CBCS Working Paper

The Real Contribution of Tourism to the Balance of Payments of Curaçao and Sint Maarten

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October 2024

The views expressed in this paper are those of the authors and do not necessarily reflect those of the Centrale Bank van Curaçao en Sint Maarten (CBCS).

Abstract

This paper examines the real contribution of tourism to the balance of payments for Curaçao and Sint Maarten. Using a combination of balance of payments data, GDP statistics, and econometric analysis, the study applies cointegration and Granger causality techniques to determine the relationship between tourism exports and merchandise imports in Curaçao and Sint Maarten. The results suggest that in Sint Maarten, a one percent increase in international tourism induces around 0.23% in additional merchandise imports, substantially lowering the net contribution of international tourism. However, the empirical results fail to find significant evidence of a relationship for Curaçao. The results further highlight the essential role tourism plays in generating foreign exchange income for both economies, while also underlining the risks associated with increased dependency on tourism for both islands. Policy implications focus on strategies to optimize foreign exchange earnings from the tourism sector along with other high-potential sectors to address the balance of payments deficit in the long-run.

JEL classification numbers:	C32, F10, F30, F32, L83, Z32, Z39
Keywords:	Tourism exports, Thirlwall's law, cointegration, Granger
	causality, import elasticity.
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1 Introduction

Recording a balance of payments equilibrium is not a common phenomenon. Several economies face deficits requiring foreign financing. These circumstances may not be sustainable in the long-run if these deficits are sizeable. In the aftermath of the international financial crisis, some economies, particularly Greece and Portugal, experienced the consequences of financial markets shutting down, thereby constraining their ability to finance their balance of payments' deficits. Such a situation occurs when doubts arise about the sustainability of the balance of payments deficit, meaning the ability of an economy to generate sufficient foreign exchange income in the future to balance and eventually repay the foreign debt. Additionally, a balance of payments deficit can cause a country's central bank to run down its foreign exchange reserves. If this process persists and reserves reach a critically low level, a sudden speculative attack could force the central bank to adjust the exchange rate (Frankel, 2006). This problem is greater for countries operating in a fixed exchange rate regime, as is the case for the two islands analysed in this paper, namely the monetary union countries Curaçao and Sint Maarten, which have a fixed peg to the United States (US) dollar.¹

Conversely, surpluses on the balance of payments may not necessarily be beneficial to a country's economy due to the inflationary pressures that come with it. In the long-run, the economy might become overly dependent on export-driven growth. This is why economists frequently argue that strengthening domestic demand is a viable solution whenever balance of payments surpluses are structurally large (IMF, 2022). The argument is that by strengthening domestic demand, imports will be stimulated, and some exports may be contained, thereby reducing the surplus on the balance of payments.

The balance of payments is a statistical overview of all economic transactions between residents of a country and the rest of the world during a specified period (IMF, 2009). This involves inflows and outflows of foreign exchange. The balance of payments comprises three accounts: the current account, the capital account, and the financial account. The current account records transactions in goods, services, (primary) income, and current transfers (also termed secondary income). Meanwhile, the capital account shows acquisitions and disposals of non-produced non-financial assets, such as patents and copyrights, and capital transfers, such as grants. The financial account presents the net acquisition of financial assets and net incurrence of financial liabilities, namely direct investment assets and liabilities, portfolio investment assets and liabilities, and other investment assets and liabilities. The current and capital accounts indicate transactions in gross terms, whereas the financial account displays transactions in net terms.

The balance of payments is based on a double-entry accounting system (IMF, 2009). Each transaction involving an inflow or outflow of funds is recorded as two entries, for example, an outflow of funds and the associated acquisition/inflow of goods, services, or assets and vice versa. In theory, the sum of all inflows is equal to the sum of all outflows. However, in practice, these entries often do not balance, leading to net errors and omissions which are separately recorded on the balance of payments. The sum of the current and capital account balances illustrates the net lending (surplus) or net borrowing (deficit) of a country vis-à-vis the rest of the world. The net balance of the financial account reflects how the net lending to or net borrowing from the rest of the world is financed.

¹ The domestic currencies in the Monetary Union of Curaçao and Sint Maarten are pegged at a fixed rate of 1.79 to the US dollar.

Tourism is the export industry of a country where residents sell goods and services to international tourists. It is typically recorded as travel services on the current account of the balance of payments.² Graph 1 shows the development of the current account balance of the balance of payments for Curaçao and Sint Maarten. Sint Maarten's current account balance fluctuates around a balanced path, except in the aftermath of natural disasters. On the contrary, in Curaçao, the current account balance exhibits persistent sizeable deficits. Sint Maarten has a relatively larger tourism industry compared to Curaçao, especially when considering its contribution to Gross Domestic Product (GDP) (see table 2). This explains why some advocate on focusing on tourism as a means of closing the deficit on the current account of the balance of payments of the Monetary Union formed by Curaçao and Sint Maarten.







The transactions of the tourism sector on the balance of payments occur as follows. In the host country, where the international tourists purchase goods and services, transactions are recorded on the inflow side of the current account of the balance of payments (travel category). In the source country, where the international tourists travel from, that spending is recorded on the outflow side of the current account of the balance of payments (travel category). It must be noted that the evaluation of the tourism sector based on only the inflow and outflow side of the travel category is incomplete, because international tourism involves transactions that affect other categories on the balance of payments which are not explicitly evident, such as:

Goods and services category (current account): Tourists consume products in the host country which generate expenses by the host country to acquire imported products (e.g., food & beverages, souvenirs) that are intended to meet the demands of the international tourists. The impact is smaller, the larger the locally produced component of the purchases by the international tourists is. These flows are recorded as general merchandise imports on the balance of payments because they relate to foreign exchange moving out of the country. At the same time, tourists make use of local services that are indirectly related to tourism, such as transportation and

 $^{^{2}}$ For Curaçao and Sint Maarten, travel exports are estimated based on the number of (stay-over and cruise) tourists, the average length of stay per tourist, and the average daily expenditure per tourist. The countries for which no recent average daily expenditure is available from the official sources, the latest average daily expenditure is corrected for the inflation index of the respective period.

business services. These flows are recorded as exports in the services component of the balance of payments because they relate to foreign exchange entering the country.

