

TOURISM PRICES AND COMPETITIVITY OF URUGUAY WITH
ARGENTINA AND BRAZIL

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ABSTRACT

The analysis of the tourist activity inside the Uruguayan economy needs an indicator of the evolution of specific prices and a measure of competitiveness of this activity. It is essential to assess consumer behavior in tourism, analyzing prices evolution and their impact on consumption, since prices are one of the most important variables in the consumers' decision about traveling.

The construction of the Uruguayan Tourist Consumption Prices Index with Argentina and Brazil, allows measuring the evolution of relative prices of goods and services consumed by visitors of the above mentioned countries, as an indicator of prices considered from the demand side.

With the above mentioned indicators we developed the Real Tourist Exchange Rate Index to measure the Uruguayan tourist competitiveness in relation to its main inbound tourists and competitors countries: Argentina and Brazil.

Both indicators are inputs for the analysis and projection of the Uruguayan tourist demand from these countries.

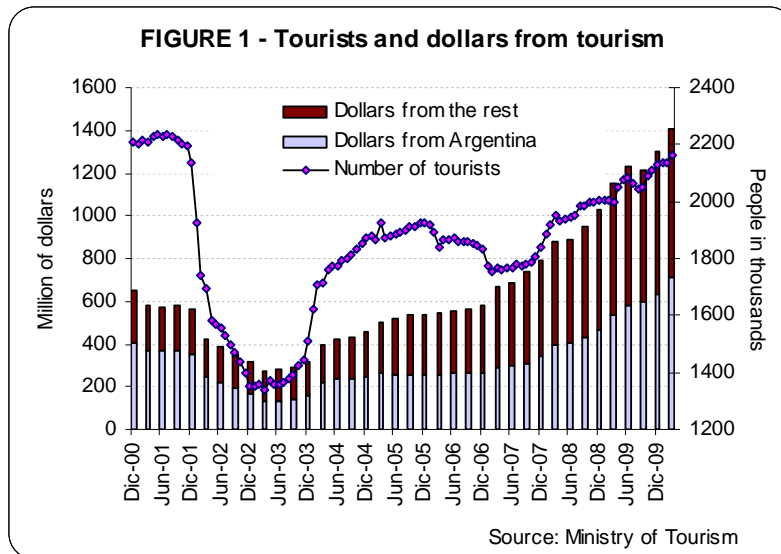
Key words: price index, real exchange rate, competitiveness, tourism.

JEL: L8, L83, E31

INTRODUCTION

Uruguay is a small country (3.3 millions inhabitants) situated between Brazil and Argentina, from where are the main visitors, many of them, principally Argentines, own second homes in Uruguay.

Annually Uruguay receives more than 2 million visitors that implied in 2010 more than 1.400 million dollars, representing the more important product exported. About half of this income comes from Argentinean visitors, our principal partners in this field.



Relative prices are highly significant for Uruguay, because Brazil is a partner but if prices benefits, it can be a competitor, attracting Argentinean visitors to its wonderful beaches.

This paper is based on the need for indicators of tourism profitability and competitiveness, an activity which contribution to Uruguayan GDP is estimated around

6% (according to the pilot experiment of the "Tourism Satellite Account for Uruguay 2008-2009"). This value is comparable to 9% that represent the primary activities (agriculture, fishing, and extractive activities) or 15% of manufacturing industries.

Furthermore, several studies point the lack of a specific deflator for the sector, which should be specified to apply in measuring different economic aspects, thus improving the analysis in relation to the use of the Consumer Price Index (CPI), which is general and displays changes in the goods and services basket's prices representative of the average household consumption, very different from the basket of tourism consumption.

The importance of academic research in Tourism Economics also lies in its role on public policy, because it can be a valuable input when taking policy decisions related to this sector, also taking into account the low development of the economic approach of tourism research in Uruguay.

Therefore, this research has as an additional interest contributing to increase knowledge in the area of Tourism Economics. There are some studies on the economic determinants of incoming tourism in Uruguay in which, it stresses the need to have a Tourist Price Index (Brida, et al., 2008, Mantero et al., 2006; Robano, 2000). Since tourism is defined by the demand side, as it is the visitor who determines what goods and services are consumed during the stay, is that there are official statistics on inbound tourism, emissive and domestic, from this perspective.

In this paper we develop a methodology for building a Tourist Consumer Price Index (TourCPI) for Uruguay, Argentina and Brazil, in order to measure changes in prices of

goods and services consumed by visitors in each country. These baskets should be comparable among the three countries. In this sense, this indicator will be taken as a proxy of profitability. However, to calculate profitability it would be more precise to calculate an index from the supply side to collect the price variation of services offered to intermediaries, that is, the prices reached at the previous stage to the final consumer (Wholesale Price Index). However, the lack of data from the tourism supply in our country, does not allow obtaining this desirable indicator of profitability.

Moreover, the TourCPI is an input for calculating the Real Tourist Exchange Rate Index, which can yield a measure of the competitiveness of the Uruguayan tourism industry in relation to its main partners, i.e. countries from where the majority of tourists arrive in Uruguay (Argentina and Brazil).

The indicators to be constructed would have relevant information for decision-making of different actors, both public and private, linked to the tourism sector. These indices also will be useful for developing tourism demand models, to understand better tourism sector and also to make projections about the number of visitors that would enter the country and the amount of spending they would take.

The second section includes the international and local record on Tourist Price Index and Real Tourist Exchange Rate Index. The third section it is presents the calculation methodology of the following indicators: Tourist Consumer Price Index for Uruguay (TourCPI-U), Argentina (TourCPI-A) and Brazil (TourCPI-B), and the Real Tourist Exchange Rate Index Uruguay with Argentina (TourRER-A), Brazil (TourRER-B) and the region (TourRER-Reg).

The period of analysis considered is 2000-2010 with base January 2000 = 100, and considering monthly data. Also within the TourCPI its components were recalculated, eliminating the category "housing", in order to obtain a Tourist Consumer Price Index for excursionists, i.e. visitors that do not stay overnight at the destination. Although in Uruguay excursionists represent only 5% of total visitors, it was understood desirable to obtain this proxy index as the deflator to be used by those who do not have to bear the costs of proper accommodation, for staying with family or friends or in their own second homes. In the fourth section we present the results and make comments. Finally, we note the challenges posed by the subject for future research.

LITERATURE REVIEW

This section has attempted to collect existing information on the development of price indices of tourism activity in some countries.

First, in Spain Tourist Price Index is estimated from a Hotel Price Index, to which was added other tourist accommodation, and subsequently spread to other tourist activities. However, this is a price index from the supply side and not from the demand, as proposed to be constructed in this research. While the CPI measures the evolution of the price level of consumer goods and services paid by resident households (in the case of Spain, including hotel accommodation service), the Hotel Price Index (HPI) measures changes in prices received by entrepreneurs, considering all their customers (not just households), i.e. the evolution of prices charged by Spanish hotels.

Secondly, on the island of Macao in Asia, it is elaborated an indicator that measures changes in prices of goods and services consumed by visitors, therefore, this price index is constructed from the demand side. The consumption structure of the Tourist Price Index is derived from an expenditure survey aimed to visitors, including excursionists and tourists. Visitors are required to provide the type of expenditure, quantity and outlets. Tourist Price Index is based on 1999-2000, consists of 89 items of goods and services grouped into eight sections specifically linked to tourism. The surveyors of Statistics and Census Service visit selected shops to collect information on prices, which also have to record the reasons why certain prices and services have a significant price change.

In regard to our country, it exists a Consumer Price Index, since 1914 based in 1913 estimated with historical data, and the National Institute of Statistics calculates this index based on consumer surveys from 1968, along with ongoing updates, leading to the current index compiled by base March 1997 = 100. Moreover, the European Community and the countries of MERCOSUR and Chile, began the process of harmonizing the Consumer Price Index in order to help advancing in the comparative analysis of inflation in the concerned countries.

