of stay over visitors declined, though stabilized after the mid-1990s hurricane disaster. The cruise tourism line clearly shows the effects of the 1995 and 1999 hurricanes as well. Cruise tourism stagnated again after 2005 and was further hit by the 2008 financial crisis. Economic recovery and expansion of harbor facilities brought a renewed growth until the present day. The available macro-economic model for Sint Maarten indicates that the (direct) contributions of total stay over tourism and cruise tourism to GDP are 56%–44% in favor of the former.

Based on this, a 20 per cent drop in stay over tourism combined with a 250 per cent rise in cruise tourists compared to 1991 levels should have resulted in a real GDP growth of more than the roughly 60 per cent now recorded. Therefore, as in the case of Aruba, there is a lack of translation of tourism volume growth into real GDP increase, and therefore a lack of productivity growth.

*Figure 2.5. Real per capita GDP Aruba and Sint Maarten, 1980-2010 (US$; CPI 1996=100)*

In Figure 2.5, for both islands, real per capita GDP is chosen as an indicator for labor productivity. The Aruban development clearly shows the crash associated with the closure of the Lago in 1985, and the subsequent rapid recovery. After 1990 the gain in real per capita GDP levels off, not structurally increasing again until the present day.

The Sint Maarten curve in Figure 2.5 clearly shows an initial gain in productivity similar to Aruba associated with the tourism boom of the 1980s, again levelling off as soon as the tourism sector becomes fully dominant in the economy. As we

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have seen earlier, in both cases further development does increase the volume of tourism as well as the volume of the labor force, partly through immigration. However, the quality of economic activity in terms of productivity remains unchanged. As stated above, this effect is compounded when taking into account that the proportion of economically active persons to the total population actually increased through immigration, as immigrants mostly fall into economically active age groups.

When real per capita GDP is used as a measure of average income, the conclusion is similar. The trend is not rising despite the rapid growth of total GDP. The usual reservations brought forward when using real per capita GDP as an income measure only make matters worse. To name one important factor; in a situation with heavy foreign investment, part of profits and interest comprised in GDP will flow overseas resulting in a GNI (Gross National Income) smaller than the GDP. Assuming the part of value added flowing to foreign recipients is more or less constant, this would not change the horizontal direction of the per capita GDP trend, rather it would just shift it to a lower level.

**Perspectives: stagnation or evolution?**

Considering the combined effect of the immigration-dependent, extensive economic growth trends outlined above with the obvious spatial constraints of both islands, the outlook for Aruba and Sint Maarten seems bleak.

The observation that environmental and physical space (often described in terms of ‘carrying capacity’) is inevitably running out has been made before; see for instance Cole and Razak (2009, p. 414) pertaining to Aruba, or as early as 2004 in the case of Sint Maarten’s carrying capacity study (TTCI 2004). It is obvious even to the casual observer, and unfortunately also to many visitors, that the intensity of the tourism industry and the increasing population density negatively affect the tourism product itself and the quality of life in general. The concept of ‘carrying capacity’ however does not come with many useful operational indicators (Johnson, P. and Thomas 1996, p. 126). Indeed, although theoretically a Caribbean tourist version of Singapore may not be out of the question, the cost of compensating for the negative externalities involved will probably become prohibitive.

The data presented here paint a picture of a rather consistent extensive growth model over several decades, which makes it a very real question why no successful attempt was made in either country to shift economic development towards a more productive, less immigration-dependent and less space-consuming direction. After all, even outside the context of island limitations, warnings about the weariness on the demand side of tourism and the ensuing need for a tourist destination to constantly reinvent itself go back to Butler’s tourism life cycle.
concept of the 1980s (Butler 1980, p. 7). Using Butler’s terms, Aruba and Sint Maarten have been residing in the ‘consolidation stage’ for decades, and staving off the ensuing ‘stagnation stage’ will not be successful much longer.

While Aruba and Sint Maarten seem to be good examples of dedicated, full-blown ‘speciation’ as postulated by Bertram and Poirine (2007, p. 327), both islands seem to lack the real strategic flexibility found in some other islands to effectively take their tourism industry to the next level. The fact that smaller scale, higher value added tourism development is in fact possible in the Caribbean is shown by examples like Anguilla, in the direction of high-end luxury tourism, or by Dominica, in the direction of eco-tourism. Neither Aruba nor Sint Maarten, therefore, entirely fulfils the niche-oriented potential shown by some other island developing nations in the PROFIT or SITE categories.

As the current extensive growth model has persisted for so long, the assumption is justified that this model must be in the interest of the major stakeholders, or is at least perceived by them to be so. A full exploration of these interests is outside the scope of this article, but the data at hand provides us with a few pointers. Externally, foreign investors in a certain category of the tourism industry evidently still consider Aruba as well as Sint Maarten attractive investment locations offering a known and consistent investment climate with stable demand factors. Internally, however, governments in both islands have not been successful in more selectively attracting a different class of investments. Lip service has been paid to such upgrading objectives since the 1990s, but few results have been visible. This may indicate shortcomings in the execution of policy, a lack of political urgency or even the absence of a real interest in change.

