

Repeat tourism in Uruguay: modelling truncated distributions of count data

Juan Gabriel Brida^a

Juan Sebastián Pereyra Barreiro^b

Raffaele Scuderi^c

^a School of Economics and Management, Free University of Bozen-Bolzano
Universitätsplatz 1 - piazza Università, 1, 39100 Bozen-Bolzano, Italy
email: JuanGabriel.Brida@unibz.it

^b Centro de Estudios Económicos, El Colegio de México
Camino al Ajusco 20 - México, D.F.
email: jpereyra@colmex.mx

^c School of Economics and Management, Free University of Bozen-Bolzano
Universitätsplatz 1 - piazza Università, 1, 39100 Bozen-Bolzano - Italy
Email: Raffaele.Scuderi@unibz.it

Abstract

This paper studies the determinants of repeat visiting in Uruguay, where loyal visitors are a relevant part of the total. From a statistical point of view the number of times a visitor has been to a place constitutes count data. In this regard available information on Uruguay present relevant limitations. Count data is in fact reported only for those who visited the country up to five times, whereas records about the most frequent visitors are collapsed into one residual category. This implies that the classic models for count data such as Poisson or negative binomial cannot be put into consideration. The paper suggest instead the use of a quantile count data regression, that is a model based on measures of location rather than mean values. A set of explanatory variables related to socioeconomic characteristics, features of the journey and composition of the travel party are considered.

Keywords

Repeat tourism; Uruguay; Quantile Regression; Count Data

1. Introduction

One of the main goals of tourism policy is to stimulate the visitor's intention to return to a destination, as a key factor to sustain tourism development. It is therefore crucial to analyse the factors driving tourists' loyalty in order to better address the actions of tourist market operators. This study contributes to this theme by studying the determinants of the loyal visit to Uruguay. Although the country is not one of the biggest world destinations, tourism has a great impact to its economy and the phenomenon of the repeat visit is noteworthy. To stress the latter point, the survey of the Ministry for Tourism and Sport to non-resident visitors reports that in 2010 more than 93% of the interviewees was a repeat visitor. Moreover almost 49% declares that she has been to Uruguay six or more times, including the time of the interview. The study of the determinants of the number of times each interviewees have been to Uruguay can be modelled through count data regression techniques (see Brida et al., 2011). Nevertheless a nontrivial limitation characterizes the available information about Uruguay survey. Count data is in fact reported only for those people who visited Uruguay up to five times, whereas bigger values are collapsed into one single category that includes almost half of the sample. The reason can be ascribed, for instance, to the need to collect reliable information for those very frequent travellers that cannot give a precise "number" of times they have already been visiting the country. This has heavy implications on the estimation of parametric models based on mean values, such as Poisson or binomial regression. This paper tries to address the issue of modelling repeat visiting in presence of such sample distribution by applying the quantile count data regression technique of Machado and Santos (2005), that is through a model based on measures of location rather than on mean values.

The paper presents two main elements of novelty. Although many different contributions analyse the issue of tourists' loyalty and the role of the factors explaining the intention to revisit a destination, – see the early work of Gyte and Phelps (1989) – the repeat visit in Uruguay has not been studied yet in terms of microeconomic analyses of its determinants. Secondly, to the best knowledge of the authors the investigation of tourists' loyalty via quantile count data regression is another element of originality in the literature.

The paper illustrates the main characteristics of tourism in Uruguay in Section 2. A review of literature is the object of Section 3. The following Section 4 describes the main characteristics of the sample. Section 5 reports an overview of the theoretical model of reference and the description of Machado and Santos' technique. Section 6 describes the results. Section 7 discusses and concludes.

2. Contextual settings: tourism in Uruguay

Tourism has a relevant impact to the economy of Uruguay although the country is not one of the biggest world destinations, and instead it is one of the smallest countries in South America in terms of land surface. Nevertheless tourist arrivals in 2010 accounted for about 80% of the total population of the country (2.707.375 visitors) with an increase of 15%

compared to the previous year. Total tourist expenditure in 2010 was about 1,500 million of dollars, with an increase of 14% with respect to 2009. If we put this amount in relation to the main economic indicators, we have a clear image of its significance: tourist expenditure represented 3.7% of the Gross Domestic Product, 18.6% of the value of the exports of goods and 60% of the exported services. It is also interesting to describe the growth of these two variables during the last decades. While tourist arrivals were less than half in 1990 (1.267.040 units) than in 2010, expenditure has grown impressively by more than 500% since 1990, when it accounted for 238 million USD.

Tourist flows mainly concentrate around two destinations. The first one is the capital city Montevideo, with 34% of tourist arrivals, followed by the area of Punta del Este, a world-class beach resort (24% of arrivals). In line with the main characteristics of both destinations, arrivals to Montevideo are more distributed over the whole year, whereas tourism in Punta del Este is more seasonal and takes place mainly in spring and summer – the first and last quarters of the year report 70% of tourist flows.

The dependence of tourism from Argentina is high. Flows of Argentinean visitors in 2010 were 64% of total arrivals and accounted for more than 50% of tourist expenditure. As stated in Brida et al. (2010), this situation is due to different reasons. First, Argentina and Uruguay are the most similar countries in the region. Secondly, Uruguayan beaches are the nearest ones to Argentina and they are more attractive in terms of their natural resources, giving rise to a marked summer season. Third, tourism is mostly regional because of the long distances from Europe and the USA, access difficulties, lack of the services required by international tourists, negligible of promotion, and restrictive transportation policies. This last point is confirmed by the fact that Brazil, the other neighbour country, is the other relevant contributor in terms of outgoing visitors.