Throughout this investigation, literature reviews related to the matter were carried out, which could not establish the existence of background of the real exchange rate of touristic activity for our country. In Uruguay it is available the bilateral sector real exchange rate with Argentina and Brazil, an indicator elaborated by the Institute of Economics, Faculty of Economics and Management (UdelaR), applied to the following

sectors: agriculture, food products, paper products, metal products, machinery and equipment, textiles, plastics and transport equipment (Mordecki, 2000).

Researchers on tourism in Uruguay have used the real exchange rate as a measure of global competitiveness of the Tourist sector. As noted the real exchange rate is a macroeconomic measure of the price competitiveness of the country, not specific to the sector, hence the importance of constructing a real exchange rate index for tourism.

Finally, from the information gathered in our research it emerges that Uruguay would be the first step towards the calculation of indicators of profitability and competitiveness of tourism in the region.

METHODOLOGY

DEFINITION OF TOURISM CONSUMER PRICE INDICES AND REAL EXCHANGE RATE TOURIST INDEX

Trying to measure the profitability of the sector, will proceed to develop a Tourism Consumer Price Index (TourCPI) taking as its starting point the Consumer Price Index (CPI). That is, consider the same definitions of expenditure, the same methodology of calculation, the same reference population and the same criteria of valuation of consumption expenditure for the CPI for the three countries. In all three cases, calculate a weighted index of fixed base, i.e. a Laspeyres Price Index (IPL), the formula for the period t, based on the period 0 is:

$$IPL_0^t = \sum_i \frac{P_i^0 Q_{i\text{sup}}^0}{\sum_i P_i^0 Q_i^0} \frac{P_i^t}{P_i^0} \quad \text{Where} \quad \frac{P_i^0 Q_i^0}{\sum_i P_i^0 Q_i^0} = w_i^0$$

i = good or service that belongs to the set of goods consumed,

P_i = price per unit of good or service i ,

Q_i = quantity consumed of the good or service i ,

w_i = importance in the total expenditure of expenditure of good i .

Goods and services belonging to the set of goods consumed by tourists are defined from the list of products developed by the World Tourism Organization (UNWTO). This organism discriminates two categories: tourism-specific products (including tourism characteristic products and related) and tourism-no specific products (all those that have no direct relevance to tourism). Tourism characteristic products are those which represent an important part of tourism consumption, or which principal buyers are the visitors.

The TourCPI serves as the basis for a Tourism Real Exchange Rate, in order to measure the evolution of the country's competitive position against its main issuing centers and competitors in tourism: Argentina and Brazil. This means that the majority of tourists arriving in Uruguay are from Argentina and Brazil and, in turn, these countries compete with Uruguay for extra-regional tourists. Regionally, Brazil seeks to catch the Argentineans that could vacation in Uruguay.

To obtain a measure of the competitiveness of the Uruguayan tourism we construct a bilateral Tourism Real exchange rate of Uruguay with Argentina (TourRER-A), Brazil (TourRER-B) and the region as a whole (TourRER-Reg). It will be considered the

definition of Real Exchange Rate as the cost of a basket of foreign goods and services expressed in domestic currency, with respect to the domestic cost of the same basket, i.e., the relative price of the basket of goods and tourism services Uruguay and in the generating tourism centers.

According to the theory of purchasing power parity (PPP), the real exchange rate in the short-term can be formulated as:

$$RER = ExP^*/P$$

Where RER = real exchange rate

E = nominal exchange rate

P* = international price index.

P = domestic price index

We will start from the bilateral real exchange rate in Argentina and Brazil, which will be considered the official exchange rate and if relevant, the parallel exchange rate. Then we will take the TourCPI prepared for Uruguay, Argentina and Brazil in this paper, and then calculate the bilateral Tourism Real Exchange rate and the regional Tourism Real Exchange rate, to assess the competitiveness of Uruguay in the tourism sector.

GENERAL PROCEDURE FOR THE CALCULATION OF TOURCPI AND TOURCPI WITHOUT ACCOMMODATION

First we surveyed and analyzed the price indices methodology for each of the three countries and the lists of specific and nonspecific tourist products defined by the World Tourism Organization, to determine the basket for TourCPI into its components and their relative weights.

Second, we selected based period on January 2000 = 100, taking into account methodological aspects of the three countries and the recommendation for index numbers of not being too remote in time and meeting the criterion of "normality" in the sense of not reflecting unusual situations and particular conjunctures, whether favorable or not.

Then analyzed to determine the items to include in the baskets of goods and services TourCPI, attending the opening used in the statistics of tourist expenditure prepared by the Ministry of Tourism and Sports: Food, Lodging, Transportation, Leisure and Procurement.

For the determination of the components of these items we applied two criteria: a descriptive and operational:

1. Descriptive, in order to reflect tourism consumer spending: take the Tourism Specific Products (characteristic and connected) and some non-specific Tourism products that are part of the visitors' costs.
2. Operational, in order to allow TourCPI monthly update we used the subcomponents that INE (Uruguay) monthly publishes.

Then we adjusted the basket of each country to maintain these criteria and defined a common basket of Tourism consumption goods and services. This adjustment involved the exclusion of general consumer items, such as urban transport that in Uruguayan CPI has an important relative weight, but it reflects consumption patterns of households in their common activities, not when they are as tourists (consequence of the high incidence of bus ticket). Linked to the transport issue, in the absence of the monthly opening in Uruguay for the "taxi" service, which is a specific touristic product, we decided not to take it in the tourist basket for the three countries. Therefore, the TourCPI takes into account only the air and maritime transport.

Shopping was another item that carefully explored, where *a priori* are considered the acquisition of *souvenirs* and typical items from each country. For example, in the case of Uruguay and Argentina correspond to the purchase of leather garments, and in Brazil cotton clothes. We studied the weights for these items in the CPI basket of each country, and there was a very large disparity between them, preventing a comparison between the purchases made by tourists in the three countries. Therefore, it was decided to consider other products to cover costs related to tourism within the shopping category, considering the following elements:

1. Items of personal care, such as cigarettes, snuff and supplies for photography, that are present in the baskets of the three countries, allowing comparability.
2. Being shopping an important part of tourist spending, it was implicitly assumed that prices of tourists purchases similarly to the CPI index.

TABLE 1	
Housing used by tourists	
(Year 2009, % of total)	
Hotel	39,1%
Homeownership	9,2%
Rented housing	8,7%
Family housing	35,7%
Camping	2,0%
Not used	3,3%
Apart hotel	1,0%
Timeshare	0,1%
Others/No data	0,9%
Total	100,0%
Source: Ministry of Tourism	

The restaurant category includes dining out and buying prepared foods. As for the housing item, a constraint when constructing the TourCPI is that you might consider hosting tourist spending in second homes or rental properties, although it is very important for tourists who come to our country.

Discrimination of tourists by type of accommodation for the year 2009 (Table 1) shows that own and rented housing represent almost 20%, which can be explained by their profile, with a strong presence of Uruguayans living abroad and Argentineans house owners in tourist areas and a large number of tourists who vacation staying in rented.

We also calculate the *TourCPI without accommodation*, to have an indicator applicable to the hikers (visitors not staying overnight) because this item (accommodation) does not affect them.

While hikers are only 5% of total visitors, which would not need the construction of a specific index is considered appropriate to develop this index to implement the large number of tourists who stay at home of relatives and friends (more 35%), who don't have housing costs. On the other hand, owners of second homes have other expenses associated with the property as land tax, municipal taxes and charges, property maintenance expenses, common charges in the case of apartments, etc. From the methodological point of view, the TourCPI without accommodation re-weights the TourCPI removing the accommodation item.

DEVELOPMENT OF THE TOURISM CONSUMPTION INDEX PRICES OF ARGENTINA (TOURCPI-A)

The Argentinean Institute of Statistics and Censuses (INDEC) calculates the Consumer Price Index for Greater Buenos Aires (CPI-A), which is available since 1924 and which seeks to measure changes in prices of a set of goods and services representing the consumption expenditure of households resident in Buenos Aires City and 24 districts of Greater Buenos Aires.