Certain characteristics of the labor market in both countries offer clues on interests perpetuating the current model as well. As immigrant labor has been continually added, mostly at the bottom of the social pyramid, those who have Dutch citizenship have increasingly moved into mid-level and higher positions in the private sector, and certainly claimed most positions in the government apparatus (CBS Aruba 2004, p. 87). As a consequence, while overall average real per capita GDP and income may have been stagnant, this is most probably not true for the average income of the pre-immigration population of both islands. The extent of the socio-economic ‘moving up’ of the original population and its effects on the perseverance of the current development model is one of the most interesting questions arising from the available data. In this context, the phenomenon of ‘rent-seeking’ behavior by organizations and individuals, as described for the Netherlands Antilles by Haan (1998), also merits further research.

The direction in which perspectives for a more sustainable evolution of Aruba and Sint Maarten are to be found are largely implied in the shortcomings of the
current model. As an overall approach, the in itself defensible course of ‘speciation’ needs to be complemented with the right amount of strategic flexibility. Within the tourism sector, new niches with higher value added need to be sought out, while the bulk of the current hospitality industry needs to shrink in quantity and grow in quality. Premium trends in tourism demand need to be sought out and catered to more effectively. Recent attention to the positive impact of business tourism on development is an example of such an approach (Rogerson 2014). Such initiatives would take Aruba and Sint Maarten back on the track of ‘resilience’. Achievement of these objectives will take strategic efforts in close public-private cooperation, affecting all factors of production and the institutional framework in which they operate.

To this end, a different kind of investor has to be attracted; one that brings a technologically more advanced ‘production process’ indicated, for instance, by higher levels of value added per room and per employee. This should be feasible in itself; both islands constitute known and proven markets and investment locations, and there is no a priori reason why the investment climate would not support a more productive class of investment. Even if most of the tourism knowhow implemented comes embedded in foreign direct investments, this is by no means a necessity. With the level of experience developed in Aruba and Sint Maarten over the past decade, the homegrown portion of their tourism industry should certainly be able to expand.

Regardless of the source of capital invested, the key to success will be in the levels of education and skills of the workforce complementary to the new formulas implemented, and in the physical and institutional ‘infrastructure’ offered by governments. Higher and more effective education of the existing workforce will be necessary to operate more advanced (luxurious, varied, specialized) hospitality formulas. Furthermore, a more luxurious class of hotels, condominiums or timeshare developments can only prosper in upgraded surroundings as well. This ranges from better roads to a cleaner environment, less crowding and different types of adjoining leisure activities.

As to human resources, alternative solutions will greatly impact the quality and quantity of the labor market. Given the islands’ circumstances, a more intensive type of growth necessarily implies substantial investments in the education and improved skill set of workers, at the same time eliminating the need for growth of the total workforce. Eventually, this may halt or reverse the migration trend. This is true for both islands but especially important in Sint Maarten, where population density is the highest in the Caribbean, and adversely affects quality of life and the tourism product.
Conclusions

Aruba and Sint Maarten constitute a specific subset of the SITE category, distinguishable by its exceptional rate of tourism volume expansion as well as immigration, even by the standards of the SITE model itself. Within the vulnerability-resilience debate, the evidence regarding Aruba and Sint Maarten points towards resilience, as even the heavy external shocks of the past decades have not fundamentally weakened their growth paths. Both islands fit the description of the ‘speciation’ strategy outlined in the island development literature. Population figures of both islands clearly show the very high levels of net immigration in comparison to natural population increase, underscoring the immigration-dependent nature of their development model. This phenomenon is stronger for Sint Maarten than for Aruba. The dependence of both countries’ economic development on immigrant labor makes their development a regionally-embedded rather than a ‘stand-alone’ island model.

Comparison of selected tourism volume indicators to real GDP growth for both islands shows that real GDP growth has not exceeded production volume growth since 1990. Productivity per unit of tourism capacity or yield per unit of tourism service rendered has not increased. The data therefore points clearly towards a model of high-paced extensive growth, combining rising volume with lagging productivity.

An assessment of real per capita GDP development over time yields the same conclusion; after a period of rising real per capita GDP during the initial years of establishment of the tourism industry in its current form, both countries’ real per capita GDP levels are no longer increasing, with Aruba settling at a slightly higher level than Sint Maarten. The indicators observed in both countries point to a model of extensive economic growth, i.e. a situation of growth in output volume without an increase in value added or output per unit of production factor.

Combining the fact of extensive growth with the self-evident limited space of both island territories, the Aruba/Sint Maarten model can clearly not be perpetuated in the long term. The future perspective is, therefore, either one of stagnation when the current model hits its physical boundaries, or one of evolution, where a different type of investment, embodying a higher level of technology, is combined with a more highly educated workforce and a more effective government administration, to increase productivity and real per capita GDP in both countries.