Although there are no previous studies about loyal tourism in Uruguay, some facts are widely accepted. In the first place, since tourism is mostly regional, repeated visitors are a large proportion of total tourists. Moreover, to the extent that Punta del Este is a tourism destination composed almost solely of second-home tourists, then it is usually supposed that loyal tourism in Uruguay has a great impact. Secondly, there are some characteristics of Uruguay, such that calmness and a high level of safety, that very appreciated by tourists. Nowadays these characteristics are still present in Uruguay and then, it is reasonable to expect that those tourists that appreciate them have been continuing visiting the destination.

3. Background

A relevant number of works study tourist loyalty and its influencing factors. For this reason giving a complete overview of the empirical studies goes beyond the scopes of this paper. One of the earliest studies about repeat visit is the work of Gyte and Phelps (1989), who examined the intention of British tourists to revisit Mallorca, Spain. Since this article, the issue of destination revisit intention has been very popular in literature. Important studies are the ones of Mazursky (1989), Milman and Pizam (1995), Court and Lupton (1997), Sönmez and

Graefe (1998), Oh (1999), Baker and Crompton (2000), Kozak (2001), Bigné et al. (2001), Caneen (2003), Um et al. (2006), Campo-Martínez et al. (2010), Assaker et al. (2011).

As a result of this large number of contributors, there is some consensus on some factors influencing in a positive way the repeated visit. At first tourist satisfaction is highly correlated with the repurchase intention (see, for instance, Petrick 2002, 2004; Tam 2000; Kozak and Rimmington, 2000; Kozak, 2001; Yoon and Uysal, 2005). Kozak (2001) finds that the main variable to explain tourist's intention to revisit a destination is their level of satisfaction. However, he also shows that other important variables are the number of previous visit and perceived performances of destination. Other studies about the influence of the number of previous visit are Mazursky (1989), Petrick et al. (2001) and Lam and Hsu (2006). An interesting analysis about this point is carried out in Campo-Martínez et al. (2010). These authors study how the influence of satisfaction and tourist's perceived image in the decision about revisiting varies according the group composition. Their results show that the return visit of tourists travelling alone is motivated by others factors different from satisfaction.

Another important factor explaining revisit intention is the so called 'destinations' image' (Bigné et al., 2001; Court and Lupton, 1997). The image of a destination can be defined '... as being made up of a series of perceptual beliefs, ideas, and impressions of a destination, which in turn, are influenced by past promotions, reputation, opinions of tour operators, and peer evaluation' (Coshall, 2000). A positive image has influence on the probability of return, but also on tourists' satisfaction in such a way that it is very difficult to isolate the two effects.

As mentioned above, one of the main destinations in Uruguay is the sun and sand resort of Punta del Este. One can suppose that factors that influence tourists' intention to revisit a destination could depend of the attractions' characteristics of the destination. In this sense, Alegre and Cladera (2006) study the determinants of repeat visitations to Balearic Islands. They found that, although, repeat visitors have more probability to revisit the destination, its main determinant is a high level of satisfaction.

Finally and very related to our work are the studies of Oppermann (1999; 2000). This author proposes tourist typologies to understand visitor intentions to revisit a destination. In Oppermann (2000) it is determined the composition of tourists respect to their loyalty. In particular, the author tries to state which characteristics hold repeat visitors and if they are a homogeneous group. This important issue, which is one of the goals of this work, has crucial consequences in terms of tourism policy: if we know which characteristics hold repeat tourists, promotional actions can be improved.

4. Uruguay: a descriptive overview of the survey

The Ministry for Tourism and Sport of Uruguay (Ministerio de Turismo y Deporte, 2011) conducts a quarterly survey on incoming tourism. The target population is the total number of non-resident visitors entering to Uruguay for purposes different than migration and working. The interviews are conducted when tourists finish their journey and exit Uruguay. The four

2010 surveys are the ones under investigation, reporting 9328 interviews of incoming visitors that are resident outside Uruguay. Due to missing data the sample reduced to 8914.

Table 1 displays the distribution of the number of times each visitor has already been to Uruguay, including the time of the interview. Sample data highlight the high frequency of those who repeat the visiting, as also stressed above. The sample is mainly composed of people leaving in the surrounding areas of Uruguay, both in Argentina and Brazil, with the former country having a very high percentage of outgoing residents visiting Uruguay. Also the most frequent nationality was Argentinian (60.22%), followed by Uruguayan (15.34%) and Brazilian (12.53%). The most frequent length of the visit ranges from 4 to 7 days (40.86%), but there is a considerable number of interviewees (about 25%) who spent more than 7 days in the country. Tourists entered Uruguay mainly via a maritime mean of transportation (43.13%), which once more supports the idea of the relevance of visiting from the neighbour countries. Interviewees declare that their main place of visiting was Montevideo (37.04%), followed by Punta del Este (26.06%) and the set of inland places (15.79%). People mainly visited Uruguay in groups of two (45.98%), 3 (14.15%) and 4 (15.00%). The main motivation of the trip was leisure (57.31%), but a relevant number of visitors came to meet their families (22.85%) and for business (10.16%). The main accommodation facilities were hotels (44.85%), but a relevant number of people stayed in relatives' houses (36.99%). The trip was mainly self-organized by travellers.