To prepare the TourCPI, it was taken as the base January 2000, considering the last two updates of the weight structure of the CPI-A based in 1999. These weights come from the information of the National Survey of Household Spending 1996 -1997.

The latest change in the CPI-A, conducted in 2008, is based on changes in the weighting structure, treatment of highly seasonal varieties (fruits, vegetables, clothing and footwear where seasonal baskets are used in the calculation of CPI-A), updating the local sample of informants and the frequency with which information is disseminated. The source of information used to estimate the structure of household spending and the selection of the basket of goods and services for the rebasing of the CPI-A is the National Survey of Household Expenditure 2004-2005 (ENGH).

The reference population of the Income and Expenditure Survey of Households in the year 1996-1997 is resident households in the geographic area Federal Capital and 24 districts of Greater Buenos Aires, which remains in the Income and Expenditure Survey of Households the year 2004-2005.

For the CPI-A based 1999, framed in the System of National Accounts consumption expenditure includes, in addition to the amount spent by households on goods and services for individual consumption, the value of goods and services received in exchange for work of household members and goods obtained from the producer's own home or business itself removed for home consumption.

On the other hand excludes expenses that are not considered consumption (interest, taxes, retirement contributions, fees, loans or debts, gifts or transfers to other households or non-profit institutions, etc.), other cash outflows attributable to physical or financial investment of the household (home ownership, payment of fees to purchase circles, loan repayments, purchase of shares, completion of bank deposits, etc.) and the imputed value of housing service provided by the homes used by their owners.

For the new index base 2008 are kept these methodological approaches, however, the analysis of the new National Survey of Household Expenditure 2004-2005 (ENGH) determined a change in the measurement of varieties with a marked seasonal behavior (Fruits, Vegetables, Clothing and Footwear), which were given special treatment by incorporating seasonal baskets in the CPI-A calculation.

To prepare the TourCPI of Argentina, two structures of tourism basket were defined, the first with weights from the National Survey of Household Expenditure 1996-1997 and the second with the Survey for 2004-2005. Once the weighting was calculated, we obtained the weights of the tourism baskets as part of TourCPI, a Laspeyres index based on January 2000 = 100 base (see Annex).

DEVELOPMENT OF THE TOURISM CONSUMPTION INDEX PRICES OF BRAZIL (TOURCPI-B)

The Brazilian Institute of Geography and Statistics calculates the Expanded Consumer Price Index (from now on we will call CPI-B) since 1979, which reflects changes in prices and weights of the consumption basket. The weights reflect the consumption patterns of the population studied over a period of time, which allow you to update the indices produced. Prior to 1979 there were other indices of consumer prices.

The purpose of the CPI-B is to measure price changes relating to personal consumption. We considered the TourCPI-B starting point in January 2000, that means taking into account two updates of the weighting structures of the CPI-B for the case of Brazil.

The first update made to consider is the Family Expenditure Survey 1995-1996, which were taken into account in the calculation of the CPI-B in August 1999 base = 100. A second update (force until the present), was carried out with base July 2006 = 100, with the weights that emerged from the Family Expenditure Survey conducted in 2002-2003. Calculations of CPI-B for August 1999 = 100 and July 2006 = 100 defined a target population by two parameters:

1. Coverage - over 90% of families living in urban areas covered by the National System of Consumer Price Index, whatever the source of income, so as to ensure close to full coverage.
2. Stability of the structure of consumption - they exclude from the extremes of the distribution, families whose income is below the minimum wage and those with

high incomes. The arguments are the instability and the atypical patterns of household consumption component of these segments.

For the CPI-B base in August 1999 and July 2006 it was calculated for each region selected the weighting structure that emerges from the respective Family Expenditure Survey 1995-1996 and 2002-2003. At the same time we must consider the regional weights, which are needed to find the total CPI-B country level grouping the 11 regions, determined by the percentage of urban population living in each region of the total (see Annex).

It is noted that the lists of sub-items of the respective weights associated structures and is where you reflect regional peculiarities and each target population. The same sub-item in a region can exist and not exist in another, therefore, item-level, the classification of goods and services CPI-B is constructed so as to ensure the existence of all categories in this level of aggregation in all weighting structures. Thus, the items when added to a national (total area) must be common to different structures, enabling the comparative analysis of the results of the CPI-B.

In the case of Brazil, we defined two baskets of tourist structures, the first of it with weights in the Family Expenditure Survey (FES) for the years 1995-1996 and the second with those for 2002-2003.

In both developed tourist baskets for Brazil the "restaurant" category is referred to in "food away from home", while accommodation, entertainment, snuff and supplies for photography is found in "recreation, smoking and movies, " transportation spending is

in "transportation" (including fuel) and Finally, purchases of personal hygiene are located in "caring ".

Once the weighting was calculated, we obtained the weights of the tourism baskets as part of the Consumer Price Index Tourist, a Laspeyres index base January 2000 = 100.

In the case of Brazil were available monthly price changes of each group, subgroup, sub-item and item, from which are constructed price indices for goods and services considered in the tourism basket with base January 2000 = 100.

DEVELOPMENT OF THE TOURISM CONSUMPTION INDEX PRICES OF URUGUAY (TOURCPIURU)

The Consumer Price Index for Uruguay (CPI-U) is calculated monthly by the National Statistics Institute (INE), to estimate "the price changes of goods and services consumed by households (INE, 1996), based on a basket of goods and services reflects the cost structure of them.

The Index of Consumer Prices regards Household Consumption according to the definition used in the Income and Expenditure Survey 1994-1995, in the methodology section: "Consumption Expenditures are considered to meet the needs of home in durable and nondurable goods and services, provided they are not aimed at increasing household assets (investment) ", (INE, 1996).

Since 1914, Uruguay's economic historians calculated the CPI-U. The formula used has always been a Laspeyres price index, which implies the assumption that the quantities of base period weights are constant over time.

The base period considered is March 1997 and the source of information used to estimate the structure of household spending and the selection of the basket of goods and services is the Income and Expenditure Survey 1994 - 1995, held in Montevideo and others cities, but CPI-U structure only represents the results for Montevideo.

In the case of Uruguay, after studying its components, compared with the items defined by the UNWTO as characteristic or related, considering the openness with which the INE publishes monthly updates to the CPI-U, we decided to include the headings and sub-headings below:

- Restaurants, prepared foods and meals away from home
- Accommodation: Tourism and Accommodations
- Transportation: Fuels and lubricants and Air Transport
- Recreation: Admission to shows, recreational activities and other entertainment expenses
- Shopping: Personal care and Cigarettes and Snuff

As mentioned, this classification is taken as a point of reference when presenting the results of the three countries. In the cases of Brazil and Argentina weighting structures are presented in the corresponding Annex. Once re-weighted the original indices, we

have the weights of the tourism baskets as base of the Tourism Consumer Price Index, base January 2000 = 100.

In the case of Uruguay, it is available monthly price data of each group and subgroup, from which are constructed price indices for goods and services considered in the tourism basket with base January 2000 = 100.

PROCEDURE FOR DEVELOPING THE TOURRER

For the development of Tourism Real Exchange Rate Index between Uruguay and Argentina, Uruguay and Brazil, and also Uruguay with the region, it was taken from the methodological document "Technical note: different measures of competitiveness in Uruguay 1980 – 1995" (Mordecki, 2000). In this document the author develops bilateral real exchange rates with Argentina and Brazil in the following sectors: agriculture, food products, paper products, metal products, machinery and equipment, textiles, plastics and materials transport.

In the above methodology we use the definition of real exchange rate as the cost of a basket of foreign goods and services expressed in domestic currency, with the cost of the same basket of household goods.

Since the first part of the research were drawn Tourism Consumer Price Indices (TourCPI) for the three countries concerned with base January 2000 = 100, in the index formula of bilateral real exchange rate adapted to tourism (TourRER), P_t^* is the Tourism Consumer Price Index of Brazil and Argentina respectively, P_t is the

Consumer Price Index Uruguay Tourism and E is the Index of Nominal Exchange Rate between Uruguay and neighboring countries respectively.

