

**Current account and international tourism:  
evidence from selected South American economies**

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**Date received: December 5, 2023. Date of acceptance: March 25, 2024.**

**Abstract**

International tourism has an impact on the external constraint to growth. Therefore, the relationship between tourism and the current account balance (CAB) was analyzed for Argentina, Brazil, Chile and Uruguay by means of a cointegration analysis using autoregressive models with distributed lags. Actual output and the real effective exchange rate were used as control variables. The existence of cointegration was corroborated for Argentina and Brazil since tourism has a stable negative relationship with the CAB. In the case of Chile, there is evidence of cointegration for the set of variables, although foreign exchange flows from international tourism do not seem to affect the CAB balance. Finally, no conclusive proof of cointegration was obtained for Uruguay.

**Keywords:** international tourism; current account balance (CAB); tourism balance; cointegration; South America.

**1. INTRODUCTION**

Until 2020, global tourism had shown almost uninterrupted growth since the 1950s, even during periods of economic decline and slow recovery in industrialized countries (UN Tourism [UNWTO], 2015 and 2019). In the decade from 2008 to 2018, arrivals and revenue generated by tourism declined only in 2009. Subsequently, from 2010 to 2018, tourism experienced an average annual growth of 5%, a rate higher than that reported by the flow of exports or even the world's Gross Domestic Product (GDP) (UNWTO, 2019).

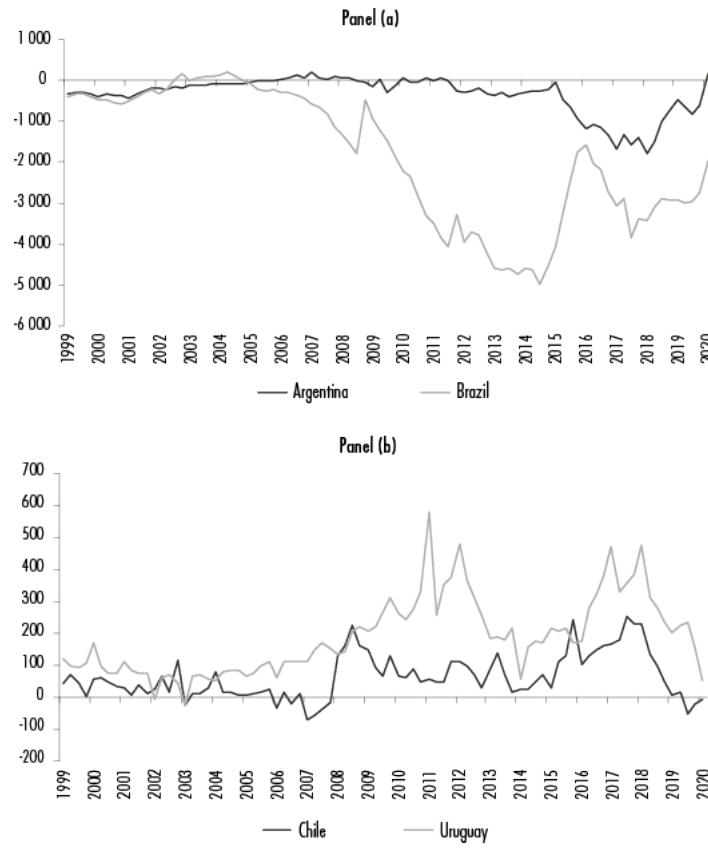
The study of tourism is of great importance because of its economic, social, cultural and environmental impact. Part of the literature examines the positive effects of tourism on growth since it is a productive sector with critical connections capable of generating not only direct effects on GDP but also indirect and induced ones (Brida *et al.*, 2008), creating employment and increasing total aggregate demand.

However, two fundamental points must be considered. On the one hand, the impact that tourism development may have on the environment and cultural characteristics of the region should be addressed. This is particularly relevant in Latin America and the Caribbean (LAC), where tourism development is linked to abundant natural and archaeological resources. Poor management of these resources can have serious environmental consequences for local communities and even undermine the foundations of the tourism industry itself (Cárdenes-García, 2012; London *et al.*, 2021).

Meanwhile, many of the studies on the relationship between tourism and growth that present this relationship as inexorably positive focus on small economies that are highly specialized in tourism (Lanza and Pigliaru, 2000; Brida *et al.*, 2016; Akadiri *et al.*, 2019; Roudi *et al.*, 2019, among others). It should be noted that in other LAC economies, such as Argentina or Brazil, tourism expenditure does not always represent a net inflow of foreign currency for the country. In this regard, few studies have focused on the relationship between this activity and the balance of payments in these cases. Tourism could represent a net inflow or outflow of foreign exchange, further tightening or loosening the so-called external constraint.