<INSERT TABLE 1 HERE>

<INSERT TABLE 2 HERE>

5. Methodology

5.1 Theoretical background

The analysis is constructed upon a theoretical model inspired by the studies of Brida et. al (2011), Hellström and Nordström (2008) and Martinez-Espíñeira et al. (2008). We assume that an agent i from a set of I individuals allocates her time and income for a bundle of non-tradable good and services in the market which includes visiting a tourist destination. Thus, an agent i maximizes her utility by choosing the number of times she visits a given destination j (denoted by y_{ij}) and the amount of goods and services to consume, that includes, transport, food and accommodation. The decision is made subject to a budget and time constraint. The utility function of agent i is defined by the following expression:

$$u_i = u_i(y_{i1}, \dots, y_{ij}, k_i, z_i, x_i) \text{ with } j = 1, \dots, N \text{ and } i = 1, \dots, I \quad (1)$$

Where

- y_{ij} is the number of visits to destination j , that can take the value 1 up to N times;
- k_i is a set of socioeconomic characteristics of individual i
- z_i is the agent's perception of the characteristics of the destination
- x_i represents the costs faced by individual i , which includes the transportation cost to the destination, accommodation costs and living costs.

Each agent maximizes the utility function (1) subject to an income restriction (total expenditure must be equal or less to her total income) and a time constraint. In our analysis we observe only the final decision of the consumer and in this sense it is related to the revealed preferences techniques.

5.2 Modelling count data through quantile regression

Factors influencing the number of times travellers have been to a tourist place are classically modelled via the Poisson or, in case of overdispersion, the negative binomial regressions (see Cameron and Trivedi, 2005; Brida et al., 2011). Data about the response variable are in fact in the form of count data deriving from independent random sampling. As stressed also above, count data in the Uruguay survey present some limitations. As Table 1 shows, the information carried by the count variable is valid until values of 5, after which those who have already been to the country more than 5 times are collapsed into one single category. As mentioned above, this can be somehow justified by the fact that usual visiting is very common, and thus it is difficult for tourists to give a reliable assessment of the number of times they have already been to the country. Moreover the category of frequent visitors includes a high number of interviewees (48,42%). This makes such truncated empirical distribution hard to model in a reliable way through classic Poisson or negative binomial regressions, for the computation of mean values can be obtained only under strong hypotheses. For these reasons the determinants of repeat visiting will be analysed by models based on measures of location, such as the quantile count data regression of Machado and Santos (2005). In particular their technique is aimed at proposing an alternative approach to certain pitfalls of the pseudo-likelihood framework for quantile count data regression. They impose an artificial smoothness to discrete count data through the use of a form of jittering introduced by Stevens (1950), which is achieved by adding a uniformly distributed noise to the count variable. This allows the construction of a continuous variable where conditional quantiles have a one-to-one relationship with the conditional quantiles of the counts.

Let Y and \mathbf{X} be two random variables, where Y is a count variable, and denote with $Q_Y(\alpha | \mathbf{X})$ the 100α th quantile of the conditional distribution of Y given $\mathbf{X} = \mathbf{x}$. Since $Q_Y(\alpha | \mathbf{X})$ cannot be a continuous function for the parameters of interest due to the discrete nature of Y , Machado and Santos construct a continuous random variable $Z = Y + U$, where U is a random uniformly distributed in $[0,1)$ and independent of Y and \mathbf{X} . The estimation strategy is based on representing $Q_z(\alpha | \mathbf{X})$ as $Q_z(\alpha | \mathbf{X}) = \exp(\mathbf{x}'\gamma(\alpha))$, where $\gamma(\alpha)$ is estimated from a linear quantile regression of

$$T(Z, \alpha) = \begin{cases} \log(Z - \alpha) & \text{for } Z > \alpha \\ \log(\varsigma) & \text{for } Z \leq \alpha \end{cases} \quad (2)$$

with $T(\cdot, \alpha)$ being a monotone transformation possibly depending on α , for which $T^{-1}(\mathbf{x}'\gamma(\alpha), \alpha) = \alpha + \exp(\mathbf{x}'\gamma(\alpha))$, and ς a small positive number. After the generation of m samples for U , and the consequent creation of m samples of Z , the average-jittering estimator of the m estimates of $\gamma(\alpha)$ is simply the sample average of the estimates.

Quantile regression is a robust method that is less sensitive to outliers than the methodology based on the estimation of mean values, such as the classic mean based regression techniques. Moreover the estimation of coefficients at different parts of the distribution allows assessing how the relationship between the response variable and the regressors evolves as the number of times of the visit increases. Of course the extrapolation of such tendency does not substitute the lack of information for the highest values of the distribution.

6. Empirical evidence

Estimates are performed via the routine of Miranda (2006) implemented in the software Stata. Each quantile estimation refers to the first five deciles (Q equals 0.1, 0.2, 0.3, 0.4 and 0.5). The choice of this limited set is driven by the structure of the surveyed count data discussed above. One of its main disadvantages is that the estimation does not include the (missing) highest values of the distribution.