- *Current transfers category (current account)*: Part of the income generated by international tourism may be transferred abroad. Particularly in developing countries, tourism may require qualified personnel who are hired from abroad and who transfer part of their income abroad (e.g., to their family). These flows are recorded as workers' remittance expenditures in the current transfers component of the balance of payments and relate to foreign exchange leaving the country.
- Direct investment category (financial account): International tourism impacts the local (tourism) infrastructure. Especially in Curaçao and Sint Maarten, the development of the international tourism industry and infrastructure is frequently financed with foreign funds. These flows are recorded as financial liabilities on the balance of payments because they relate to foreign exchange entering the country to finance tourism infrastructure.
- Income category (current account): The interest payments related to the financing of the previously mentioned investments are recorded as direct investment expenditure on the balance of payments because they relate to foreign exchange leaving the country.

Overall, the balance of payments records all inflows and outflows of foreign exchange which originate from transactions between residents and non-residents. Therefore, when assessing the tourism figures we should be able to infer the net contribution of the inbound tourism industry to the economies of Curaçao and Sint Maarten. However, contrary to other economic activities where it is quite straightforward to establish the link between the inflows and outflows of foreign exchange, this is not the case for the tourism industry.

Although major efforts are made to identify the exact outflow and inflow of foreign exchange in the tourism sector, it is challenging to capture all transactions related to tourism. Especially in the case of small open economies like Curaçao and Sint Maarten with limited natural resources and domestic production, a significant part of the recorded domestic consumption may be related to international tourists as the international tourism industry has a substantial share in these economies. Examples are when international tourists bus tickets, gas at the gas station, food and beverages at restaurants or supermarkets. Both the national accounts and the balance of payments are unable to fully capture these purchases as purchases by international tourists.

Any economic activity generating foreign exchange inevitably leads to a subsequent outflow of foreign currency. This occurs because local salary disbursements are frequently used, in part or in substantial amounts, to purchase imported goods and services. The impact is larger in economies like Curaçao and Sint Maarten due to the more substantial import component of their total consumption. The same logic applies to the income earned by those employed by the international tourism industry. In principle, the notion is applicable to every industry generating foreign exchange. The distinguishing feature of international tourism is that, aside from the generated salaries, wages, and profits that induce imports, expenditures by international tourists also directly influence the balance of payments through the import of goods and services, especially general merchandise (like food and beverages). To summarize, international tourism inflows influence or cause additional outflows of foreign exchange which are not fully captured by the balance of payments statistics as tourism related. We argue that, to some extent, the size of general merchandise imports, especially food and beverages, is influenced by the international tourism in Curaçao and Sint Maarten.

This paper intends to quantify the real net contribution of tourism to the balance of payments of Curaçao and Sint Maarten. To do so, we first examine to what extent tourism exports are generating additional

imports of merchandise products to supply the tourism sector. By considering the additional imports of merchandise products caused by tourism exports along with the total tourism exports, a more accurate estimate of the net contribution of tourism exports to the financing of the balance of payments may be obtained. Aside from its undoubted economic importance and contribution to employment, the extent to which tourism exports contribute to reducing the deficit on the balance of payments may more accurately be assessed.

We seek to contribute to the existing literature by focusing on two small open economies in the Caribbean. Previous research in the international tourism and balance of payments field has investigated mostly (developed) economies in Europe and Asia (Akbulaev and Mirzayeva, 2020; Çelik et al., 2013; Cihangir et al., 2014; Halicioglu, 2012; Lee and Chang, 2008; Ongan, 2008; Shakouri et al., 2017; Thano, 2015; Zaei and Zaei, 2013; Zortuk, 2009). For the Caribbean, studies have mostly focused on Barbados (Lorde, Lowe, and Francis, 2013). The remainder of this paper is organized as follows. It begins with a review of relevant literature, followed by a brief overview of the significance of international tourism for the economies of Curaçao and Sint Maarten. Subsequently, the paper discusses the balance of payments of these islands and examines the impact of international tourism on their balance of payments. An analysis is then conducted to determine whether other components of the balance of payments are influenced by international tourism. Finally, the methodology employed in this study and its results are presented, and conclusions are drawn.

2 Literature review

Generally, research on international tourism has focused on three areas. The first line of research refers to the contribution of international tourism to economic growth. International tourism may be a growth engine for an economy, especially small open economies with limited national resources and domestic production (Shakouri et al., 2017). This means that in economies with sparse capabilities to export value-added products or services, international tourism may provide foreign exchange inflows and play a key role in financing the current account deficit of the balance of payments. It may ensure the foreign exchange income is needed to finance the import of goods and services and capital goods. In addition, many researchers agree that international tourism has a strong impact on employment (Ennew, 2003; Gómez López & Barrón Arreola, 2019; International Labor Organization, 2019). It is one of the few industries where modern technology does not necessarily reduce the number of working staff. In that sense, international tourism acts as a catalyst for social and economic inclusion, contributing to sustainable development (Partale & Partale, 2021; Grun, 2021). For example, Tariq, Ahmad, & Hussain (2015) established that international tourism and international trade contribute positively to economic growth, employment, and poverty reduction. Vanegas and Croes (2007) went a step further in their research, even proposing specialization in international tourism for Nicaragua to reduce poverty.

In addition, there is an interesting area of research for those advocating export-led growth, implying that it is mainly through the expansion of exports that the growth rate can be raised without worsening the balance of payments. However, there is a limit to the international debt-to-GDP ratio, beyond which financial markets become vulnerable (Thirlwall, 1979). The same growth rate of exports in different countries will not necessarily generate the same economic growth rate, because the imports induced by growth differ between countries. Thirlwall (1979) postulated that no country can grow faster than the growth rate consistent with the balance of payments equilibrium on its current account, unless it can finance deficits indefinitely, which is not feasible. According to this so-called Thirlwall's law, a relation among the economic growth rate, the growth rate of exports, and the income elasticity of imports is established in the long-run. The law states that an economy's growth path is sustainable only if the

growing demand for imports is related to economic growth and financed by the revenues from exports. Thus, economic growth is constrained at a rate that is imposed by the balance of payments, which can explain why growth rates among countries differ. Thirlwall (2011) found that the economic growth rate in several developed countries during the periods 1953-76 and 1951-73 approximates the export growth rate divided by the income elasticity of demand for imports, empirically supporting Thirlwall's law. Halicioglu (2012) also found evidence for Thirlwall's law in Turkey during the period of 1980-2008. Furthermore, various studies validate a positive relation between international tourism and economic growth. Shakouri et al. (2017) found that international tourism was an important source of foreign exchange income needed to finance economic growth in Iran during the period 1985-2013. He found a positive association between international tourism spending and economic growth in the short-run and the long-run. Zortuk (2009) established a long-run equilibrium relationship between economic growth and tourist arrivals with unidirectional causality from tourist arrivals to economic growth in Turkey from the first quarter of 1990 to the third quarter of 2008. Moreover, Lee and Chang (2008) showed that international tourism has a more significant impact on economic growth in non-OECD countries than in OECD countries. They pointed to a unidirectional causal relationship between tourism and economic growth in OECD countries and a bidirectional relationship in non-OECD countries for the period 1990-2002.