The tourism balance is the part of the balance of payments that considers the inflow of foreign currency from international visitors (exports) and the outflow of foreign currency from nationals going abroad (imports). Although there was an improvement in the tourism balance of the four Southern Cone countries in the sample in the five years prior to 2020 (see Figure 1), this was due to a decrease in spending by residents abroad as a result of the economic slowdown already observed before the COVID-19 pandemic.

Figure 1. Travel balance, 1999:Q1-2020:Q1



Note: all series are quarterly, expressed in millions of dollars and seasonally adjusted.

Source: prepared by the authors based on data from ECLAC (2021).

In the first quarter of 2020, the last period before the generalized policy of social isolation and border closures due to the COVID-19 pandemic, the deficit in the Travel component of the Balance of Services<sup>1</sup> was USD\$428 million for Argentina and USD\$1,486 million for Brazil.

As can be seen in panel (a) of Figure 1, the result in this component of the balance of payments (hereafter referred to as the "travel balance" or TB) tends to be in deficit for the above countries. On the other hand, in the case of Uruguay and Chile, the result is generally in surplus.

Furthermore, the constant deficit in the balance of payments has been one of the factors cited as being responsible for the stagnation of LAC countries. These external imbalances, in addition to internal imbalances (fiscal deficits), seem difficult to reverse due to their structural nature. In addition, in recent years, there has been an increase in the vulnerability of the external sector, which depends on the export of raw materials, especially in the South American region (Chisari and Fanelli, 1990; Thirlwall, 2012; Bárcena and Prado, 2015; ECLAC, 2019). Tourism could be a tool to correct external imbalances if the right policies are implemented.

Therefore, this paper aims to explore the relationship between tourism as a supplier or demander of foreign currencies and the current account balance for four economies of the Southern Cone: Argentina, Brazil, Chile and Uruguay. Analyzing this behavior may shed light on the existing relationship between these variables and outline policy recommendations. In addition, few studies examine the relationship between tourism and the performance of external accounts, so the aim is to contribute to generating background information on the subject. Specifically, the relationship between the net flow of foreign currency caused by tourism activity (TB) and the current account balance (CAB) will be analyzed using a cointegration analysis based on autoregressive distributed lag models (ARDL). This exercise will make it possible to corroborate (or not) the existence of a long-term relationship of equilibrium between net tourism balances and the CAB balance for each of the four selected economies. In addition, short-term effects and relationships between GDP and the real effective exchange rate (REER) with respect to the CAB can be interpreted, with GDP and the REER being control variables.

The following is a brief presentation on the subject, emphasizing the relationship between tourism and the CAB, mentioning some previous developments and presenting the case of the four countries to be analyzed. Section 3 presents the methodology. The results are then analyzed in section 4. Finally, the concluding remarks are presented.

## 2. TOURISM, GROWTH AND BALANCE OF PAYMENTS

Most studies focusing on the macroeconomics of tourism analyze the relationship between tourism and growth. A comprehensive review by Brida *et al.* (2016) mentions strong evidence for a positive relationship between tourism and growth. However, some contemporary and later works show different results in this regard (Brida *et al.*, 2015; Seghir *et al.*, 2015; Phiri, 2016; Dogru and Bulut, 2018; Akadiri *et al.*, 2019; Mitra, 2019; Candias *et al.*, 2020).

The idea developed is the Tourism-Led Growth Hypothesis (TLGH), naturally derived from the demand-led growth hypothesis (specifically, exports). The relevant premise is that an increase in external demand allows for an easing of the balance of payments constraint by means of the inflow of foreign