As remarked above, data are from Ministerio de Turismo y Deporte (2011). The considered regressors are related to socioeconomic characteristics (nationality, residence, education, occupation), features of the stay (total per capita expenditure per day, length, mean of transportation to enter Uruguay, main place of stay, trimester of the interview, main motivation of the trip, accommodation, organization via a tourist package) and composition of the vacation group (number of people, age composition). The set does not include the gender and the age of the respondent, two variables that are usually considered by empirical studies. The reason is simply due to the fact that they are not surveyed. A variable related to satisfaction is also missing, although literature means it as a key element in explaining the repeat visit (see above). The reason is its availability, since the questionnaire does not survey how much the interviewee is satisfied about the visit. Dataset reports instead a set of elements about which the interviewee had to declare whether she liked each one of them or not. Neither these variables can be used due to the very high concentration of the frequencies on some items and their consequent low informative power. Interviewees in fact selected “everything” as the most liked item, followed by “other”; on the other hand, the element that people disliked most is “nothing”, followed by “other”; all items concerning other elements report very low frequencies.

<INSERT TABLE 3 HERE>

Estimates of coefficients and marginal effects are reported in Table 3. Results highlight a significant and weakly positive relationship of the expenditure, which slightly increases as the number of times of the visit raises. Also the dummies related to the place of residence are positively and significantly related to the repeat of the visit, for what concerns the considered areas of Argentina and Brazil, and Paraguay and Chile, with reference to non South American countries. The increasing value of the marginal effect with the times of the visit, as well as their high values, point out a very strong association along all the distribution with the dependent variable, which increases as we move to higher quantiles. The areas of the remaining part of South America are instead not significantly associated with the repeat of the vacation.

The three considered nationalities appear to be significantly related with a loyal visit, with respect Nationalities of non-neighbour countries. The one that appears more related with it is the Brazilian, whereas Argentinian people show substantially stationary coefficients as the number of visits raises, and Uruguayans decrease the intensity of the relationship with the raise of the number of visits.

The length of stay is not significantly related to a repeated visit in the low part of the distribution, but the relationship becomes positive, though weakly, and significant as the number of visits raises.

All the three considered means of transportation are estimated as significant and positively related to the repeated visit, with respect to travelling by bus. In particular travelling by car highlights a decreasing trend as the number of visits raises, and maritime mean of transportation are weakly significant at the highest considered quantiles of the response variable.

Among the considered places of stay, only Montevideo and the places in Rio de la Plata mouth (that is, the ones near Montevideo) show a significant and negative relationship as the number of times of visiting raises, whereas the remainder non-significant ones report a negative sign. Although Uruguay is a country where descriptive statistics show that many visitors use to repeat the visit of the same localities, the negative correlation with the number of repeat visits is not surprising. We estimated in fact the influence of having visited a main place to the number of visit repetitions of the whole country. The sign of the estimates indicates that being in one single destination is in an inverse relationship with having visited the overall country, suggesting then that the repeat visit is a more complex phenomenon for what concerns the territorial distribution of the visited places.

For what concerns the time of the vacation, only the warmer trimesters (I and II) are significantly associated with a loyal visit, but in a negative way. Such effect indicates that the repeat visit is significantly less frequent in spring or summer with reference to the winter.

The most significant motivations for a loyal visit are family and business. As the former's marginal effects decrease their intensity with the number of visits, the latter's are increasing and show the highest values, being consistent with the results of a negative relationship with

the repeat visit in summer. Leisure appears instead not significant in explaining the repeat visits.

The three accommodations considered in the estimates are all significant. Staying at relatives' house or own house is positively associated but in a decreasing trend with the increase of repeated visits. There appears to be instead a negative association with the stay in a hotel, which can be related to the fact that those who choose this accommodation are likely to be in an inverse relationship with the repeat of the visit. Repeated visiting is also significantly but inversely correlated with the organization of the vacation through a tour operator.

The group composition of the interviewee is evaluated with respect to the number of people in the age of 65 or more due to multicollinearity. We see that the presence of very young people (males and females <15 yrs) is substantially not significant related to a frequent visit, whereas on the contrary for the two age classes of 15-29 and 30-64 significant estimates are reported.

Education of the interviewee does not appear to be in a significant relationship with the loyal visit. Some occupations appear instead significant related to repeat visit, with respect to economically inactive population and unemployed. Managing directors are those that show a positive and significant marginal effect in visiting Uruguay frequently. Clerical support workers, and professionals for what concerns the highest quantiles instead report a significant and inverse relationship.

7. Discussion and conclusions

The place of residence and nationality appear as the two are the most important variables explaining tourist loyalty in Uruguay, showing the highest marginal effects. The significance and relevance of the place of residence confirms the importance of neighbour countries for tourism. It is worth noting that all significant marginal effects increase with the number of visits, which means that the effect of the place of residence is stronger for those who visit Uruguay more frequently. Interestingly Buenos Aires, the capital city of Argentina, does not report the highest marginal effects, whereas the association with others cities of this country is stronger. A renewed attention towards other markets than Buenos Aires can thus constitute an interesting strategy in order to increase the loyalty of visitors from Argentina. Brazil is another interesting case because in the lower part of the distribution its coefficients are not significant, although they becomes higher and significant in the last quantile. We have a similar phenomenon for Paraguay and Chile. Thus, in order to stimulate visitor's intention to return to the destination is crucial to focus on promotion policy for these countries, especially Paraguay and Chile that nowadays are not one the main tourists' origins (about 5% of the total visitors).