The second line of research refers to the contribution of international tourism to the sustainability of the current account of the balance of payments. The sustainability of the current account balance refers to a lack of persistent deficits. In principle, current account deficits are not problematic. Countries tend to incur said deficits to foster demand to counter the adverse impact of a recession (Lorde et al., 2010). Nevertheless, if the deficits become persistent, the accumulation of external debt to finance them leads to a great burden in the future (Wu, 2000). Lorde et al. (2013) investigated the contribution of tourism receipts to the sustainability of the current account balance in Barbados. They used the inter-temporal budget approach of Hakkio and Rush (1991) and Husted (1992) with modification by Quintos (1995) and concluded that only when accounting for the contribution of international tourism the current account balance of Barbados is weakly sustainable. Without the contribution of international tourism, the current account balance of Barbados is not sustainable. This confirms Barbados' dependence on international tourism to finance its balance of payments. Ongan (2008) followed a similar approach and found that despite the rapid development of international tourism in Turkey, its current account balance is not sustainable. Akbulaev and Mirzayeva (2020) did not only find evidence of the contribution of international tourism to finance the balance of payments of Azerbaijan, but also showed that international tourism works as a catalyst for exports in general. A 1% increase in foreign exchange proceeds from international tourism is associated with an average growth of 0.57% in the export of goods from other industries and an average increase of 0.59% in the trade balance of the balance of payments of Azerbaijan.

Lastly, the third line of research concerns the contribution of tourism to imports. Import leakages occur when tourism exports induce imports (Hernández-Martín, 2007). These leakages limit the positive impact of tourism exports on economic growth and the current account of the balance of payments. According to Thano (2015), many countries face serious problems due to the current account deficit on their balance of payments including shortages of reserve currency, increased foreign debt, depreciation of national currency, and vulnerability to foreign shocks. The governments of those countries therefore seek to stimulate sectors which can increase foreign exchange inflows needed to finance said deficit. International tourism is rightfully considered one of those sectors. Cihangir et al. (2014) found that tourism revenues in Turkey have positive effects on the current account of its balance of payments over the period 1984-2013. Çelik et al. (2013) reached the same conclusion for Turkey for the years 1984 to 2012, quantifying a reduction of the balance of payments deficit by 14% thanks to international tourism.

Additionally, Zaei and Zaei (2013) found that the international tourism industry can play a significant role in the economic development of India and the improvement of its balance of payments.

Overall, the literature seems to suggest that international tourism can have a positive effect on a country's economy and balance of payments. However, countries with a high degree of specialization in international tourism usually run a deficit in their merchandise trade. Especially in small open economies, there are concerns about the relationship between international tourism and imports because international tourism demand induces imports. International tourism activities may take place at the expense of other activities because the country has comparative advantages in international tourism. In such cases, the concerns are not legitimate because the inflow of foreign exchange due to international tourism. But if the country has no comparative advantages in international tourism, those concerns may be legitimate. Especially if the authorities introduce market distortions by favouring the development of the international tourism industry at the detriment of other economic activities. Hence, it is important to identify the real net impact of tourism on the balance of payments.

3 The economies of Curaçao and Sint Maarten

Although Curaçao and Sint Maarten form a monetary union, the exchange of goods and services between the two economies is quite limited. This has to do with the nature of the economies at hand, namely service-based economies with limited local manufacturing and agriculture. The second factor that causes these limited business flows is related to the geographical distance (over 900 kilometres) between these two islands. The exchanges are essentially related to specialized services that are mostly provided by Curaçao entities to customers in Sint Maarten. Consequently, we are not referring to a traditional monetary union with strong economic ties and many business transactions between the countries constituting the monetary union.³ This paper analyses economies that are tied into a monetary union sharing the same currency and the same monetary policy, which because of the peg to the US dollar is in effect dictated by the Federal Reserve Bank (Fed). There are also some tourism transactions between the islands by natives from one island residing on the other island, thus they are usually visiting their families and friends. In addition, there is some business travel between the islands as some businesses have offices on both islands. However, this is not a sizeable tourism flow within the Monetary Union.

The economy of Curaçao has historically been more diversified than that of Sint Maarten. There were several economic pillars that drove Curaçao's economy, which have come under stress over the last twenty years due to external shocks and lack of structural adjustment to absorb these shocks. First, the economy has been severely affected by the social-economic situation in Venezuela. The closing of the borders between Curaçao and Venezuela in early 2019 dictated the end of tourism flows from Venezuela. The closure of the oil refinery that was leased by Venezuelan oil state company PDVSA later that year further amplified the adverse impact of the situation in Venezuela on the economy of Curaçao. Second, some local airline (Insel Air and Dutch Antilles Express [DAE]) collapsed because of the devaluation of the Venezuelan Bolívar, foreign exchange controls that were put in place by the Venezuelan authorities, and the social-economic situation in Venezuela. Third, the lack of a wide network of tax treaties and the international developments with regards to taxation posed a major challenge to the financial services industry. Finally, the competition from the Asian region has made it much more challenging for the ship-repair industry to prosper. These developments in recent years have caused Curaçao to become increasingly dependent on tourism.

³ These transactions are not reflected on the balance of payments of the Monetary Union.

Meanwhile, the economy of Sint Maarten is a specialized economy, mostly depending on international tourism consisting of both stay-over and cruise tourists. Therefore, Sint Maarten has a relatively larger tourism industry in terms of contribution to Gross Domestic Product (GDP) compared to Curaçao. Even though the number of cruise tourists significantly outweighs stay-over arrivals, foreign exchange earnings from cruise tourism only represent around 33%⁴ of total tourism earnings as they stay for a shorter period on the island compared to stay-over tourists. The general view is that Sint Maarten is a net contributor to the balance of payments of the Monetary Union due to the size of the foreign exchange inflows from international tourism to Sint Maarten. As a result, the deficit on the balance of payments of the Monetary Union is typically attributed to Curaçao (see graph 1). The economy of Sint Maarten, however, took a severe hit in the third quarter of 2017 when hurricanes Irma and Maria caused deaths and damaged the country's production capacity and infrastructure and in turn its current account balance. The adverse effects of the hurricanes are long lasting as reconstruction activities are still ongoing in 2024.