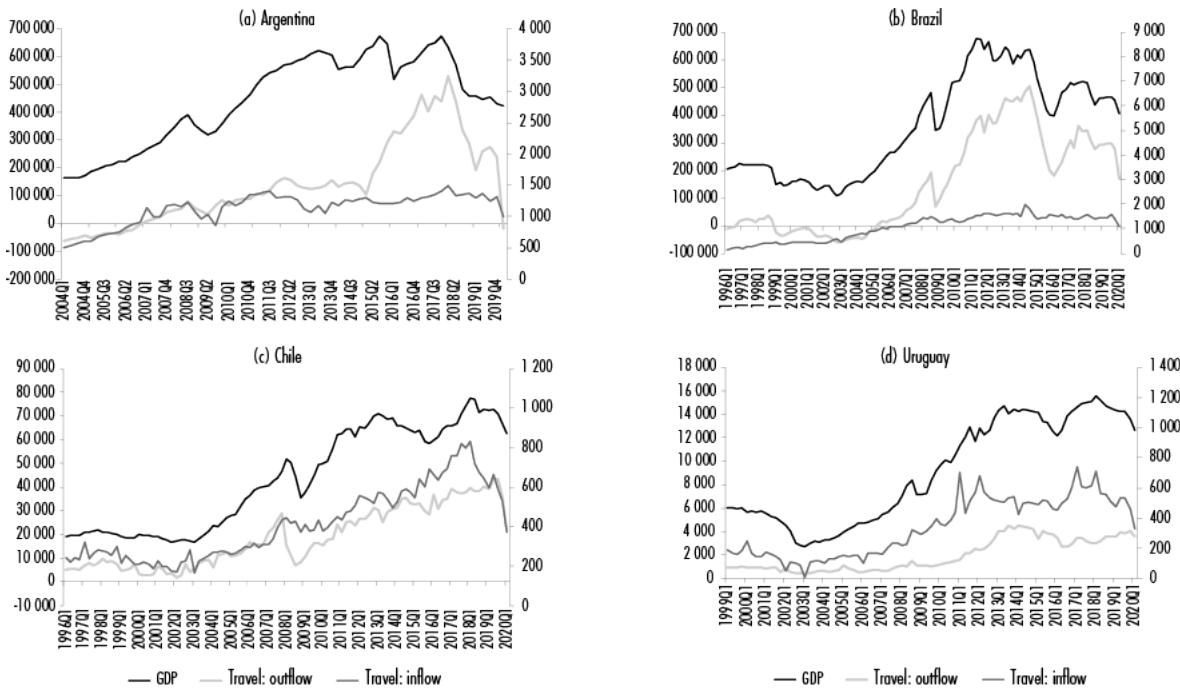
currency. However, for this to be true, there must be a positive relationship between the TB balance and the CAB balance.

Empirical developments analyzing the relationship between tourism and external accounts in emerging economies are very scarce. For example, Lorde *et al.* (2012) examined the relationship between tourism and the CAB outcome for Barbados (1990-2006) and concluded that reducing the trade deficit is highly dependent on the tourism industry. Çelik *et al.* (2013) examined the impact of tourism on Turkey's global balance of payments deficit from 1984 to 2012, while Alp and Genc (2015) examined the relationship between tourism and the current account deficit for the same country. Both papers concluded that there is a significant relationship between tourism and the reduction of the deficit position of both balances.

Rasheed *et al.* (2019) recently examined the long-term relationship between tourism and the balance of payments deficit for Pakistan (1976-2015) using an ARDL model. The authors found evidence of an indirect relationship between tourism and the balance of payments deficit. In contrast, the trade balance deficit, the real exchange rate and the fiscal deficit have a positive and significant relationship with the balance of payments deficit.

Figure 2 shows the evolution of GDP and international tourism inflow and outflow (credits and debits of the travel component of the balance of payments) for the group of selected South American economies.

Figure 2. Evolution of GDP and international tourism income and expenditures



Note: All series are quarterly, expressed in millions of dollars and seasonally adjusted.  
The GDP balance is on the left and the travel balance is on the right.

Source: prepared by the authors based on data from the ECLAC (2021).

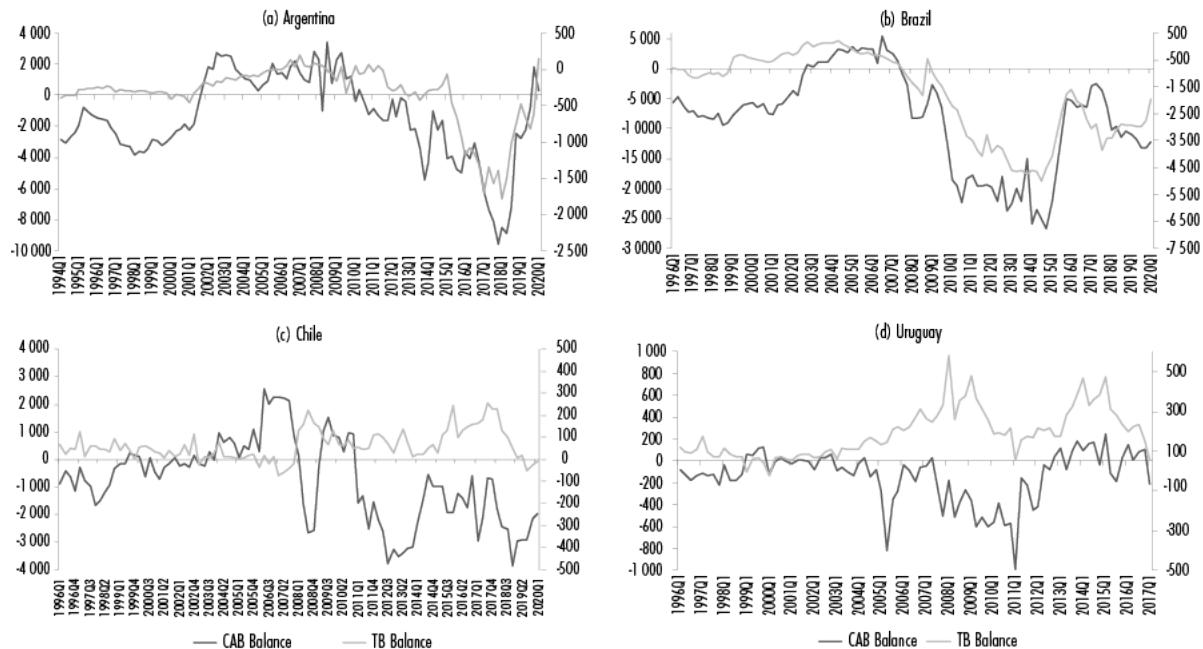
In the case of Argentina, it can be observed that the fall in output due to the 2001 crisis and (to a lesser extent) the 2008 international crisis corresponded to a fall in foreign exchange outflow from travel abroad. Inflow also declined to a lesser extent in 2001 and to a greater extent due to the international crisis. It can also be observed that the TB had a continuous negative balance throughout the 1990s, with an appreciated exchange rate and a liberalized foreign exchange market. Similarly, from 2011, the TB again had negative balances, which increased significantly from 2015 with the liberalization of the foreign exchange market and decreased with the recession and the reimposition of exchange controls.