Although length of stay reports a weak marginal effect its positive sign confirms the evidence of other studies. This fact is one of the main reasons to stimulate repeated visits since they are associated with longer stays.

The decreasing trend of the marginal effects of the means of transportation implies that it is not strongly associated with high values, though significant related to loyalty. Here the highest marginal effect is given by the aeroplane.

Two interesting results concern the trimester of the interview and the main motivation. These two variables reveal that loyal tourists are not those tourists that go to Uruguay in summer for leisure. Indeed this contrasts with what is generally supposed, and suggests that tourists revisit Uruguay in winter and for business. This new finding highlights that there is a need for new policies in order to boost this peculiar market.

It is also clear from the estimations that the motivation of visit family, although important in the lowest quantiles, it is not in the highest one. This is important since reasons for revisit Uruguay are not related to have a family in the country, although being of Uruguayan nationality is significant and has a high marginal effect. On the contrary the features of the destination appear as more important.

Results regarding the group composition also have important policy implications. All significant marginal effects are negative, which means that group composed by a bigger percentage of young people tend to be less loyal than the groups composed by the oldest people (reference category). This result is in line with some characteristics of the destination that make this country appropriate for tourists searching for calmness: economic, political and social stability and high level of safety. This can be an important point to focus on in order to properly address market policies.

Overall the methodology presented in this paper offers interesting results for the study of repeat visit. Surveying loyal visit information as a count data may be unreliable due to the memory effect of very frequent visitors. In this sense the proposed methodology overcomes the effects of dealing with distributions where the whole upper part is missing, due to the impossibility of surveying certain characteristics of the population without incurring in relevant measurement errors. A further advantage of quantile regression deals with the possibility to study portions of the distribution, and thus to describe how variables influence specific loyal behaviours. The analysis can be also extended to the yearly surveys in order to assess the stability of the highlighted tendencies.

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Table 1 – Distribution of the number of times the interviewed tourists have been to Uruguay, including the time of the interview

	%	Cumulative %
1	6.15	6.15
2	5.01	11.16
3	12.21	23.37
4	9.22	32.59
5	18.99	51.58
6 or more	48.42	100.00

Table 2 – Sample descriptive statistics

Residence		No. of people in the group	
Argentina: Gran Buenos Aires, La Plata	59.11%	1	19.26%
Argentina: Rosario, Santa Fe, other Mesopotamia places	7.70%	2	45.98%
Argentina: other cities	6.20%	3	14.15%
Brazil: Porto Alegre, Pelotas, Rio Grande, other cities of the South	11.50%	4	15.00%
Brazil: other cities	2.84%	5	3.46%
Paraguay, Chile	4.97%	6	1.21%
South America, other	1.58%	7 or more	0.94%
America, other	2.22%		
Europe	3.61%	Main motivation of the trip	
World, other	0.27%	visit family	22.85%
		leisure	57.31%
		business	10.16%
Nationality		sport	0.46%
Uruguay	15.34%	study/congresses/seminaries	1.68%
Argentina	60.22%	health	0.40%
Brazil	12.53%	transit	4.41%
America, other	6.48%	shopping	0.12%
Europe	5.14%	second dwelling	1.29%
Other	0.29%	religious	0.18%
		cultural	0.04%
Length (days)		other	1.10%
0-3	33.91%	Accommodation	
4-7	40.86%	relatives' house	36.99%
8-15	19.74%	hotel	44.85%
16 - 30	4.82%	own house	7.65%
31 or more	0.66%	rent house/apartment	9.12%
Mean of transportation to enter Uruguay		camping	1.23%
maritime	43.13%	none	0.16%
land: bus	5.46%		
land: automobile	27.16%	Organization	
aeroplane	24.26%	self organized	96.32%
Main place of staying		tourist package	3.68%
Montevideo	37.04%		
Punta del Este	26.06%		
inland places	15.79%		
places in Rio de la Plata mouth	9.44%		
coast places between Montevideo and Punta del Este	7.08%		
coast places, east of Punta del Este	4.59%		

Table 3 – Count data quantile regression: results. Standard errors in parenthesis.