Therefore, the formulas for calculating the Real Tourist Exchange Rate Index Uruguay with Brazil, Argentina and the region, are the following:

$$a. \text{ TourRER-B} = \text{Ex}P_t^*/P_t$$

Where:

TourRER-B = Tourism Real Exchange Rate Index between Uruguay and Brazil

E = Nominal Exchange Rate Index between Brazilian real and Uruguayan peso.

P_t^* = Tourism Consumer Price Index of Brazil.

P_t = Tourism Consumer Price Index of Uruguay.

$$b. \text{ TourRER-A} = \text{Ex}P_t^*/P_t$$

Where:

TourRER-A = Real Tourist Exchange Rate Index between Uruguay and Argentina

E = Nominal Exchange Rate Index between Argentinean peso and Uruguayan peso.

P_t^* = Tourism Consumer Price Index of Argentina.

P_t = Tourism Consumer Price Index of Uruguay.

Moreover, since Argentinean and Brazilian tourists are an important source of revenue for Uruguayan economy, it is of great importance to build a summary indicator that measures the competitiveness of our country towards the region. To do this, one can construct a Tourism Real Exchange Rate Index between Uruguay and the region (Argentina and Brazil), using the weight of tourist visitors spending from each of these countries held in Uruguay in each current year.

$$c. \text{ TourRER-Reg} = \alpha_t \times (E_{U-A} \times P_A^* / P_U) + \beta_t \times (E_{U-B} \times P_B^* / P_U)$$

Where:

TourRER-Reg = Tourism Real Exchange Rate Index between Uruguay and the region

α_t = Weight of Argentinean tourists' expenditure in the current year t.

β_t = Weight of Brazilian tourists' expenditure in the current year t

E_{U-A} = Nominal Exchange Rate Index between Argentinean and Uruguayan peso.

E_{U-B} = Index of Nominal Exchange Rate between real and Uruguayan peso.

P_A^* = Tourism Consumer Price Index of Argentina.

P_B^* = Tourism Consumer Price Index of Brazil.

P_U = Tourism Consumer Price Index of Uruguay.

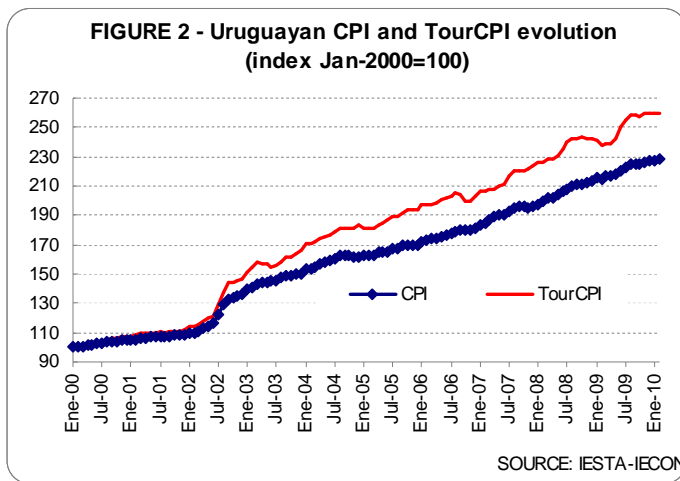
With regard to exchange rates is considered to be the relevant for tourism. In Brazil, there is a parallel market dollar, with certain restrictions on the purchase of foreign currency, it was considered that this was the price relevant to include in this index. For Argentina and Uruguay was considered the trading currency price.

MAIN RESULTS

EVOLUTION OF TOURCPI AND TOURCPI WITHOUT ACCOMMODATION

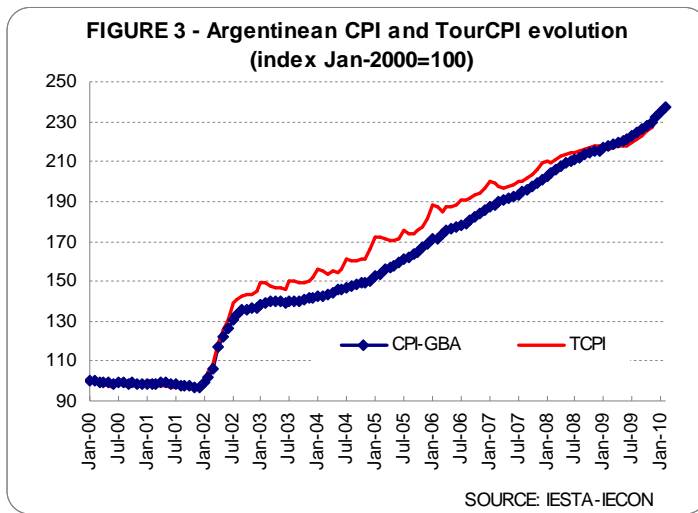
We have developed TourCPI-U series of Uruguay, Argentina and Brazil based on January 2000 and they have been compared with the overall CPI of each country.

Since March 1997 TourCPI-U evolution in Uruguay was very similar to evolution of the overall CPI, but shows a jump in mid-2002, linked to the sharp acceleration in inflation experienced in that year.



While in 2001 inflation in Uruguay was 3.6% in 2002 it reached 25.9%, considered December to December. In addition, the acceleration of inflation was linked to the significant

devaluation of the peso that occurred in 2002 (93.2%), impacting primarily on traded items, which are mostly part of TourCPI-U (Figure 2).

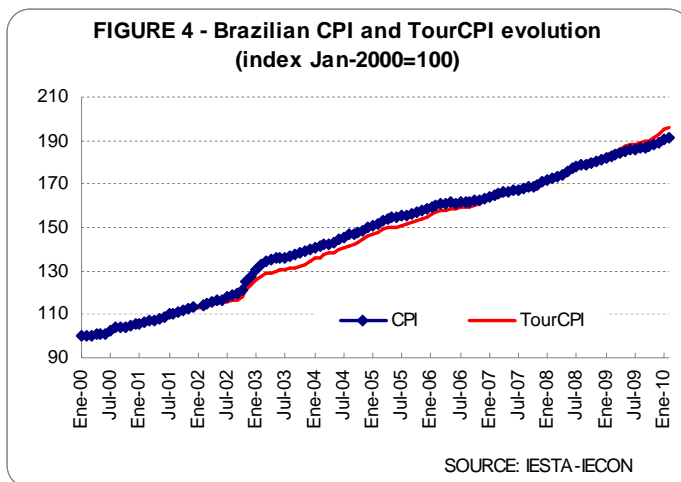


TourCPI-A evolution in Argentina was similar, broadly speaking, to what happened in Uruguay, since the phenomenon of the devaluation in 2002 and its passage to prizes occurred at similar rates in

Argentina and Uruguay, with a temporary mismatch of a few months (Figure 3).

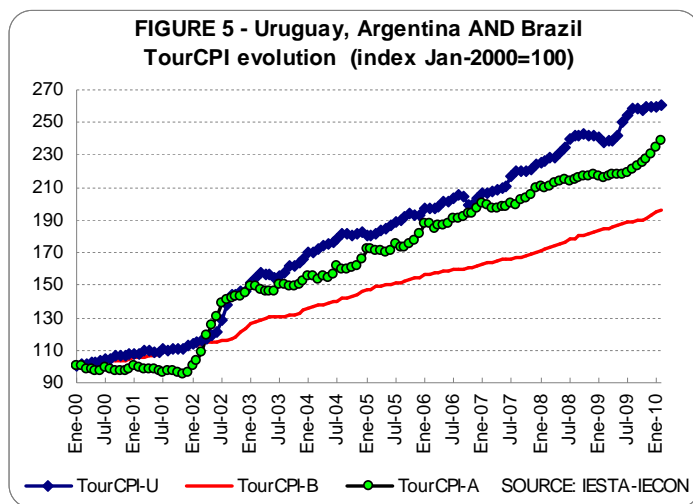
While in Argentina the phenomenon was unleashed in January 2002 with the abandonment of convertibility, in Uruguay the end of fixed nominal exchange rate was in mid June 2002. However, the magnitude of the variation of the exchange rate was much higher in Argentina than in Uruguay, verifying an increase of 249% in the Argentinean peso during 2002 (December after December). In the same period, inflation

in Argentina was 49%.