In the case of Brazil, there is a close positive correlation between outbound travel and the evolution of the GDP. In turn, foreign currency inflow from international tourism shows a moderate, albeit continuous, increase. In this respect, Argentina's tourism receipts have been more volatile.

The cases of Chile and Uruguay show some differences from the two previous cases. First, they have positive TB balances (at least from 2006 to early 2019 in the case of Chile). Second, outflow due to foreign travel does not seem to respond to GDP increases to the same extent as in Argentina and Brazil. Indeed, Uruguay's outbound travel expenditures remained virtually stable until 2011 despite the continuous growth of the GDP since 2002 (with the exception of the 2008 crisis).

Figure 3 shows each economy's evolution of the CAB and TB balances. In the case of Argentina and Brazil, the TB balance follows the evolution of the CAB balance. Meanwhile, in the case of Chile, there are periods when the TB was a buffer for the CAB deficits, as in the case of the 2008 crisis or some quarters of 2012 or 2016. In the case of Uruguay, the pattern seems to be more erratic.

Figure 3. Current Account Balance (CAB) and Travel Balance (TB)



Note: All series are quarterly, expressed in millions of dollars and seasonally adjusted.  
CAB is on the left and TB is on the right.

Source: prepared by the authors based on data from the ECLAC (2021).

This first graphical approximation suggests that international tourism flow, far from alleviating the external constraints of economies such as Argentina and Brazil, seems to exacerbate them, especially during the economic boom and exchange rate appreciation periods. In the case of Uruguay and Chile, the pattern is more varied.

The econometric analysis that follows examines these intuitively presented relationships in more detail. The aim is to determine whether a stable long-term relationship exists between tourism balances (measured by TB credits and debits), the CAB balance and economic performance (measured by GDP). In addition, the REER is included as a control variable to analyze the role of this variable.

### 3. DATA AND METHODOLOGY

To study the impact of tourism flows on the CAB result of each country in the study, a specific methodology was used to determine whether or not there is cointegration between the variables in question. Methodologies such as those developed by Engle and Granger (1987), Johansen (1988), and Johansen and Juselius (1990) have been criticized for technical limitations, as they require the time series to be integrated to order I(1) or low power in the case of small samples. Based on these criticisms, Pesaran *et al.* (1999 and 2001) introduced the ARDL model methodology for cointegration testing. According to Philips (2018), for samples with less than 80 temporary observations, the cointegration bound test proposed by Pesaran *et al.* (2001) tends to be more conservative by reducing the risk of accepting a cointegration relationship when none exists.

The cointegration test using ARDL models has some peculiarities. First, the endogenous variable must have a unit root (i.e., be I(1)). Second, the regressors used cannot have an integration order greater than 1 (in other words, they can be I(0) or I(1), which eases the same integration order requirement of the methods mentioned above). Finally, an ARDL model must be estimated in which the dependent variable is considered in first differences and lagged values of the dependent variable and lagged and difference values of the regressors are included. This addresses both theoretical issues (since the coefficients of the lagged values in levels can be read as the long-term effects of the regressor on the endogenous variable, while the coefficients accompanying the differences can be interpreted as the short-term effects) and technical issues to ensure the presence of white noise residuals in the presence of unit root series.

Second, the cointegration test is an *F*-test that has specific asymptotic critical values for finite samples (Narayan, 2005).<sup>2</sup> In this study, we chose to use the ARDL methodology for temporary series and not for panel data for three reasons: first, we want to analyze the relationship between the TB, CAB and other regressors individually for each economy since there is evidence of heterogeneous behavior across countries (as shown in the previous figures). Also, panel work would eliminate the possibility of contrasting results between economies. Finally, the number of economies is small, so the panel methodology would have strong objections in this case: the results could be difficult to generalize and biased (see Pesaran *et al.*, 1999; Baltagi, 2005).