Q	Coefficients					Marginal Effects				
	0.1	0.2	0.3	0.4	0.5	0.1	0.2	0.3	0.4	0.5
Per capita total expenditure, per day, USD	0,00026*** (0,00006)	0.00027*** (0.00004)	0,00027*** (0,00004)	0.00028*** (0.00004)	0.00030*** (0.00004)	0,00085*** (0,00020)	0.00102*** (0.00014)	0,00108*** (0,00014)	0.00122*** (0.00016)	0.00139*** (0.00020)
Place of residence (ref. non South American countries)										
Argentina: Gran Buenos Aires, La Plata	0,41166*** (0,05238)	0.49999*** (0.05209)	0,57305*** (0,05682)	0.62933*** (0.05858)	0.64600*** (0.07242)	1,30707*** (0,16406)	1.82063*** (0.18759)	2,26023*** (0,22179)	2.65145*** (0.24353)	2.89038*** (0.31725)
Argentina: Rosario, Santa Fe, other Mesopotamia places	0,39155*** (0,05560)	0.46447*** (0.05429)	0,53923*** (0,05823)	0.59349*** (0.05958)	0.60665*** (0.07316)	1,51287*** (0,25357)	2.13553*** (0.30421)	2,78677*** (0,37835)	3.36589*** (0.43287)	3.67809*** (0.56809)
Argentina: other cities	0,42185*** (0,05476)	0.50761*** (0.05369)	0,57984*** (0,05801)	0.63375*** (0.05899)	0.64651*** (0.07256)	1,66641*** (0,26040)	2.40474*** (0.31837)	3,08924*** (0,39875)	3.70941*** (0.45412)	4.04582*** (0.59683)
Brazil: Porto Alegre, Pelotas, Rio Grande, other cities of the South	0,35560*** (0,05571)	0.43553*** (0.05509)	0,50143*** (0,05864)	0.54903*** (0.06050)	0.57406*** (0.07400)	1,33697*** (0,24116)	1.94940*** (0.29313)	2,50679*** (0,35790)	2.99783*** (0.40978)	3.36654*** (0.54095)
Brazil: other cities	0,16287* (0,09516)	0.36467*** (0.07032)	0,47342*** (0,06260)	0.53064*** (0.06315)	0.54165*** (0.07627)	0,57458 (0,36289)	1.63687*** (0.37621)	2,43934*** (0,40313)	3.01346*** (0.45847)	3.28702*** (0.59190)
Paraguay and Chile	0,36911*** (0,04664)	0.46652*** (0.04378)	0,54567*** (0,04727)	0.62098*** (0.04587)	0.68160*** (0.05053)	1,43138*** (0,21514)	2.18447*** (0.25465)	2,88625*** (0,32159)	3.65026*** (0.35729)	4.38987*** (0.43924)
South America: other places	0,02248 (0,02909)	0.01464 (0.03480)	0,01566 (0,04218)	0.01471 (0.05293)	0.02658 (0.08906)	0,07414 (0,09698)	0.05541 (0.13263)	0,06440 (0,17477)	0.06470 (0.23453)	0.12495 (0.42419)
Nationality (ref. non-neighbour countries)										
Uruguay	0,66724*** (0,05007)	0.56643*** (0.04804)	0,49631*** (0,04993)	0.45395*** (0.05059)	0.44688*** (0.05997)	2,80718*** (0,26747)	2.63446*** (0.27228)	2,43857*** (0,29178)	2.34761*** (0.30752)	2.44879*** (0.38616)
Argentina	0,48919*** (0,04930)	0.44751*** (0.04846)	0,39917*** (0,05069)	0.37001*** (0.05065)	0.37684*** (0.05990)	1,52601*** (0,14891)	1.61236*** (0.16789)	1,56809*** (0,19195)	1.55922*** (0.20675)	1.68635*** (0.26011)
Brazil	0,29135*** (0,05923)	0.34562*** (0.05496)	0,34886*** (0,05413)	0.34878*** (0.05349)	0.36510*** (0.06161)	1,06363*** (0,24217)	1.48474*** (0.26953)	1,63003*** (0,28812)	1.74403*** (0.30502)	1.95260*** (0.37842)
Length of stay, days	-0,00074 (0,00149)	0.00036 (0.00104)	0,00093 (0,00060)	0.00117** (0.00050)	0.00169*** (0.00048)	-0,00242 (0,00486)	0.00134 (0.00391)	0,00381 (0,00244)	0.00512** (0.00217)	0.00783*** (0.00222)
Mean of transportation to enter Uruguay (ref. bus)										
Aeroplane	0,16337*** (0,03083)	0.10637*** (0.02192)	0,07740*** (0,01649)	0.06948*** (0.01404)	0.07031*** (0.01231)	0,55753*** (0,10979)	0.41142*** (0.08687)	0,32257*** (0,07006)	0.30922*** (0.06365)	0.33256*** (0.05935)
Car	0,11226*** (0,03275)	0.08681*** (0.02207)	0,06985*** (0,01597)	0.06053*** (0.01340)	0.05681*** (0.01114)	0,37486*** (0,11194)	0.33199*** (0.08577)	0,28916*** (0,06699)	0.26764*** (0.05998)	0.26670*** (0.05293)
Maritime	0,09329*** (0,03012)	0.05588*** (0.02100)	0,03141** (0,01486)	0.01961 (0.01232)	0.01675* (0.01006)	0,30694*** (0,09995)	0.21097*** (0.07952)	0,12856** (0,06092)	0.08581 (0.05397)	0.07783* (0.04685)
Main place of stay (ref. other places)										
Montevideo	-0,09335*** (0,02089)	-0.07642*** (0.01264)	-0,06644*** (0,01036)	-0.06473*** (0.00968)	-0.06096*** (0.00851)	-0,30063*** (0,06629)	-0.28403*** (0.04637)	-0,26861*** (0,04146)	-0.28012*** (0.04155)	-0.28047*** (0.03877)
Punta del Este	-0,02418 (0,02478)	-0.01876 (0.01602)	-0,01080 (0,01352)	-0.01392 (0.01233)	-0.02196** (0.01086)	-0,07844 (0,07990)	-0.07018 (0.05964)	-0,04398 (0,05490)	-0.06059 (0.05349)	-0.10135** (0.04988)
Coast places between Montevideo and Punta del Este	-0,02501 (0,02560)	-0.02012 (0.01588)	-0,00075 (0,01288)	0.00559 (0.01125)	0.00240 (0.00985)	-0,08074 (0,08175)	-0.07495 (0.05859)	-0,00305 (0,05254)	0.02448 (0.04939)	0.01114 (0.04583)