In the case of Brazil, the evolution of both indices is relatively similar, although from 2003 onwards it shows the acceleration of inflation, only part of it was transferred to tourism

prices. This inflation evolution in Brazil resulted from a somewhat different process in relation to what happened in Argentina and Uruguay (Figure 4).



From January 1999, when Brazil abruptly changed its economic policy (“Plan Real”) and the currency depreciated sharply, inflation in Brazil remains under control and at the same time, it started a

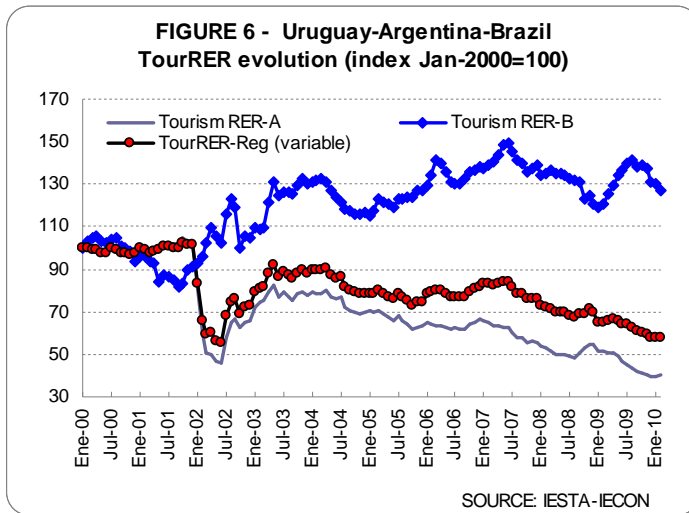
process of Brazilian currency (“real”) appreciation. This determined the growth of non-tradable prices in this period, generating a relative drop in prices in the tourism sector. However, this process declined and, from mid-2008, tourism prices started to rise faster than the overall CPI, as a result of the strong dollar inflation that occurred in this period.

In all three cases it appears that for the period of analysis comparing the overall CPI index and TourCPI for tourists’ consumption, the latter exceeds the former at a certain point, i.e., prices of goods and services consumed by tourists increased more than the overall household consumption (Figure 5).

In addition, for the three countries it appears that the TourCPI without accommodation has no significant differences with general TourCPI, as the housing has a low weighting in the tourism basket (see Statistical Annex).

TOURRER EVOLUTION

Figure 6 presents the evolution of the Tourist Real Exchange Rate Index base January 2000 = 100 between Uruguay and Argentina, Uruguay and Brazil and a Regional one (between Uruguay and both countries, using variable weights).



We also calculated the bilateral real exchange rates for the same period overall, using the corresponding Consumer Price Index prepared by the agencies (IBGE in Brazil, INDEC in Argentina and INE in

Uruguay). This will illustrate the difference shown by calculating the global competitiveness indicator (ITCReal) and with a specific type as that found Real Tourist Exchange Rate Index.

The construction of bilateral Tourist Real Exchange Rates index and the regional TourRER allows the analysis of the competitiveness of the tourism sector between Uruguay and its neighbors.

Analyzing the evolution of bilateral rates there has been a very different behavior of Uruguay related to Argentina and Brazil. Comparing with Argentina there was a strong loss of competitiveness in early 2002, after the breakdown of convertibility in

Argentina, which is then reversed with the devaluation of the Uruguayan peso in the mid of that year. However, since 2004 the different exchange rate policies applied in both countries led to a further loss of competitiveness with Argentina, being in the first months of 2010 in levels similar to 2002. However, we must take account of measurement problems currently facing Argentina on retail prices from 2007, which could imply that the true level of competitiveness is much higher than what these indices reflect. However, there is no disaggregated information on alternative measures of inflation to estimate tourist prices.

With respect to Brazil, the situation is very different, as from 2002 it was observed a significant improvement in competitiveness, which had its counterpart in the largest influx of tourists from this country. In late 2008, the economy had a loss of competitiveness in this measurement, derived from the strong depreciation of Brazilian “real” following the international crisis that broke at that time. However, after that episode, we have recovered competitiveness with this country.

CONCLUSIONS

In this paper we developed tourist price indices of Argentina, Brazil and Uruguay, so it was necessary to study the different items that compose them, following those established by the UNWTO as characteristic items, but with the additional problems emerging from the necessity that items should be mutually consistent.

In addition, using these prices as a base, there were developed tourist real exchange rates for Uruguay with Argentina, Brazil and Uruguay with all region summarizing both calculations.

From the analysis of the trajectory of these indicators we can appreciate the differential impact that had the 2002 crisis and the sharp rise in inflation in that year, and also the devaluation that occurred as a result of this crisis. The impact was different in the three countries, and rates of variation of the TourRER show it. Moreover, real exchange rates calculated here allow the analysis of price competitiveness of tourism in Uruguay with the main consumers and also competitors: Argentina and Brazil. Here it becomes evident the strong gain in competitiveness that the country had with Brazil, while it lost with Argentina. This highlights the efforts and sector policies that should be implemented in order to complement these trajectories, to compensate or take advantage of these paths of competitiveness.

Besides the importance of updating the indicators used, there are some topics that could be incorporated into future development of TourCPI for the purpose of improving the tourism baskets.

On the other hand, the construction of an indicator from the supply side of tourism would be a task of great value that should be done in the future. This task requires the design and implementation of specific surveys to tour operators who provide accommodation, meals, transport, car rental agencies, receptive travel agencies, etc.

Moreover, the indicators developed here provide a basis for further studies and models to make projections on future tourism, based on proposed scenarios for the possible development of tourism competitiveness, which serves to plan activities and establish and carry out the policies needed to support the activity of this sector.

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STATISTICAL ANNEX

TABLE A.1			
URUGUAY: CPI (Base Mar-97 = 100) - TourCPI (Base Jan-00 = 100) weights structure			
<i>Selected products in Uru TCPI basket</i>	<i>CPI weights</i>	<i>TourCPI weights</i>	<i>TourCPI without accomm. weights</i>
Prepared meals	0.9	5.89%	6.46%
Eating out	4.7	31.45%	33.96%
Fuels and Lubricants	2.6	17.37%	18.66%
Air transport	0.5	3.07%	3.59%
Entrance Entertainment	0.5	3.46%	3.59%
Recreation	1.0	6.33%	7.18%
Other expenditure on recreation	0.5	3.34%	3.59%
Tourism and accommodation	1.2	7.97%	0.00%
Personal Care Items	1.8	12.05%	12.92%
Tobacco	1.4	9.06%	10.05%
TOTAL	15	100%	100%

Source: Elaborated based on INE data

TABLE A.2					
ARGENTINA: CPI (Base 99=100) - TourCPI (Base Jan00=100) weights structure					
<i>Selected products in Arg TourCPI basket</i>	<i>CPI weights</i>		<i>TourCPI weights</i>		<i>TourCPI without acc. weights</i>
	<i>Basket 1996-1997</i>	<i>Basket 2004-2005</i>	<i>Basket 1996-1997</i>	<i>Basket 2004-2005</i>	<i>Basket 1996-1997</i>
Food and Beverage		37.87		76.91%	
Meals ready to lead	1.06		6.87%		7.44%
Breakfast and snack	0.94		6.13%		6.65%
Lunch and dinner	0.51		3.30%		3.57%
Fuels and Lubricants	2.35		15.25%		16.53%
Fuel and tolls for tourism	0.14		0.94%		1.01%
Public transport for tourism	0.59		3.80%		4.12%
Accommodation	1.19		7.74%		
Recreation		5.07		10.30%	
Tours and travel packages	0.83		5.40%		5.85%
Audio equipment, television, photography and computer	0.75		4.85%		5.26%
Audio, photography, video and computer elements	0.41		2.67%		2.90%
Audio, photo and video services	1.27		8.22%		8.91%
Cinemas, theaters and other entertainment	0.67		4.35%		4.71%
Clubs, parks and entertainment	0.63		4.10%		4.45%
Other goods and services		6.30		12.79%	
Cigarettes and Accessories	1.34		8.72%		9.45%
Toiletries & Beauty	1.89		12.27%		13.30%
Personal care services	0.83		5.39%		5.84%
TOTAL	15.38	49.24	100%	100%	100%