In the case of this paper, the constructed ARDL model is as follows:

$$\begin{aligned}
 \Delta CAB(t) = & \alpha(0) + \beta_1 * CAB(t-1) + \beta_2 * \Delta GDP(t) + \beta_3 * GDP(t-1) \\
 & + \beta_4 * \Delta TRAVEL\_INFLOW(t) + \beta_5 * TRAVEL\_INFLOW(t-1) + \\
 & \beta_6 * \Delta TRAVEL\_OUTFLOW(t) + \beta_7 * TRAVEL\_OUTFLOW(t-1) + \\
 & \beta_8 * \Delta REER(t) + \beta_9 * REER(t-1) + \varepsilon(t)
 \end{aligned} \tag{1}$$

Where  $\Delta$  represents the first difference of the variable in question and  $(t-1)$  denotes the value in lagged levels. It is also estimated:

$$\begin{aligned} \Delta CAB(t) = & \alpha(0) + \beta_1 * CAB(t-1) + \beta_2 * \Delta GDP(t) + \beta_3 * GDP(t-1) \\ & + \beta_4 * \Delta TRAVEL\_INFLOW(t) + \beta_5 * TRAVEL\_INFLOW(t-1) + \\ & \beta_6 * \Delta TRAVEL\_OUTFLOW(t) + \beta_7 * TRAVEL\_OUTFLOW(t-1) + \\ & \beta_8 * \Delta REER(t) + \beta_9 * REER(t-1) + \varepsilon(t) \end{aligned} \quad (2)$$

Where the net balance of the TB has replaced the regressors representing foreign exchange inflow and outflow from tourism. Of course,  $\alpha(0)$  is the regression constant and  $\varepsilon(t)$  is the residual.

As explained below, in the case of Uruguay, an alternative model was estimated to verify the cointegration between the series of foreign exchange outflows due to foreign travel (TRAVEL\_OUTFLOW), GDP and REER. In other words, in this case, the following was evaluated:

$$\begin{aligned} \Delta TRAVEL\_OUTFLOW(t) = & \alpha(0) + \beta_1 * TRAVEL\_OUTFLOW(t-1) + \\ & \beta_2 * \Delta GDP(t) + \beta_3 * GDP(t-1) + \beta_4 * \Delta REER(t) + \beta_5 * REER(t-1) + \varepsilon(t) \end{aligned} \quad (3)$$

Data are quarterly and are available for each of the countries in the sample for the following periods: 2004:Q1-2020:Q1 (Argentina); 1996:Q1-2020:Q1 (Brazil and Chile); and 1999:Q1-2020:Q1 (Uruguay).<sup>3</sup> The decision to forcefully stop the series in the first four months of 2020 is due to the abrupt drop in tourism activity after that date due to the preventive and mandatory isolation measures and border closures applied by the four countries during the COVID-19 crisis. GDP data were extracted from the ECLAC database (2021) in local currency at constant prices and converted into dollars using the nominal exchange rate (quarterly average) available in the IMF database. Data corresponding to the components of the balance of payments (in millions of dollars) and the REER were obtained from the ECLAC (2021). GDP, REER and travel inflow and outflow are expressed in natural logarithms, while CAB and TB balances are expressed as a percentage of GDP. The series were previously seasonally adjusted using the X-12 ARIMA procedure.

#### 4. RESULTS

First, the Dickey-Fuller augmented and Phillip-Perron unit root tests were performed to confirm the order of integration of the series. The results are summarized in Table 1.

Table 1. Order of integration of the series used

Variable	Argentina	Brazil	Chile	Uruguay
GDP	I(1)	I(1)	I(1)	I(1)
CAB	I(1)	I(1)	I(1)	I(0)
TRAVEL_OUTFLOW	I(1)	I(1)	I(1)	I(1)
TRAVEL_INFLOW	I(1)	I(1)	I(1)	I(0)
TB	I(1)	I(1)	I(0)	I(0)
REER	I(1)	I(1)	I(1)	I(1)

Source: prepared by the authors based on estimates.

Since the methodology requires the dependent variable to be I(1), the analysis was partially modified for the case of Uruguay, given that the variables CAB, TB and TRAVEL\_INFLOW were stationary. In this case, as already mentioned, the dependent variable considered was  $\Delta TRAVEL\_OUTFLOW$ , the regressors GDP and REER in lagged levels and first differences, and TRAVEL\_OUTFLOW in lagged level.<sup>4</sup>

The results of the estimated models are summarized below (see Tables 2-5).