There are several areas to look at when analysing the tourism sectors of Curaçao and Sint Maarten. First, table 1 gives an overview of the main tourism indicators of Curaçao and Sint Maarten in 2019 and sheds light on both the similarities and the differences between the tourism sectors of Curaçao and Sint Maarten. Tourists seem to spend more when looking at the Average Daily Rate (ADR) and the Average Daily Expenditure (ADE) in Curaçao compared to Sint Maarten. Meanwhile, Sint Maarten is the clear leader in cruise tourism as they welcome twice as many cruise passengers as Curaçao while being the smaller island out of the two and having suffered from a devastating natural disaster two years prior. This is mainly due to Sint Maarten's geographical location as the country is closer to the United States and is surrounded by many other cruise destinations. In addition, some cruise lines use Sint Maarten's harbour as a homeport (ports where passengers begin or end their cruises), which in turn brings additional economic activity to its tourism sector.

Table 1: Tourism sector indicators in 2019					
	Curaçao	Sint Maarten			
Average Daily Rate (ADR) in USD	158.51	120.58			
Average Daily Expenditure (ADE) in USD	171.00	130.45*			
Average occupancy rate (%)	72.1	77.5			
Total number of stay-over tourists	463,652	319,695			
Total number of cruise tourists	808,380	1,631,537			

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Source: CBCS estimates, CTB Curaçao, STAT & SHTA Sint Maarten

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* The ADE reported for Sint Maarten is a CBCS estimate and differs from the official estimates according to the Tourist Exit Survey of Sint Maarten

Another way to measure the development in tourism is to look at international tourism's contribution to the current account, measured as foreign exchange earnings from travel as a share of total exports of goods and services which tends to be relatively large for small open economies like Curaçao and Sint Maarten. The economy of Sint Maarten has been highly specialized in tourism for many years, while Curaçao's tourism sector has been catching up more recently but remains far behind Sint Maarten's levels. In 2019, international tourism as a share of total export of goods and services stood at 23.5% for Curaçao, 53.0% for Sint Maarten (graph 2).

⁴ Average cruise tourism earnings as a percentage of the total foreign exchange earnings from tourism for the period 2004-16.





The total number of international tourists (i.e., cruise and stay-over) visiting each island over the years is shown in graph 3. The number of tourists visiting Sint Maarten significantly outweighs the numbers of Curaçao, further illustrating Sint Maarten's higher degree of specialization in tourism. However, as with the share of foreign exchange earnings, the gap between Curaçao and Sint Maarten has diminished over time with the expansion of the tourism industry on Curaçao in recent years. Graph 3 also shows the negative impact that the hurricanes had on the tourist arrivals in Sint Maarten as of 2017. In 2019, the number of international tourists was around 1.3 million in Curaçao and around 2.0 million in Sint Maarten.





The average composition of the GDP in Curaçao and Sint Maarten by main sectors is shown in table 2.⁵ It is important to note that the tourism industry on these islands is directly linked to the hotel & restaurants sector as several tourists reside in hotels and have meals at restaurants during their stay. In addition, but to a lesser extent, sectors such as the wholesale & retail trade and transportation sectors are affected by stayover arrivals as tourists consume products at local supermarkets or other shopping venues and travel to the islands primarily by air. Furthermore, tourism has spillover effects on the construction, utilities, and real estate sectors. Tourism is currently the largest and fastest growing industry in Curaçao and Sint

Source: CTB and TEATT

⁵ As only the main sectors are presented, the totals do not add up to 100%.

Maarten. According to the Curaçao Tourist Board (2021), international tourism is currently the largest economic sector representing almost a quarter of Curaçao's GDP in 2019. For Sint Maarten, World bank (2022) estimated that the tourism sector generated 56 percent of GDP before the hurricanes.

As evident from table 2, Sint Maarten has a clear specialization in tourism-related activities. Curaçao, on the other hand, historically had a more diversified economy. In addition to tourism, the other important economic pillars in Curaçao were the international financial services, real estate, and manufacturing (bunkering and ship repair activities) sectors.

Table 2. The average composition of GDT by main sectors in 2014-10					
	Curaçao	Sint Maarten			
Manufacturing	8.2%	1.0%			
Electricity, gas, & water	4.1%	2.6%			
Construction	3.6%	1.9%			
Trade	8.5%	13.8%			
Accommodation & food services	3.2%	10.7%			
Transport, storage, & communications	9.2%	13.5%			
Real estate, renting, & business activities	16.3%	18.6%			
Financial & insurance services	15.6%	7.1%			
Government	6.9%	11.4%			

Table 2. The average composition	of GDP by main sectors in 2014-18
Table 2. The average composition	1 01 GD1 by main sectors in 2014-10

Source: CBS & STAT estimates

Note. The year 2018 was used since this is the latest year that the data is available for both islands.

Finally, it is also interesting to review the industries that in the past were the main contributors to the balance of payments of the two countries. In this regard, four sectors are assessed and compared to the tourism industry in Curaçao and Sint Maarten: (a) the international financial services industry, (b) the ship repair industry, (c) oil-related activities (refining and bunkering) and (d) the transportation sector (specifically, the airline industry). The advantage of analysing these sectors is that their impact on the balance of payments of the Monetary Union is (fully) captured in the statistics. Hence, their net direct impact along the lines of this research may be derived directly from the records of the balance of payments. This impact is presented in table 3 along with the net contribution from international tourism.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<u>Curaçao</u>															
Financial services industry	6.1%	5.0%	4.2%	3.1%	3.0%	2.2%	1.4%	1.5%	1.2%	1.8%	1.8%	1.9%	1.0%	1.8%	1.9%
Oil industry	2.3%	2.9%	2.3%	-1.9%	2.1%	-1.5%	-2.2%	0.5%	0.4%	3.8%	7.5%	6.2%	5.3%	-0.4%	-1.3%
Ship-repair industry	1.9%	2.3%	2.5%	2.2%	2.0%	1.9%	3.3%	2.1%	2.0%	1.5%	1.1%	1.4%	0.9%	1.5%	2.8%
Transportation industry	-0.8%	-0.5%	-0.4%	-0.9%	-1.4%	-0.5%	0.7%	1.3%	3.6%	3.5%	1.4%	0.6%	-1.6%	-1.9%	-2.4%
Tourism industry	3.5%	3.6%	5.0%	2.6%	5.5%	5.0%	6.3%	8.9%	9.5%	10.8%	8.8%	7.6%	6.0%	6.9%	12.1%
<u>Sint Maarten</u>															
Financial services industry	0.7%	2.7%	1.6%	1.8%	1.7%	0.7%	0.6%	0.5%	0.3%	-0.0%	0.3%	0.1%	0.1%	0.2%	0.2%
Oil industry	-9.1%	-9.5%	-11.7%	-13.1%	-6.3%	-6.3%	-8.9%	-12.0%	-11.6%	-11.2%	-5.5%	-7.4%	-5.5%	-10.8%	-14.0%
Transportation industry	0.2%	0.2%	0.7%	0.8%	-1.8%	-1.3%	-1.1%	-1.6%	-1.8%	-2.3%	-1.6%	-0.3%	0.8%	1.0%	1.7%
Tourism industry	68.0%	63.6%	61.1%	57.2%	53.0%	56.3%	64.5%	64.5%	63.9%	65.7%	64.3%	60.1%	45.5%	32.4%	47.7%