Source: Elaborated based on INDEC data

TABLE A.3
BRAZIL: CPI (base Mar-97=100) - CPI (base Jul-06=100) - TourCPI (base Jan-00=100) weights structure

<i>Selected products in TourCPI- B basket</i>	<i>CPI weights</i>		<i>TourCPI weights</i>		<i>TourCPI Without accomm. weights</i>	
	<i>Basket 1999</i>	<i>Basket 2006</i>	<i>Basket 1999</i>	<i>Basket 2006</i>	<i>Basket 1999</i>	<i>Basket 2006</i>
	Food away from home	5.878	6.624	38.48%	36.34%	39.32%
Ferry-boat	0.006	0.010	0.04%	0.06%	0.04%	0.06%
Plane	0.324	0.283	2.12%	1.55%	2.17%	1.58%
Navio	0.004	0.000	0.02%	0.00%	0.02%	0.00%
Boat	0.007	0.003	0.04%	0.06%	0.04%	0.02%
Parking	0.177	0.135	1.16%	0.74%	1.18%	0.75%
Fuel	2.311	5.018	15.13%	27.53%	15.46%	28.10%
Alcohol	0.776	0.439	5.08%	2.41%	5.19%	2.46%
Personal care	1.962	2.560	12.85%	14.05%	13.13%	14.34%
Cinema	0.149	0.289	0.97%	1.59%	1.00%	1.62%
Ticket to game	0.064	0.048	0.42%	0.26%	0.43%	0.27%
Club	0.256	0.185	1.67%	1.01%	1.71%	1.04%
CD	0.000	0.265	0.00%	1.46%	0.00%	1.49%
Toys	0.597	0.418	3.91%	2.29%	3.99%	2.34%
Disco and nightclub	0.409	0.406	2.68%	2.23%	2.74%	2.27%
Motel	0.102	0.084	0.67%	0.46%	0.00%	0.00%
Sporting goods	0.005	0.005	0.04%	0.03%	0.04%	0.03%
Hotel	0.294	0.287	1.93%	1.58%	0.00%	0.00%
Tour	0.077	0.101	0.50%	0.55%	0.51%	0.56%
Disco	0.313	0.000	2.05%	0.00%	2.10%	0.00%
Theatre	0.014	0.000	0.09%	0.00%	0.10%	0.00%
Tobacco	1.438	0.777	9.41%	4.26%	9.62%	4.35%
Film and disposable flash	0.034	0.066	0.22%	0.36%	0.23%	0.37%
Revelation and copy	0.149	0.226	0.98%	1.24%	1.00%	1.26%
TOTAL	15.3	18.2	100%	100%	100%	100%

Source: Own elaboration based on IBGE data

TABLE A.4									
URUGUAY - ARGENTINA - BRAZIL - TourCPI (Base January 2000=100) series									
	<i>CPI-U</i>	<i>TourCPI-U</i>	<i>TourCPI-U</i> <i>without acc.</i>	<i>CPI-A</i>	<i>TourCPI-A</i>	<i>TourCPI-A</i> <i>without acc.</i>	<i>CPI-B</i>	<i>TourCPI-B</i>	<i>TourCPI-B</i> <i>without acc.</i>
Jan-00	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Feb-00	100.3	101.3	101.5	100.0	100.2	100.2	100.1	100.5	100.5
Mar-00	101.0	101.6	102.3	99.5	98.5	99.6	100.4	100.9	100.9
Apr-00	101.4	102.0	102.4	99.4	98.3	99.4	100.8	101.2	101.2
May-00	101.9	102.6	103.4	99.0	97.4	98.9	100.8	101.5	101.5
Jun-00	102.4	103.8	104.7	98.8	97.1	98.7	101.0	101.6	101.6
Jul-00	102.8	104.1	104.8	99.2	99.5	100.6	102.6	102.3	102.3
Aug-00	103.3	104.9	105.8	99.0	97.9	99.2	104.0	103.1	103.2
Sep-00	103.7	106.2	107.2	98.9	97.7	99.2	104.2	103.3	103.4
Oct-00	104.4	106.6	107.7	99.0	97.7	99.1	104.4	103.6	103.7
Nov-00	104.5	106.8	107.9	98.5	97.3	98.9	104.7	104.0	104.0
Dec-00	104.7	107.3	108.2	98.4	98.1	99.4	105.3	104.8	104.9
Jan-01	105.0	107.4	108.4	98.5	99.9	99.6	105.9	105.2	105.2
Feb-01	105.3	108.0	108.9	98.3	99.8	99.8	106.4	105.7	105.7
Mar-01	105.7	109.4	110.4	98.5	98.0	99.4	106.8	106.1	106.1
Apr-01	106.6	109.6	110.6	99.1	98.0	99.0	107.4	106.3	106.3
May-01	107.2	109.2	110.4	99.2	97.9	99.2	107.9	106.9	106.9
Jun-01	106.8	109.2	110.3	98.5	96.9	98.5	108.4	107.7	107.8
Jul-01	107.7	110.5	111.1	98.2	96.6	98.1	109.9	109.0	109.0
Aug-01	107.4	110.1	111.4	97.8	97.3	99.0	110.6	109.6	109.7
Sep-01	107.7	110.4	111.6	97.7	96.8	98.5	111.0	110.2	110.2
Oct-01	108.0	110.7	112.0	97.3	96.6	98.4	111.9	111.2	111.2
Nov-01	108.1	111.2	112.7	97.0	95.5	97.5	112.7	112.3	112.3
Dec-01	108.4	112.4	113.7	96.9	95.7	97.5	113.4	112.9	113.0
Jan-02	109.4	113.9	114.5	99.1	100.2	101.3	114.0	113.1	113.1
Feb-02	110.1	114.6	115.6	102.3	104.0	105.9	114.4	113.4	113.4
Mar-02	111.1	115.5	116.3	106.3	108.6	111.2	115.1	114.2	114.3
Apr-02	112.8	117.2	118.1	117.3	119.1	122.9	116.0	114.9	114.9
May-02	114.2	119.5	120.2	122.0	125.3	129.7	116.3	115.3	115.3
Jun-02	116.2	121.2	121.7	126.5	131.0	135.7	116.7	115.4	115.4
Jul-02	121.9	128.8	126.6	130.5	138.9	144.2	118.1	115.8	115.8
Aug-02	129.0	137.6	135.1	133.6	141.0	146.5	118.9	116.2	116.3
Sep-02	133.0	144.4	141.6	135.4	142.2	147.9	119.8	116.8	116.8
Oct-02	134.3	144.4	142.6	135.7	143.3	148.9	121.3	118.0	118.0
Nov-02	134.8	145.8	144.1	136.3	143.6	149.1	125.0	120.8	120.9
Dec-02	136.5	146.4	144.5	136.6	144.8	150.3	127.6	123.6	123.6
Jan-03	139.1	151.7	149.5	138.4	149.3	151.7	130.5	126.1	126.2
Feb-03	141.0	154.7	153.4	139.2	149.0	152.1	132.5	127.5	127.5
Mar-03	142.7	158.1	157.5	140.0	147.3	151.6	134.2	128.6	128.6
Apr-03	144.1	156.4	155.4	140.1	146.7	151.4	135.5	129.3	129.4
May-03	144.6	156.7	155.8	139.5	146.5	151.6	136.3	130.1	130.2
Jun-03	144.8	154.6	155.0	139.4	145.8	150.8	136.1	130.2	130.2
Jul-03	145.6	155.8	156.1	140.0	150.3	155.5	136.4	130.2	130.3
Aug-03	147.3	158.1	158.2	140.1	150.3	155.6	136.8	131.0	131.0
Sep-03	148.4	161.5	161.9	140.1	149.4	155.0	137.9	131.6	131.6
Oct-03	149.2	162.1	162.3	141.0	149.6	154.9	138.3	132.0	132.0
Nov-03	149.5	163.4	163.4	141.3	150.0	155.3	138.8	133.1	133.1
Dec-03	150.4	166.3	164.5	141.6	152.2	156.7	139.5	134.5	134.5
Jan-04	153.7	170.4	168.4	142.2	155.7	157.8	140.5	135.6	135.6
Feb-04	153.8	170.4	168.7	142.3	155.1	157.2	141.4	136.3	136.3
Mar-04	154.7	171.7	170.6	143.2	153.2	157.5	142.1	137.5	137.4
Apr-04	156.6	174.6	174.1	144.4	155.1	158.8	142.6	138.0	137.9
May-04	158.2	175.6	175.2	145.5	154.7	159.5	143.3	138.5	138.4
Jun-04	158.7	176.1	176.0	146.3	156.4	161.5	144.3	139.5	139.4
Jul-04	160.3	178.6	178.4	147.0	161.4	166.3	145.6	140.3	140.2
Aug-04	162.2	181.2	181.4	147.5	159.8	164.9	146.7	141.5	141.5
Sep-04	162.7	181.3	182.1	148.4	159.9	165.2	147.1	142.0	141.9
Oct-04	162.1	181.0	182.0	149.0	161.0	166.1	147.8	142.9	142.9
Nov-04	161.7	181.3	182.3	149.0	161.3	166.6	148.8	144.3	144.2
Dec-04	161.9	182.9	183.2	150.2	165.9	170.6	150.1	145.9	145.8