Table 2. ARDL estimation results for Argentina

	Model 1	Model 2	Model 3
<i>Dependent variable: <math>\Delta CAB(t)</math></i>			
CAB(t-1)	-0.630 *** 0.122	-0.609 *** 0.112	-0.683 *** 0.121
$\Delta GDP(t)$	-1.028 0.715		-0.968 0.680
GDP(t-1)	-0.742* 0.316	-0.506* 0.228	-0.866** 0.272
$\Delta TRAVEL\_OUTFLOW(t)$	-0.134 0.315		
TRAVEL_OUTFLOW(t-1)	-0.727 ** 0.244	-0.607 ** 0.216	
$\Delta TRAVEL\_INFLOW(t)$	0.522 0.503		
TRAVEL_INFLOW(t-1)	0.768 * 0.358	0.616 0.326	
$\Delta BALANCE\_TRAVEL(t)$			0.842 0.919
BALANCE_TRAVEL(t-1)			2.289 *** 0.680
$\Delta REER(t)$	2.886 ** 1.045	2.541** 0.913	3.144** 0.985
REER(t-1)	0.813 0.785		0.998 0.762
CONST.	5.447 ** 1.926	6.514 *** 1.705	6.420 *** 1.808
N	64	64	64
R2	0.43	0.39	0.43

Note: Standard errors are reported below the coefficients. Significance: \*  $p<0.05$ , \*\*  $p<0.01$ , \*\*\*  $p<0.001$ .

Source: prepared by the authors.

Table 3. ARDL estimation results for Brazil

	Model 1	Model 2	Model 3
<i>Dependent variable: <math>\Delta CAB(t)</math></i>			
CAB(t-1)	-0.188 *** 0.052	-0.186*** 0.048	-0.201*** 0.053
$\Delta GDP(t)$	0.370 2.985		0.145 2.590
GDP(t-1)	2.554* 1.301	2.608** 0.916	0.546* 0.240
$\Delta TRAVEL\_OUTFLOW(t)$	-2.240* 1.020	-2.188 0.887	
TRAVEL_OUTFLOW(t-1)	-1.652** 0.666	-1.672** 0.605	
$\Delta TRAVEL\_INFLOW(t)$	1.747* 0.772	1.742* 0.696	
TRAVEL_INFLOW(t-1)	0.021 0.398		
$\Delta BALANCE\_TRAVEL(t)$			3.820*** 1.201
BALANCE_TRAVEL(t-1)			1.605** 0.642
$\Delta REER(t)$	-2.428 3.022	-2.740* 1.559	-1.887 2.882
REER(t-1)	2.019* 0.890	2.047*** 0.502	1.242** 0.443
CONST.	-29.335* 13.381	-29.851** 8.674	-12.284** 4.105
N	94	94	94
R2	0.3	0.31	0.29

Note: Standard errors are reported below the coefficients. Significance: \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

Source: prepared by the authors.

Table 4. ARDL estimation results for Chile

	Model 1	Model 2
<i>Dependent variable: <math>\Delta CAB(t)</math></i>		
CAB(t-1)	-0.376***	-0.349***
	0.076	0.071
$\Delta GDP(t)$	25.169***	25.843***
	7.365	7.045
GDP(t-1)	0.464	-0.606
	1.339	0.339
$\Delta TRAVEL\_OUTFLOW(t)$	-0.825	
	1.821	
TRAVEL_OUTFLOW(t-1)	-0.098	
	1.588	
$\Delta TRAVEL\_INFLOW(t)$	1.109	
	1.948	
TRAVEL_INFLOW(t-1)	-1.306	
	1.831	
$\Delta BALANCE\_TRAVEL(t)$		1.637
		1.421
BALANCE_TRAVEL(t-1)		-0.180
		1.661
$\Delta REER(t)$	25.059*	26.719**
	11.445	11.161
REER(t-1)	6.170*	5.552*
	2.741	2.556
CONST.	-25.875*	
	14.679	
N	94	94
R2	0.31	0.31

Note: Standard errors are reported below the coefficients. Significance: \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

Source: prepared by the authors.

**Table 5. Table 4. ARDL estimation results for Uruguay**

	<i>Model 1</i>	<i>Model 2</i>
<i>Dependent variable: ΔTRAVEL_OUTFLOW(t)</i>		
TRAVEL_OUTFLOW(t-1)	-0.201** 0.066	-0.207** 0.065
ΔGDP(t)	-0.028 0.383	
GDP(t-1)	0.309** 0.102	0.267** 0.089
ΔREER(t)	-1.060* 0.511	-1.178** 0.369
REER(t-1)	0.175 0.214	
CONST.	-2.570* 1.505	
N	82	82
R2	0.24	0.23

Note: Standard errors are reported below the coefficients. Significance: \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.