Places in Rio de la Plata mouth	-0,08774*** (0,03025)	-0,07783*** (0,01889)	-0,06868*** (0,01492)	-0,07275*** (0,01423)	-0,07346*** (0,01287)	-0,27629*** (0,09196)	-0,28334*** (0,06656)	-0,27261*** (0,05759)	-0,30852*** (0,05866)	-0,33091*** (0,05627)
Coast places in the east of Punta del Este	-0,02256 (0,03477)	-0,03770 (0,02584)	-0,01474 (0,02015)	-0,01047 (0,01777)	-0,01778 (0,01432)	-0,07285 (0,11117)	-0,13923 (0,09381)	-0,05976 (0,08111)	-0,04551 (0,07689)	-0,08183 (0,06541)
Trimester of the interview (ref. III trim.. winter)										
I_trim	-0,07502*** (0,01698)	-0,05182*** (0,01110)	-0,05578*** (0,00920)	-0,05802*** (0,00852)	-0,05482*** (0,00752)	-0,24206*** (0,05388)	-0,19319*** (0,04105)	-0,22577*** (0,03704)	-0,25121*** (0,03660)	-0,25234*** (0,03433)
II_trim	-0,00792 (0,01462)	-0,02384** (0,01027)	-0,03759*** (0,00897)	-0,04289*** (0,00838)	-0,04282*** (0,00747)	-0,02578 (0,04749)	-0,08892** (0,03809)	-0,15169*** (0,03587)	-0,18489*** (0,03570)	-0,19614*** (0,03384)
IV_trim	0,00116 (0,01537)	0,00898 (0,01040)	0,00788 (0,00885)	0,00471 (0,00824)	0,00617 (0,00749)	0,00380 (0,05017)	0,03383 (0,03925)	0,03221 (0,03626)	0,02060 (0,03607)	0,02870 (0,03491)
Main motivation of the trip (ref. other motivations)										
Visit family	0,09681*** (0,02568)	0,06838*** (0,01797)	0,05153*** (0,01448)	0,03729*** (0,01276)	0,02675** (0,01099)	0,32442*** (0,08815)	0,26179*** (0,06984)	0,21330*** (0,06069)	0,16452*** (0,05677)	0,12503** (0,05169)
Leisure	-0,02638 (0,01996)	-0,02235 (0,01419)	-0,01739 (0,01298)	-0,02136* (0,01226)	-0,02003* (0,01078)	-0,08623 (0,06546)	-0,08412 (0,05352)	-0,07108 (0,05316)	-0,09343* (0,05377)	-0,09310* (0,05023)
Business	0,14220*** (0,02828)	0,13864*** (0,02187)	0,14973*** (0,02096)	0,15851*** (0,02029)	0,13548*** (0,01789)	0,49145*** (0,10319)	0,55092*** (0,09164)	0,64924*** (0,09646)	0,73824*** (0,10022)	0,66414*** (0,09171)
Accommodation (ref. other accommodations)										
Relatives' house	0,12716*** (0,03053)	0,12700*** (0,02362)	0,10245*** (0,01740)	0,08618*** (0,01431)	0,07693*** (0,01155)	0,42306*** (0,10363)	0,48648*** (0,09198)	0,42466*** (0,07298)	0,38134*** (0,06398)	0,36119*** (0,05472)
Hotel	-0,23954*** (0,02705)	-0,25669*** (0,02150)	-0,25500*** (0,01874)	-0,21748*** (0,01695)	-0,16265*** (0,01399)	-0,77207*** (0,08677)	-0,95202*** (0,07967)	-1,02742*** (0,07427)	-0,93921*** (0,07125)	-0,74818*** (0,06250)
Own house	0,30742*** (0,02652)	0,21810*** (0,02046)	0,14854*** (0,01576)	0,10122*** (0,01344)	0,07229*** (0,01047)	1,14840*** (0,11123)	0,90128*** (0,09143)	0,64657*** (0,07227)	0,46185*** (0,06359)	0,34607*** (0,05148)
Organization: tourist package	-0,42094*** (0,05703)	-0,40044*** (0,05055)	-0,33583*** (0,04907)	-0,30845*** (0,04645)	-0,28480*** (0,04874)	-1,13776*** (0,12680)	-1,25734*** (0,13030)	-1,17802*** (0,14605)	-1,17192*** (0,15218)	-1,16173*** (0,17314)
Number of people in the group	0,01136 (0,01068)	0,01389** (0,00704)	0,01309*** (0,00458)	0,01223*** (0,00409)	0,01023*** (0,00325)	0,03706 (0,03491)	0,05220** (0,02645)	0,05341*** (0,01871)	0,05341*** (0,01787)	0,04747*** (0,01509)
Group composition. % (ref. elderly. >64yrs.. males and females										
% Males < 15 yrs	-0,11474* (0,06468)	-0,06728* (0,03795)	-0,04971* (0,02980)	-0,04618 (0,02940)	-0,03430 (0,02540)	-0,35515* (0,18987)	-0,24506* (0,13390)	-0,19829* (0,11615)	-0,19744 (0,12300)	-0,15666 (0,11418)
% Males. 15-29 yrs.	-0,29517*** (0,04667)	-0,28019*** (0,03363)	-0,23576*** (0,03477)	-0,18724*** (0,03265)	-0,15156*** (0,02860)	-0,96312*** (0,15236)	-1,05270*** (0,12613)	-0,96220*** (0,14118)	-0,81782*** (0,14204)	-0,70338*** (0,13252)
% Males. 30-64 yrs.	-0,09855*** (0,03138)	-0,05596*** (0,01951)	-0,02989** (0,01492)	-0,02546* (0,01341)	-0,01794 (0,01186)	-0,32156*** (0,10217)	-0,21026*** (0,07316)	-0,12200** (0,06085)	-0,11121* (0,05859)	-0,08326 (0,05502)
% Females < 15 yrs.	0,08528* (0,05076)	0,02522 (0,03543)	0,00851 (0,02624)	-0,01022 (0,02363)	-0,01835 (0,02064)	0,28956 (0,17882)	0,09585 (0,13624)	0,03487 (0,10792)	-0,04441 (0,10224)	-0,08443 (0,09419)
% Females. 15-29 yrs.	-0,09195*** (0,03125)	-0,07421*** (0,02021)	-0,05834*** (0,01546)	-0,04897*** (0,01424)	-0,04232*** (0,01255)	-0,30004*** (0,10200)	-0,27881*** (0,07583)	-0,23810*** (0,06307)	-0,21389*** (0,06216)	-0,19641*** (0,05824)
% Females. 30-64 yrs.	-0,09900*** (0,02684)	-0,07018*** (0,01754)	-0,04119*** (0,01364)	-0,02717** (0,01227)	-0,01912* (0,01116)	-0,32304*** (0,08769)	-0,26368*** (0,06572)	-0,16812*** (0,05559)	-0,11867** (0,05355)	-0,08873* (0,05177)
Education, completed (ref. primary)										
Secondary	-0,03266** (0,01540)	-0,01663 (0,01029)	-0,01335 (0,00816)	-0,01013 (0,00741)	-0,00541 (0,00645)	-0,10662** (0,05020)	-0,06249 (0,03868)	-0,05452 (0,03330)	-0,04426 (0,03236)	-0,02511 (0,02995)