TABLE A.4
URUGUAY - ARGENTINA - BRAZIL - TourCPI (Base January 2000=100) series

	<i>CPI-U</i>	<i>TourCPI-U</i>	<i>TourCPI-U</i> <i>without acc.</i>	<i>CPI-A</i>	<i>TourCPI-A</i>	<i>TourCPI-A</i> <i>without acc.</i>	<i>CPI-B</i>	<i>TourCPI-B</i>	<i>TourCPI-B</i> <i>without acc.</i>
Jan-05	162.5	180.9	180.8	152.5	172.5	173.9	151.0	146.9	146.8
Feb-05	162.5	180.6	181.1	153.9	172.3	173.9	151.8	147.7	147.7
Mar-05	163.2	181.3	181.9	156.3	171.5	175.5	152.8	148.9	148.8
Apr-05	164.8	183.9	185.3	157.1	170.7	175.4	154.1	149.7	149.7
May-05	164.9	184.2	185.9	158.0	170.5	175.5	154.9	150.2	150.1
Jun-05	165.3	186.5	188.8	159.4	171.1	176.1	154.8	150.3	150.3
Jul-05	167.4	188.8	190.4	161.0	175.5	180.1	155.2	151.1	151.0
Aug-05	167.8	189.7	191.9	161.7	173.4	178.2	155.5	151.4	151.3
Sep-05	169.1	192.1	194.2	163.6	173.5	178.6	156.0	152.1	152.1
Oct-05	169.6	193.8	196.1	164.9	175.7	180.4	157.2	153.2	153.2
Nov-05	169.4	193.3	195.7	166.9	177.6	182.1	158.1	154.1	154.1
Dec-05	169.8	193.5	195.4	168.8	181.3	184.6	158.6	154.6	154.6
Jan-06	172.1	197.0	197.1	170.9	188.0	186.7	159.6	156.3	156.3
Feb-06	173.3	197.4	197.5	171.6	187.6	187.6	160.2	157.0	157.0
Mar-06	173.8	197.3	198.0	173.7	185.0	187.9	160.9	157.7	157.7
Apr-06	174.7	198.4	199.3	175.3	187.2	190.1	161.2	158.0	158.0
May-06	175.8	201.1	202.5	176.2	186.9	190.6	161.4	158.4	158.4
Jun-06	176.4	201.8	203.5	177.0	187.9	191.7	161.1	158.3	158.3
Jul-06	177.9	203.1	204.5	178.1	191.2	194.7	161.4	159.3	159.3
Aug-06	179.3	205.5	207.5	179.1	190.8	194.1	161.4	159.4	159.4
Sep-06	180.3	204.4	206.2	180.7	191.9	195.5	161.8	159.7	159.7
Oct-06	179.9	199.5	200.8	182.3	193.6	197.3	162.3	160.3	160.3
Nov-06	180.0	199.5	200.7	183.6	194.1	198.2	162.8	160.9	160.8
Dec-06	180.6	203.0	203.5	185.4	196.9	200.6	163.6	162.2	162.2
Jan-07	183.8	206.4	205.8	187.5	200.0	203.0	164.3	163.3	163.2
Feb-07	185.0	206.3	205.7	188.0	199.3	202.6	165.0	163.8	163.7
Mar-07	186.6	208.0	208.2	189.5	197.4	203.5	165.7	164.2	164.2
Apr-07	188.9	208.1	208.9	190.9	197.0	203.6	166.1	165.0	164.9
May-07	190.3	210.0	211.0	191.7	197.7	204.3	166.5	165.8	165.7
Jun-07	190.6	211.1	212.3	192.5	198.5	205.1	167.0	166.1	166.1
Jul-07	192.2	216.5	218.0	193.5	200.1	206.5	167.4	166.2	166.1
Aug-07	195.5	220.3	222.6	194.6	199.7	206.4	168.2	166.9	166.8
Sep-07	196.3	220.2	222.5	196.2	202.0	208.8	168.5	167.3	167.2
Oct-07	195.8	219.9	222.3	197.5	203.3	210.0	169.0	168.0	167.9
Nov-07	195.4	221.1	223.3	199.2	205.9	212.8	169.6	168.8	168.8
Dec-07	196.0	224.1	226.2	201.1	209.6	216.2	170.9	170.4	170.3
Jan-08	197.5	225.7	226.9	202.9	210.6	215.2	171.8	171.5	171.4
Feb-08	199.3	226.0	228.3	203.9	209.3	214.6	172.7	172.1	172.1
Mar-08	201.6	227.9	230.3	206.2	210.7	216.6	173.5	173.0	173.0
Apr-08	202.3	228.9	232.7	207.9	213.0	219.8	174.4	173.9	173.9
May-08	204.0	231.3	235.6	209.1	213.3	220.1	175.8	175.2	175.1
Jun-08	206.6	235.1	239.5	210.4	214.5	221.4	177.1	176.5	176.5
Jul-08	207.6	240.2	244.5	211.2	214.1	221.0	178.1	178.0	178.0
Aug-08	209.7	242.1	246.3	212.2	215.0	221.9	178.6	178.8	178.8
Sep-08	210.9	242.2	245.2	213.2	215.8	222.7	179.0	180.2	180.2
Oct-08	211.6	242.9	244.5	214.2	216.8	223.8	179.8	180.9	180.9
Nov-08	212.0	241.8	242.4	214.9	217.4	224.4	180.5	181.3	181.3
Dec-08	214.0	242.2	241.4	215.6	218.1	225.1	181.0	182.1	182.1
Jan-09	215.7	241.1	238.9	216.8	217.2	224.1	181.9	183.2	183.2
Feb-09	215.1	237.5	236.0	217.7	216.3	223.3	182.9	184.2	184.2
Mar-09	216.8	239.1	236.8	219.1	217.0	223.9	183.2	184.8	184.8
Apr-09	216.7	239.2	237.4	219.8	217.5	224.5	184.1	186.1	186.0
May-09	217.6	241.8	241.2	220.5	217.5	224.5	185.0	187.2	187.0
Jun-09	220.0	250.5	250.9	221.5	218.1	225.1	185.6	187.8	187.7
Jul-09	222.2	254.7	255.3	222.9	219.2	226.2	186.1	188.5	188.3
Aug-09	224.9	258.1	260.5	224.7	221.4	228.4	186.4	189.0	188.9
Sep-09	225.5	258.4	261.2	226.4	223.0	230.2	186.8	189.6	189.5
Oct-09	225.4	257.8	261.3	228.2	225.1	232.3	187.3	190.1	190.0
Nov-09	226.2	259.4	263.0	230.1	227.4	234.7	188.3	191.4	191.3
Dec-09	227.1	259.5	263.3	232.2	230.8	238.2	189.3	192.9	192.8
Jan-10	227.9	260.0	262.7	234.6	234.1	241.6	190.3	194.9	194.8
Feb-10	228.7	260.1	263.2	237.6	239.0	246.7	191.7	195.8	195.8