Table 3: Net contribution of	primary sectors to the current ac	count balance (in % of curre	nt account balance)*
	primary beccord to the current ac	count bulance (m / o or curre	it account balance,

Source: CBCS

* The net contribution as a % of the total current account balance is calculated by taking the difference between the exports and imports component of each sector as a share of the total current account balance. A negative sign "-" denotes a negative contribution.

The specialization in tourism-related activities in Sint Maarten is also evident in table 3. These activities generate around half of the funds needed to finance the current account balance of the balance of payments of Sint Maarten, while in Curaçao they cover just over ten percent4. The pattern in Sint Maarten is quite stable (apart from the years affected by hurricanes Irma and Maria), while the structural transformation of the economy of Curaçao is reflected in the financing of its current account balance. In Curaçao, traditionally but depending on the moment in time as well, other economic sectors such as the refinery, international financial services, and ship repair generated substantial contributions to finance the current account deficit further highlighting the diversified nature of Curaçao's economy. The question remains whether these graphs fully reflect the net contribution of international tourism to the balance of payments of Curaçao and Sint Maarten. The current not directly observable impact of international tourism on the balance of payments needs to be accounted for to reach a better conclusion, which is placed under scrutiny in the next sections.

4 Methodology

The objective of this research paper is to measure the real net contribution of international tourism to the balance of payments by estimating the impact of international tourism inflows of foreign exchange on general merchandise imports of two small-island and tourism-dependent economies, namely Curaçao and Sint Maarten. This section discusses the data gathering process for this research. Afterwards, we continue with a summary of the econometric techniques employed.

4.1 Data

Most of the data was collected from the balance of payments database of the Central Bank of Curaçao & Sint Maarten (CBCS). Additionally, data was obtained from the IMF World Economic Outlook (WEO), the Federal Reserve Bank of St. Louis (FRED), and the local national statistical offices. For each country, four data series were constructed for the years 2005-17⁶ on a quarterly basis:

- Real tourism exports,
- Real general merchandise imports,
- Real Gross Domestic Product (GDP), and
- Real exchange rate.

4.1.1 Balance of payments data: exports and imports

The balance of payments data (tourism exports and general merchandise imports) is reported in nominal terms on a quarterly basis. To obtain real data, the nominal data series needs to be deflated. Since the price changes of several (domestic and foreign) demand components, for example, investment goods, government spending, and net exports of goods and services, are often unknown, the Consumer Price Index (CPI) is commonly used as a substitute deflator. Since the spending by the international tourism sector is mostly affected by the local prices, tourism exports were deflated using the consumer price index (CPI).

Given that the CPI only reflects consumer prices and does not capture all price changes within an economy, especially import prices, this is not considered an appropriate deflator for the import data.

⁶ The years 2018-23 were not included due to the impact of hurricane Irma in Sint Maarten and the COVID-19 pandemic in both islands. In order to ensure consistency between the analysis of Curaçao and Sint Maarten, the data range 2005-17 was used.

Therefore, import deflators were constructed to deflate these series based on previous research by Pau (2016).

To deflate the merchandise imports series, it is necessary to consider the price developments in the source markets. The United States (US) and the Netherlands (NL) are the two main trading partners for the two countries. As the United States and the Netherlands do not produce export prices data for these islands, the non-oil export deflator data for the US and the NL from the IMF WEO database was used as a proxy for export prices in relation to the islands. The merchandise import deflator for each island is a weighted average of the CPI and export prices of the two main trading partners, namely the US and the NL, following equation (1).

(1) Merch Imp deflator_{it} =
$$\alpha_{it} Pexp US_t + \beta_{it} Pexp NL_t + (1 - \alpha_{it} - \beta_{it})\pi_{it}$$

where α_{it} denotes the merchandise imports share of the US in total merchandise imports, for country *i* in year *t* and, similarly β_{it} denotes the share of the Netherlands for country *i* in year *t*. Lastly, π_{it} denotes the inflation rate (CPI) for country *i* in year *t*. The weights of the import components by the main trading partner are derived from the balance of payments of each of the two countries.

4.1.2 Gross Domestic Product (GDP)

The GDP is included in the model because general merchandise imports are expected to move in line with the economy. The growth of the GDP increases domestic demand which in turn induces more imports. While the balance of payments data is available on a quarterly basis, the national accounts produced by the statistical offices of the islands are on an annual basis. Therefore, the first step is to construct a quarterly GDP data series. Several methods may be applied to construct quarterly GDP data series, ranging from direct methods to indirect methods (Boot, Feibes, & Lisman, 1967). Direct methods commonly use existing quarterly growth data to determine the quarterly GDP data from the annual GDP data. Indirect methods use indicators that are closely correlated with the data series to construct the quarterly data. Obviously, only indicators with a quarterly data frequency can be used. In the case of GDP, the most widely used indicators to determine the quarterly data are electricity production and quantity of money in the economy (Szustak, Dąbrowski, Gradoń, & Szewczyk, 2021).

To address this limitation, this paper uses the Denton proportional benchmarking method to interpolate annual GDP data into quarterly frequency. For this conversion, quarterly electricity production data serves as an auxiliary indicator to guide the distribution of GDP estimates across quarters. In this case, we opted to use annual electricity production to determine the seasonality of GDP as annual electricity production was higher correlated with annual GDP compared to annual money supply and GDP.