Source: prepared by the authors.

Once the residuals of the different regressions are found to be white noise, cointegration tests are performed to confirm the existence of a long-term relationship between the variables in question. A summary of the results of these tests is presented in Table 6. There is evidence of a stable long-term relationship between the variables representing international tourism foreign currency flows (inbound and outbound), GDP, REER and the CAB balance for Argentina, Brazil and Chile. There is no conclusive evidence in the case of Uruguay (see Annex for statistics and critical values).

**Table 6. Cointegration Test Results**

	<i>Argentina</i>	<i>Brazil</i>	<i>Chile</i>	<i>Uruguay</i>
Model 1	Cointegration (5%)	Cointegration (5%)	Cointegration (1%)	No evidence of cointegration
Model 2	Cointegration (1%)	Cointegration (1%)	Cointegration (1%)	Cointegration (10%)
Model 3	Cointegration (1%)	Cointegration (5%)		

Note: the significance levels at which the cointegration hypothesis is accepted are in brackets.

Source: prepared by the authors based on the results of the previous estimations.

Coefficients associated with lagged variables are usually interpreted as the long-term relationship between the explanatory and endogenous variables. In the case of Argentina, foreign currency outflow from tourism is negatively related to CAB balances in the long run. Although foreign exchange inflow could have a positive relationship, the coefficient associated with this variable is significant only in the case of Model 1 and at 10% significance. On the other hand, Model 3 clearly shows that improvements in TB balances are positively related to CAB in the long run.

Notably, the short-term relationships (measured by the coefficients accompanying the variables in the differences) are not relevant. On the other hand, as expected, GDP has a negative relationship with the CAB (given the dependence of imports on the GDP). In contrast, the REER has a positive short-term relationship with the CAB but no long-term relationship.

As in the case of Argentina, Brazil's foreign travel expenditures have a stable, long-term positive relationship with the CAB. Likewise, the TB shows a positive relationship with the CAB in the long term and, unlike Argentina, also in the short term. Interestingly, the GDP is also positively related to the CAB and REER shows a positive long-term relationship with the CAB.

Only two models have been estimated for Chile and Uruguay. Although the test of Pesaran *et al.* (2001) confirms the presence of cointegration for the Chilean series, the variables related to outbound and inbound international tourism flows do not show significant relationships with the CAB balance in either the short or the long run. In addition, for Chile, the GDP has a positive relationship with the CAB balance in the short run, and the REER shows a positive relationship in both the short and long run, although with low significance.

In the case of Uruguay, an alternative model was estimated given the stationarity of the series that would ideally have functioned as endogenous variables (CAB or, in its absence, balance of payments or TB). An attempt was made to confirm the existence of a long-term relationship between foreign currency outflow due to foreign travel, GDP and REER. In the first model, the null hypothesis of cointegration is rejected. In the second model, the evidence is very weak and cointegration is accepted only at the 10% significance level. If this significance level is accepted, it can be said that the GDP has the expected long-term relationship with foreign currency outflow due to foreign travel since it positively correlates with the demand for outbound tourism. In contrast, the REER has the expected short-term effects (an increase in the REER makes tourism imports more expensive, reducing foreign currency outflow for this concept).

## 5. FINAL CONSIDERATIONS

As mentioned by Çelik *et al.* (2013), the impact of tourism is not always positive for a given economy, as there are countries where outbound international tourism activity is much higher than inbound activity in terms of comparative monetary flows. In this paper, we have seen how Brazil or Argentina could illustrate this statement since their economies behave as net importers of tourism. This fact, far from alleviating the problems of external restrictions, could aggravate them.

In this regard, the econometric analysis confirmed the existence of a stable long-term relationship between the variables representing foreign currency flows from international tourism (outbound and inbound), GDP, REER and the CAB balance for Argentina and Brazil. This was not the case for Uruguay, where the evidence was inconclusive. In the case of Chile, for example, although there is evidence of cointegration between all the variables defined, individually, the variables representing foreign currency flows from international tourism do not seem to have a stable short- or long-term relationship with the CAB balance.

The long-term relationship between the TB and CAB is relevant in the Argentine case (not so much the short-term relationship), demonstrating the need for a continuous reversion in the TB balance for a significant contribution to the CAB balance. In this regard, a tourism planning policy aimed at controlling the international tourism deficit, stimulating domestic tourism supply and demand or, even more, international inbound tourism could be vital.

Again, using the Argentine case as an example, according to INDEC, the Services item was estimated to have a deficit of USD\$5,183 million in 2019. The principal negative balance corresponded to travel. Although expenditure in the first quarter decreased by USD\$163 million compared to the same quarter of the previous year, this was due to Argentina's economic crisis even before the pandemic. Foreign exchange income from tourism was also USD\$44 million lower than in the same quarter of 2018. Interestingly, the leading destination of Argentine tourists, in terms of total spending, was Europe (USD\$410 million), followed by the United States and Canada (USD\$340 million).