Source: Elaborated based on INE data

TABLE A.5									
Argentina-Brazil-Region (Variable and fixed Weighting) TRER series									
Base January 2000=100									
	<i>Tourism</i>	<i>Tourism</i>	<i>TourRER-</i>	<i>TourRER-</i>		<i>Tourism</i>	<i>Tourism</i>	<i>TourRER-</i>	<i>TourRER-</i>
	<i>RER-A</i>	<i>RER-B</i>	<i>Reg</i>	<i>Reg</i>		<i>RER-A</i>	<i>RER-B</i>	<i>Reg</i>	<i>Reg</i>
			<i>(variable)</i>	<i>(fixed)</i>				<i>(variable)</i>	<i>(fixed)</i>
Jan-00	100.0	100.0	100.0	100.0	Jan-05	70.7	114.9	78.9	79.3
Feb-00	99.5	103.6	99.9	100.3	Feb-05	69.8	117.2	78.6	79.1
Mar-00	98.4	104.6	98.9	99.6	Mar-05	70.7	123.0	80.4	80.9
Apr-00	98.2	105.4	98.9	99.6	Apr-05	69.1	121.7	78.9	79.4
May-00	97.4	103.0	97.9	98.5	May-05	67.2	120.7	77.2	77.7
Jun-00	96.8	102.2	97.3	97.8	Jun-05	66.1	118.8	75.9	76.4
Jul-00	99.9	103.7	100.2	100.6	Jul-05	68.3	123.3	78.5	79.1
Aug-00	98.9	104.7	99.4	100.0	Aug-05	66.1	123.0	76.7	77.2
Sep-00	97.6	101.1	97.9	98.3	Sep-05	64.0	123.8	75.1	75.7
Oct-00	97.4	99.7	97.6	97.8	Oct-05	61.8	123.9	73.3	74.0
Nov-00	97.0	98.4	97.1	97.2	Nov-05	62.3	127.3	74.4	75.1
Dec-00	97.7	93.3	97.3	96.8	Dec-05	63.0	126.7	74.9	75.5
Jan-01	100.2	96.1	99.8	99.4	Jan-06	64.9	129.2	78.8	77.5
Feb-01	99.8	96.3	99.5	99.1	Feb-06	64.2	134.6	79.5	78.1
Mar-01	98.3	93.9	97.9	97.4	Mar-06	63.3	141.5	80.3	78.7
Apr-01	98.9	93.0	98.4	97.8	Apr-06	63.5	139.6	80.0	78.4
May-01	100.4	83.9	98.9	97.2	May-06	62.4	135.6	78.2	76.8
Jun-01	101.8	87.5	100.5	99.0	Jun-06	61.8	131.1	76.8	75.4
Jul-01	102.1	86.7	100.6	99.1	Jul-06	62.6	130.4	77.3	75.9
Aug-01	101.5	84.8	99.9	98.2	Aug-06	61.9	130.2	76.7	75.3
Sep-01	102.2	81.3	100.3	98.1	Sep-06	62.0	132.7	77.3	75.9
Oct-01	104.5	83.2	102.5	100.3	Oct-06	64.0	136.2	79.6	78.2
Nov-01	102.9	89.3	101.6	100.2	Nov-06	65.3	136.5	80.7	79.2
Dec-01	102.8	90.9	101.7	100.5	Dec-06	66.3	137.9	81.8	80.4
Jan-02	81.0	92.7	83.0	83.3	Jan-07	65.7	137.0	83.5	79.7
Feb-02	59.4	95.7	65.6	66.5	Feb-07	64.8	139.2	83.4	79.4
Mar-02	50.9	102.2	59.7	61.0	Mar-07	63.7	140.4	82.8	78.7
Apr-02	50.0	109.6	60.2	61.7	Apr-07	63.2	144.1	83.3	79.0
May-02	46.3	105.9	56.5	58.0	May-07	62.7	148.6	84.2	79.6
Jun-02	45.6	102.8	55.3	56.8	Jun-07	62.5	149.4	84.2	79.6
Jul-02	58.0	115.8	67.8	69.4	Jul-07	60.6	145.3	81.7	77.2
Aug-02	64.7	122.9	74.6	76.1	Aug-07	58.2	141.2	78.9	74.5
Sep-02	67.0	119.4	75.9	77.3	Sep-07	58.0	139.8	78.4	74.1
Oct-02	62.7	100.3	69.1	70.0	Oct-07	55.7	136.0	75.8	71.5
Nov-02	64.9	105.7	71.9	72.9	Nov-07	55.9	137.7	76.3	71.9
Dec-02	66.1	104.6	72.6	73.6	Dec-07	55.3	138.8	76.2	71.7
Jan-03	72.0	109.8	79.4	79.4	Jan-08	54.0	134.1	72.6	69.7
Feb-03	74.5	109.0	81.3	81.2	Feb-08	52.7	135.1	71.9	68.9
Mar-03	75.0	109.8	81.8	81.8	Mar-08	51.8	136.2	71.5	68.4
Apr-03	79.4	121.8	87.7	87.7	Apr-08	50.3	134.8	69.9	66.9
May-03	82.5	131.2	92.1	92.1	May-08	49.9	135.3	69.8	66.7
Jun-03	77.1	124.4	86.4	86.4	Jun-08	50.1	134.3	69.7	66.6
Jul-03	79.6	126.4	88.8	88.8	Jul-08	48.7	132.8	68.3	65.2
Aug-03	77.3	126.6	87.0	87.0	Aug-08	48.3	132.0	67.7	64.7
Sep-03	75.5	125.4	85.4	85.3	Sep-08	50.5	131.1	69.3	66.4
Oct-03	78.1	129.5	88.3	88.2	Oct-08	52.8	123.0	69.1	66.5
Nov-03	79.0	132.5	89.6	89.5	Nov-08	54.8	125.0	71.2	68.6
Dec-03	77.5	130.6	87.9	87.9	Dec-08	54.9	120.3	70.1	67.7
Jan-04	79.6	131.1	90.0	89.7	Jan-09	51.9	119.0	65.0	65.0
Feb-04	78.5	132.0	89.3	89.0	Feb-09	51.7	120.3	65.2	65.2
Mar-04	78.4	133.0	89.4	89.1	Mar-09	51.0	125.5	65.7	65.7
Apr-04	79.8	131.3	90.1	89.9	Apr-09	50.8	129.8	66.3	66.3
May-04	77.0	126.9	87.0	86.8	May-09	49.1	134.6	65.9	65.9
Jun-04	76.4	123.8	85.9	85.7	Jun-09	46.3	136.3	64.0	64.0
Jul-04	77.3	121.4	86.2	86.0	Jul-09	45.3	140.0	63.9	63.9
Aug-04	72.5	118.4	81.7	81.5	Aug-09	43.8	141.6	63.0	63.0
Sep-04	70.5	117.2	79.8	79.6	Sep-09	42.3	138.2	61.1	61.1
Oct-04	69.7	116.0	79.0	78.8	Oct-09	40.8	138.6	60.0	60.0
Nov-04	68.7	115.7	78.1	77.9	Nov-09	40.4	137.2	59.4	59.4
Dec-04	69.5	116.6	78.9	78.7	Dec-09	39.5	131.2	57.5	57.5
					Jan-10	39.80	130.17	57.53	57.53
					Feb-10	40.53	127.12	57.52	57.52

Source: Elaborated based on INE, INDEC and IPEA data