The Denton proportional approach operates under the principle that the high-frequency (quarterly) estimates should be as smooth as possible, subject to maintaining the constraint of matching the known low-frequency (annual) totals. It achieves this by minimizing the sum of squared proportional deviations between consecutive high-frequency periods (Denton, 1971). The mathematical representation of the optimization problem for the Denton method is shown in equation (2),

(2)
$$\min \sum_{t=2}^{T} \left(\frac{X_t}{X_{t-1}} - \frac{I_t}{I_{t-1}} \right)^2$$

where X_t represents the high-frequency series in quarter t (quarterly GDP) to be estimated, I_t is the auxiliary high-frequency indicator in quarter t (quarterly electricity production). The Denton method adjusts these initial estimates by minimizing the proportional differences in growth rates between the

quarterly GDP estimates and the electricity production series. By minimizing the changes in the ratio of GDP to electricity production, the Denton method ensures that the quarterly estimates follow the general dynamics of the electricity production data but are also smoothed to avoid excessive volatility between adjacent quarters. It must be noted, however, that one of the notable limitations of the Denton method is that it assumes a linear relationship between the quarterly indicator and the variable being interpolated, meaning that the indicator series is expected to proportionally guide the distribution of GDP. This assumption can be limiting in cases where the relationship between electricity production and GDP is non-linear or varies over time. In addition, the Denton method minimizes the proportional changes between consecutive quarters, which may not always be a realistic assumption as it fails to capture the effects of economic shocks or seasonal patterns. Despite its disadvantages and due to a lack of alternative methods caused by data limitations, we have opted to use the Denton method for the purpose of this research.

The next step is to deflate the quarterly nominal GDP data series that were constructed to obtain the quarterly real GDP data series. The national statistical office of Sint Maarten (STAT) reports GDP data in both nominal and real terms. Therefore, the implicit GDP deflator was used to deflate the nominal GDP series for Sint Maarten. Conversely, GDP data for Curaçao has historically been deflated using the CPI which is not considered the most appropriate deflator for the GDP data series. Therefore, for the purpose of this research, the GDP data series for Curaçao is deflated according to the method outlined below.

To construct the deflator for the GDP data series for Curaçao, the three components of GDP are considered: domestic demand, foreign demand and imports as shown in equation (3).

$$(3) \qquad GDP_{Ct} = Domestic \ demand_{Ct} + Total \ Exp_{Ct} - Total \ Imp_{Ct}$$

Domestic demand consists of consumption and investment by both the private and public sectors. The most appropriate and available deflator for this component is the CPI. The deflators previously used on tourism exports and merchandise imports are not appropriate to deflate the total export and import components of GDP. The reason is that tourism exports and merchandise imports data do not include international transactions of energy (oil) products. These transactions have a substantial impact on the balance of payments of Curaçao. Therefore, a total export deflator is constructed for Curaçao as a weighted average of changes in the oil prices and the deflator for tourism exports as shown in equation (4),

(4) Total Exp deflator_{ct} =
$$\omega_{ct} Pwoil_t + (1 - \omega_{ct}) Tour Exp deflatorct$$

where ω_{Ct} denotes the share of oil exports in total export of goods and services of Curaçao, *Pwoil* denotes the growth in the world Average Petroleum Spot Price (APSP) and *t* denotes the year.

Similarly, a total imports deflator is constructed for Curaçao as a weighted average of changes in the oil prices and the deflator for merchandise imports. This is presented in equation (5),

(5) Total Imp deflator_{ct} =
$$\omega_{ct} Pwoil_t + (1 - \omega_{ct}) Merch Imp deflator_{ct}$$

where ω denotes the share of oil imports in total imports of goods and services of Curaçao, *Pwoil* denotes the growth in the world APSP and *t* denotes the year. The deflator data is only available on an annual basis. Hence, the quarterly data within a year is deflated using the annual deflator of the corresponding year.

4.1.3 Exchange rate

Changes in the exchange rate affect imports and exports. A depreciation (an appreciation) makes exports less (more) expensive and hence more (less) attractive. The effect on imports is the opposite: a depreciation (an appreciation) makes imports more (less) expensive and hence less (more) attractive.

Curação and Sint Maarten have a fixed exchange rate with the US dollar (1 USD = 1.79 NAf.) since 1971. The nominal US dollar to euro exchange rate collected from the FRED website on a quarterly basis is used as a starting point. To calculate the real NAf. to euro exchange rate for Curação and Sint Maarten, one alteration was made. To convert the nominal exchange rate into real terms, the NAf. to euro exchange rate was adjusted for the differential between the inflation rate in the Euro area (sourced from the FRED website) and the local inflation rates (provided by the statistical offices). This is summarized in equation (6),

(6) Real Exchange Rate_{it} =
$$\varepsilon_{it} * \left[\frac{(1 + \rho_t)}{(1 + \pi_{it})} \right]$$

where ε_{it} denotes the NAf. to euro spot exchange rate for country *i* in year *t*, ρ_t denotes the Euro area inflation rate (CPI) in year t, and π_{it} denotes the inflation rate (CPI) for country i in year t. All data series used for the empirical analysis run from 2005Q1 – 2017Q4 as the years affected by hurricane Irma and the COVID-19 pandemic are excluded from the analysis.⁷ Finally, the natural logarithm of the data series is taken to normalize the data.

4.2 Empirical analysis and results

Our objective is to determine the extent to which the positive impact of tourism exports on the balance of payment is reduced by additional imports that are induced by those same tourism exports. For this purpose, the existence of a long-run relationship needs to be determined. Co-integration between the variables confirms the existence of a long-run relationship. An overview of the long-run (equilibrium) models estimated in this paper is presented in table 4.

Variable	Description	Curaçao	Sint Maarten
Dependent	Real general merchandise imports (in log)	$limp_CUR_t$	$limp_SXM_t$
Constant	Intercept	α_0	$lpha_0$
Independent 1	Real tourism exports (in log)	$lexp_CUR_t$	$lexp_SXM_t$
Independent 2	Real GDP (in log)	$lgdp_CUR_t$	$lgdp_SXM_t$
Independent 3	Real NAf. to Euro exchange rate (in log)	ler_CUR _t	ler_SXM_t

Table 4: Long-run relationship models for Curaçao and Sint Maarte

We are particularly interested in the sign of the coefficients of the contemporary tourism export data. A positive sign would imply that additional tourism exports induce additional general merchandise imports, limiting the positive impact of tourism exports on the current account balance of the balance of payments.

⁷ An overview of all the data series used in the current paper are available upon request.

To estimate this model, the variables included in the model need to be integrated of the first order, I(1). Therefore, to start we need to assess whether the variables included in the model are stationary or I(1). To do so, the series are first plotted to visually inspect their pattern to obtain an indication of stationarity within these series reported in graphs 5 and 6. At first glance, the visual inspection of the plots seems to suggest that all data series for each country are non-stationary. The Augmented Dickey-Fuller (ADF; Dickey & Fuller, 1981) test and the Kwiatkowski–Phillips–Schmidt–Shin (KPSS; Kwiatkowski et al., 1992) test are performed to confirm that none of the variables are stationary or I(0) or integrated of second order I(2).