In this regard, regional integration and cooperation among South American governments would be crucial in promoting intraregional outbound tourism and extra-regional inbound tourism. For example, while Argentina's inbound tourism comes mainly from Europe, the country has a relative deficit in outbound tourism to Europe (the inflow of foreign currency was US\$379 million, compared to the outflow of US\$410 million mentioned above). In addition, the primary consumers of tourism services in Argentina, after Europeans, come from Brazil, Bolivia and Uruguay, indicating the importance of intra-regional tourism.

Meanwhile, the decline in Argentine outbound tourism has had a negative impact on some regional destinations, such as Uruguay, Chile and Paraguay. Although the UNWTO (2019) points out that the increased arrival of US tourists in the region should be seen positively, as they arrive with an increasingly stronger dollar, the truth is that the number of Latin American tourists choosing to vacation within Latin America has also increased. According to UNWTO data, seven out of ten tourists arriving in the region came from another Latin American country.

Tourism is a potential activity that generates foreign currency. However, it could also become an activity that constantly drains foreign currency out of the region, hindering the long-awaited search for external balance. Considering the direction of past and projected flows of international tourism, outbound and inbound, extra-regional and intraregional, should be part of the integration agenda considered by the Southern Cone governments and constitute a future line of research to be expanded.

## ANNEX

The cointegration tests referred to in the results section are presented below.

**Table A1. Argentina***Pesaran, Shin and Smith (2001) cointegration test***Calculated critical values Model (1)**

I(0)	I(1)	
2.574	3.682	10%
3.068	4.274	5%
4.188	5.694	1%

t-statistical : 5.54

H0 (cointegration) is accepted at 5% significance level

**Calculated critical values Model (2)**

I(0)	I(1)	
2.574	3.682	10%
3.068	4.274	5%
4.188	5.694	1%

t-statistical : 7.62

H0 (cointegration) is accepted at 1% significance level

**Calculated critical values Model (3)**

I(0)	I(1)	
2.843	3.923	10%
3.435	4.583	5%
4.69	6.143	1%

t-statistical : 8.18

H0 (cointegration) is accepted at 1% significance level

Source: prepared by the authors based on estimates.

**Table A2. Brazil***Pesaran, Shin and Smith (2001) cointegration test***Calculated critical values Model (1)**

I(0)	I(1)	
2.45	3.52	10%
2.86	4.01	5%
3.74	5.06	1%

**t-statistical : 4.33**

H0 (cointegration) is accepted at 5% significance level

**Calculated critical values Model (2)**

I(0)	I(1)	
2.72	3.77	10%
3.23	4.35	5%
4.29	5.61	1%

**t-statistical : 5.62**

H0 (cointegration) is accepted at 1% significance level

**Calculated critical values Model (3)**

I(0)	I(1)	
2.72	3.77	10%
3.23	4.35	5%
4.29	5.61	1%

**t-statistical : 4.96**

H0 (cointegration) is accepted at 5% significance level

Source: prepared by the authors based on estimates.

**Table A3. Chile***Pesaran, Shin and Smith (2001) cointegration test***Calculated critical values Model (1)**

I(0)	I(1)	
2.45	3.52	10%
2.86	4.01	5%
3.74	5.06	1%

**t-statistical : 6.38**

H0 (cointegration) is accepted at 1% significance level

**Calculated critical values Model (2)**

I(0)	I(1)	
2.72	3.77	10%
3.23	4.35	5%
4.29	5.61	1%

**t-statistical : 8.14**

H0 (cointegration) is accepted at 5% significance level

Source: prepared by the authors based on estimates.

Table A4. Uruguay

Pesaran, Shin and Smith (2001) cointegration test

## Calculated critical values Model (1)

I(0)	I(1)	
3.17	4.14	10%
3.79	4.85	5%
5.15	6.36	1%

t-statistical : 3.56

H0 is rejected (cointegration)

## Calculated critical values Model (2)

I(0)	I(1)	
4.04	4.78	10%
4.94	5.73	5%
6.84	7.84	1%

t-statistical : 5.08

H0 is accepted (cointegration) at 10% significance level

Source: prepared by the authors based on estimates.

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<sup>1</sup> This item is considered a proxy for the tourism balance, although it is recognized that this indicator is likely to underestimate tourism inflow and outflow.

<sup>2</sup> For a more detailed methodology, see Philips (2018).

<sup>3</sup> Data availability corresponds to the methodological continuity of the GDP series (Argentina, Brazil and Chile) or to the availability of balance of payments data (Uruguay).

<sup>4</sup> Alternatively, the total balance of payments variable was assessed, but this variable was found to be stationary for the four economies studied.