College	0,01388 (0,02100)	0,00959 (0,01501)	0,00833 (0,01255)	0,01193 (0,01147)	0,01425 (0,00975)	0,04537 (0,06881)	0,03610 (0,05657)	0,03402 (0,05137)	0,05222 (0,05028)	0,06629 (0,04548)
Other	-0,02048 (0,03444)	0,01516 (0,02259)	0,03253* (0,01683)	0,03842*** (0,01430)	0,04200*** (0,01231)	-0,06619 (0,11018)	0,05735 (0,08611)	0,13482* (0,07084)	0,17086*** (0,06480)	0,19879*** (0,05946)
Occupation (ref. retired, housewives, students, unemployed, inactive)										
Manager	0,02119 (0,02260)	0,00597 (0,01479)	0,00154 (0,01134)	0,00904 (0,01001)	0,01059 (0,00904)	0,06955 (0,07455)	0,02246 (0,05575)	0,00630 (0,04631)	0,03956 (0,04393)	0,04928 (0,04221)
Managing director, chief executive	0,10283*** (0,03961)	0,09423*** (0,02748)	0,09803*** (0,02199)	0,09324*** (0,02004)	0,07914*** (0,01754)	0,35235** (0,14235)	0,37027*** (0,11290)	0,41918*** (0,09842)	0,42572*** (0,09544)	0,38135*** (0,08759)
Professional	-0,03231 (0,02552)	-0,02666 (0,01733)	-0,02630* (0,01349)	-0,02553** (0,01220)	-0,02504** (0,01087)	-0,10464 (0,08201)	-0,09955 (0,06431)	-0,10667** (0,05439)	-0,11083** (0,05267)	-0,11551** (0,04989)
Supervisors	0,07065** (0,02981)	0,02518 (0,02243)	0,00354 (0,01790)	-0,01042 (0,01589)	-0,02017 (0,01525)	0,23843** (0,10378)	0,09576 (0,08625)	0,01446 (0,07328)	-0,04530 (0,06873)	-0,09270 (0,06943)
Skilled worker, craft worker	0,01615 (0,02967)	0,00673 (0,01735)	-0,00509 (0,01242)	-0,01091 (0,01109)	-0,01312 (0,00995)	0,05308 (0,09817)	0,02534 (0,06557)	-0,02072 (0,05048)	-0,04742 (0,04800)	-0,06054 (0,04563)
Clerical support worker	-0,07054*** (0,02543)	-0,05919*** (0,01548)	-0,06918*** (0,01255)	-0,07079*** (0,01114)	-0,06045*** (0,00972)	-0,22574*** (0,07963)	-0,21880*** (0,05640)	-0,27703*** (0,04943)	-0,30323*** (0,04683)	-0,27590*** (0,04353)
Other	-0,02948 (0,04155)	-0,03000 (0,02696)	-0,03124 (0,02081)	-0,02141 (0,01905)	-0,00874 (0,01483)	-0,09487 (0,13183)	-0,11114 (0,09846)	-0,12565 (0,08246)	-0,09255 (0,08150)	-0,04040 (0,06825)
Constant	0,45587*** (0,05751)	0,53993*** (0,04143)	0,60170*** (0,03539)	0,63657*** (0,03454)	0,64624*** (0,03890)					

Significance: *** 1%; ** 5%; * 10%