Table 5 presents the unit root test results. The KPSS test results confirm non-stationarity for most variables, except ler_SXM_t while the ADF test results confirm non-stationarity for most variables, except $limp_SXM_t$. However, in both cases it is the model confirming stationarity (for ler_SXM_t it is ADF while for $limp_SXM_t$ it is KPSS) that has a lower Schwarz Information Criterion (SIC) which indicates a more accurate model. As a result, these variables are also considered non-stationary for the purpose of this research.

Table 5: Unit root test results					
Variable	ADF (level)	KPSS (level)	Conclusion		
lexp_CUR _t	-1.7998 (4)	0.8410 [5]	<i>I</i> (1)		
$limp_CUR_t$	-1.4300 (2)	0.5539 [5]	I(1)		
$lgdp_CUR_t$	-1.7828 (3)	0.3102 [2]	I(1)		
ler_CUR _t	-2.5850(1)	0.4353 [5]	I(1)		
$lexp_SXM_t$	0.2557 (2)	0.1853 [7]	I(1)		
limp_SXM _t	-2.9467** (5)	0.3556 [2]	I(1)		
$lgdp_SXM_t$	-2.0301 (3)	0.2918 [4]	I(1)		
ler_SXM _t	-1.2663 (2)	0.4940** [5]	I(1)		

Note. ** p < 0.05. The optimal lag length for ADF based on SIC (Schwarz, 1978) is in parenthesis (...) and the bandwidth for KPSS based on the Newey-West Bandwidth using Bartlett Kernel is in brackets [...].

Next, the Engle and Granger (1987) cointegration method is used. In this case the assumption of cointegration implies that deviations from equilibrium are stationary with finite variance, even though the series themselves are nonstationary with infinite variance. The first step of this process is to estimate the long-run (equilibrium) models (see table 6). In the long-run, there appears to be a positive relationship between tourism exports and general merchandise imports for Sint Maarten (0.2293). Regarding Curaçao, however, the results indicate a negative relationship, which in turn is not significant at the 5% level (-0.1203). These long-run results suggest that tourism exports are producing additional imports of merchandise products to supply for the tourism sector of Sint Maarten, but not for the tourism sector of

Curaçao. It must be noted, however, that the models have a relatively low R^2 , especially the model for Sint Maarten (0.2333). This implies that the results of these models must be interpreted with a high level of caution.

The next step to take is to test the residuals for the presence of unit roots. This means that we test whether the residuals (ε_{CUR_t} , and ε_{SXM_t}) in the previously estimated models are stationary as determined by the ADF test. The residuals would need to be stationary for there to be a cointegrating relationship between the variables. As evident from table 7, the ADF test results indicate that the regression models for Curaçao and Sint Maarten have white-noise residuals (stationary), implying that there is a cointegrating relationship among the variables.

Table 6: Long-run (equilibrium) model results for Curaçao and Sint Maarten					
Model 1:		Model 2:			
Dependent variable: <i>limp_</i>	CUR _t	Dependent variable: <i>limp</i>	_SXM _t		
Independent variables	Coefficient	Independent variables	Coefficient		
α_0	-0.4677	α_0	4.6266***		
	(2.4626)		(1.5386)		
lexp_CUR _t	-0.1203	$lexp_SXM_t$	0.2293***		
	(0.0710)		(0.0623)		
lgdp_CUR _t	0.9758***	$lgdp_SXM_t$	-0.0567		
	(0.3519)		(0.2666)		
ler_CUR _t	0.6319***	ler_SXM _t	0.0643		
-	(0.2233)	,	(0.2453)		
\mathbb{R}^2	0.4355	\mathbb{R}^2	0.2333		
Adjusted R ²	0.4002	Adjusted R ²	0.1844		
DW-statistic	1.3109	DW-statistic	1.2925		
F-statistic	12.3430***	F-statistic	4.7570***		

Note. ** p < 0.05; *** p < 0.01. The standard error is in parenthesis (...).

Table 7: ADF test results for residuals of lo	ng-run (equilibrium) models
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$- \cdots \cdots - \cdots -$				
Variable	ADF (level)	Conclusion		
$\varepsilon_{CUR_{t}}$	-5.6726*** (1)	<i>I</i> (0)		
ε_{SXM_t}	-4.7213*** (0)	I(0)		

Note. *** p < 0.01. The optimal lag length for ADF based on SIC (Schwarz, 1978) is in parenthesis (...).

The final step is to estimate the short-run (error correction) models (see table 8) and test whether the error correction term is negative and significant (see table 9). This would confirm the stability of the model. This step is only applicable when cointegration is present. As indicated earlier, cointegration is present for both Curaçao and Sint Maarten. In the short-run, there seems to be a positive relation between tourism exports and general merchandise imports for Curaçao (coefficient for $d(lexp_CUR_{t-3})$ is 0.3502), yet a negative association between the two variables for Sint Maarten (coefficient for $d(lexp_SXM_{t-2})$ is -0.3548). However, for the purpose of this research, we are mainly interested in the long-run relationship between tourism exports and merchandise imports and therefore do not interpret the coefficients of the short-run model as it is only employed to confirm that there is cointegration between the two variables and that the long-run model is stable.

As shown in table 9, the t-test results verify that the direction and significance of the error correction terms are correct. In order to have a viable OLS regression several assumptions need to be met, and these are tested with the following diagnostic tests. Jarque-Bera test to check for normality, Breusch-Godfrey LM test to check for serial correlation, Breusch-Pagan-Godfrey test to check for heteroskedasticity, and

Table 8: Short-run model results for Curaçao and Sint Maarten				
Model 1:		Model 2:		
Dependent variable: $d(limp_CUR_t)$		Dependent: $d(limp_SXM_t)$		
Independent variables	Coefficient	Independent variables	Coefficient	
α ₀	-0.0063	α_0	0.0163	
	(0.0124)		(0.0140)	
$d(lexp_CUR_t)$	0.1427	$d(lexp_SXM_{t-2})$	-0.3548***	
	(0.0737)		(0.0672)	
$d(lexp_CUR_{t-3})$	0.3502***	$d(lgdp_SXM_{t-4})$	-1.0587**	
	(0.0843)		(0.9014)	
ECT_CUR_{t-1}	-0.4532***	ECT_SXM_{t-1}	-0.5977***	
	(0.1415)		(0.1237)	
\mathbb{R}^2	0.6258	\mathbb{R}^2	0.8188	
Adjusted R ²	0.6003	Adjusted R ²	0.8055	
DW-statistic	2.3670	DW-statistic	2.2742	
F-statistic	24.5303***	F-statistic	61.7355***	

CUSUM and CUSUM of squares tests to check the stability of the model. The diagnostic test results suggest that all short-run models are valid, reliable, and stable.⁸

Note. ** p < 0.05; *** p < 0.01. The standard error is in parenthesis (...).

Table 9: T-test results for error correction terms of short-run (error correction) models of Curaçao and Sint Maarten

Variable	Adjustment coefficient	T-statistic
ECT_CUR _{t-1}	-0.4532	-3.2036***
	(0.1415)	
ECT_SXM_{t-1}	-0.5977	-4.8319***
	(0.1237)	

Note. *** p < 0.01. The standard error is in parenthesis (...).

⁸ The diagnostic test results are available upon request.

5 Discussion and Conclusion

International tourism is an important economic pillar in financing the balance of payments. However, empirical evidence contests the view that international tourism is the one and only economic pillar that generates a net inflow of foreign exchange reserves. In addition, it sheds light on the fact that part of foreign exchange earned from tourism may leave the countries' balance of payments through merchandise imports needed to supply the tourism sector. When adjusting for the import of merchandise that is being induced by international tourism, we end up with a net contribution that is substantially lower than the raw balance of payments' data initially suggest. In Sint Maarten, a one percent increase in international tourism induces around 0.23% in additional merchandise imports, substantially lowering the net contribution of international tourism.

The analysis covers the period prior to the pandemic and the devastating Irma and Maria hurricanes. International tourism in that period was strongly shopping based in Sint Maarten. The general impression is that, after the pandemic, international tourism in Sint Maarten has transitioned towards a more experience-focused tourism product and less shopping-focused. This is partially explained by the wide shopping offers provided on cruise vessels. Hence, this paradigm might be changing for Sint Maarten.

However, the empirical results fail to find the same evidence for Curaçao. In the case of Curacao, there is proof of a cointegrating relationship, but international tourism does not seem to be inducing additional merchandise imports. Conversely, the coefficient is negative but not significant at the 5% significance level. This might be related to the type of tourists that visit the islands. For example, contrary to Sint Maarten, the Curaçao source market is mainly concentrated in Europe, especially the Netherlands, which spends considerably less on average than the other source markets (CTB, 2022). This substantially lowers the import component of the foreign currency spent on the island by international tourists. In addition, as shown in table 2, Curaçao has a more diversified economy with a sizeable contribution by the manufacturing industry. The negative sign that was encountered for Curaçao in the cointegrating relationship (table 6) may suggest some indication that international tourism is enabling the replacement of some merchandise imports by domestic production.

Although international tourism is quite substantial in Sint Maarten and for the monetary union, it is not the only economic activity generating foreign exchange to finance the balance of payments of the monetary union. The importance of international tourism in Curaçao is quite smaller compared to Sint Maarten in in the analysed period (2005-17) but has been growing in recent years. In post-Irma years, we have seen that the foreign exchange earnings from tourism of Curaçao have grown to be along the same line or even higher than those of Sint Maarten. But more important is that foreign currency earned in Curaçao from international tourism seems to contribute relatively more to the financing of the balance of payments.

From the balance of payments data and the empirical analysis, it can be concluded that the deficit in the balance of payments of the monetary union is mainly the result of a negative trade balance in both countries. Because there is a relatively high degree of specialization in international tourism for both countries, a deficit in merchandise trade is common, as argued by Thano (2015).

From the empirical findings, we conclude that international tourism is not to be seen as the one and only avenue to finance the balance of payments of the monetary union. The pandemic and its effects on both Curaçao and Sint Maarten have further demonstrated the importance of having a diversified economy where economic growth is not solely dependent on just one major sector. In addition, the empirical findings indicate that a well-thought-out approach for the international tourism sector is to be pursued. This also calls for a more balanced approach to the development of the economy of the monetary union where aside from international tourism proper attention needs to be paid to other economic pillars. In

addition, a diversified economy makes a country more resilient to exogenous shocks. A similar line of reasoning could be applied to the balance of payments of Sint Maarten, even though this economy is more specialized and dependent on tourism compared to Curaçao.

Looking at the historical figures, it is evident that several economic pillars contributed positively in the past to the balance of payments (see table 3). For instance, in Curaçao, when considering oil refinery or bunkering activities the contribution is already being netted as both the export and import of all products are being reported in the balance of payments. This confirms that in the past these industries contributed to balancing the balance of payments, i.e., were net contributors to the balance of payments. Secondly, the ship repair industry is a net contributor to the financing of the balance of payments. Further development of this sector into a major economic pillar can help and further decrease the deficit of the monetary union. Moreover, the international financial services sector has the potential to be a significant net contributor in financing the balance of payments of the monetary union. Finally, looking at the airline industry, this industry clearly causes an outflow of foreign exchange as it is required to pay lease fees and international landing rights. In addition, the airline industry also has an impact on the volume of refined oil products being consumed within the monetary union. When adjusting for these items, a positive net contribution to the balance of payments from the airline industry can be obtained as well. It must be noted, however, that recent developments in these sectors have not reflected the positive contribution that they historically made to the balance of payments. Therefore, it might be time to turn to newer high-potential sectors that could contribute positively to the current account balance of the monetary union in the long-run.

Overall, the results imply that international tourism is an important economic pillar for financing the balance of payments in both countries, but particularly Sint Maarten. However, the empirical evidence suggests that part of the foreign exchange earned from tourism leaves the country through merchandise imports needed to supply the tourism sector. Hence, it can be concluded that the deficit on the balance of payments of the monetary union is mainly the result of a negative trade balance in both countries, which is not necessarily caused by the tourism sector. Hence, the negative trade balances reflect the limited natural resources and domestic production of Curaçao and Sint Maarten.

However, international tourism should not be seen as the only way to finance the balance of payments of the monetary union. A balanced approach in which appropriate conditions are created by the government for the (further) development of other high-potential economic pillars such as the renewable energy sector in Curaçao and the logistics industry (airport and harbour) in Sint Maarten, along with international tourism is to be preferred. This should be supported through profound economic reforms to attract local and foreign investors to the high potential sectors on the island such as reducing the cost-of-doing business (of which red tape, specifically licenses and permits, is an important component) and promoting investment in human capital and education in general.

6 References

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