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RESEARCH NOTES



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PROFILING THE PURPOSE OF TRAVEL: NEW EMPIRICAL EVIDENCE

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Passenger profiling is an extremely important topic for airport managers. Airport design will depend on the needs and demands of the different types of passengers. Airlines also structure their operations and tariffs to respond to different types of passenger. Studies have traditionally focused on distinguishing between leisure and business passengers (Dresner, 2006; Martínez-García, Ferrer-Rosell, & Coenders, 2012), whilst trips made to visit friends and relatives (VFR) have traditionally been an under-studied area.

Using the largest sample of similar studies this paper seeks to offer full profiles of the three types of passengers according to the reasons for their trips (Business, Leisure and VFR). To be specific, our research uses a database of 37,226 passengers (of whom 16,266 were foreign) who were interviewed in the departure lounges at eight different Spanish airports, specifically those of Almeria, Alicante, Santiago, Seville, Tenerife Sur and Valencia and the major hubs of Madrid and Barcelona. All the survey campaigns were carried out during the summer of 2010, with questionnaires in 5 or 6 languages, depending on the airport, and a small average sampling error of $\pm 1.54\%$. This is calculated at the point of greatest indeterminacy for a 95.45% confidence level, i.e., $\pm \text{Error} = 2\sqrt{(\text{Size}_{\text{population}} - \text{Size}_{\text{sample}})/(\text{Size}_{\text{population}} - 1)}\sqrt{0.25/\text{Size}_{\text{sample}}}$.

A multinomial logit model was used to analyze the factors that define this profile, as the dependent variable is not ordinal but instead consists of more than two

Table 1. Marginal effects

Variable	Explanation	Business	Leisure	VFR
Sex.	1 if male, 0 if female.	Δ 11.173%***	∇ 5.170%***	∇ 6.003%***
Age.	1 < 30; 2 = 31–49; 3 = 50–64; 4 > 65	Δ 3.297%***	∇ 3.929%***	Δ 0.632%
Spanish.	1 if passenger is Spanish, 0 if passenger foreign.	Δ 6.143%***	∇ 5.709%***	∇ 0.433%
Education.	1= no formal or only primary education; 2= completed secondary education; and 3= holds university degree.	Δ 10.158%***	∇ 2.079%	∇ 8.079%***
Low-cost carrier.	1 if passenger is flying by LCC; 0, otherwise.	∇ 5.476%***	Δ 6.949%**	∇ 1.473%
Charter.	1 if passenger flies on a charter airline, 0, otherwise.	∇ 1.865%*	Δ 11.472%***	∇ 9.607%***
Connecting flight.	1 if passenger is connecting to another flight at the airport, 0, if traveling no further.	Δ 6.025%***	∇ 1.390%	∇ 4.634%*
Destination.	Eurozone international destination.	∇ 0.484%	Δ 8.051%***	∇ 7.567%***
	Non-Eurozone international destination.	∇ 4.144%***	Δ 6.976%***	∇ 2.832%***
Ticket purchase channel.	Internet.	Δ 0.736%	∇ 9.142%***	Δ 8.406%***
	Telephone.	∇ 17.065%***	∇ 24.308%***	Δ 7.243%***
Direct purchase.	1 if passenger has bought the ticket directly from the airline, 0, if passenger used an intermediary for the purchase.	∇ 3.406%**	∇ 4.481%***	Δ 7.887%***
Duration of the trip.	1= 0–1 days; 2= 2 to 7 days; 3= 8 to 14; 4= 15 to 30; 5 > 30 days.	∇ 7.737%***	Δ 2.232%***	Δ 5.505%***
Weekend.	1 if the survey was taken on a Saturday or Sunday, 0, otherwise.	∇ 3.609%***	Δ 3.583%***	Δ 0.026%
Accessibility.	Taxi.	∇ 5.158%***	∇ 2.834%	∇ 2.324%***
	Courtesy bus.	∇ 9.990%***	Δ 27.721%***	∇ 17.730%***
	Rent-a-car.	Δ 3.821%	Δ 4.714%	∇ 8.534%**
	Public transport.	∇ 8.790%***	Δ 3.104%	∇ 5.686%***
Children.	1 if passenger is flying with children, 0, otherwise.	∇ 9.574%***	∇ 4.235%	Δ 13.809%***
Accompaniment.	Work.	Δ 37.268%***	∇ 17.126%***	∇ 20.142%***
	Friends.	∇ 17.275%***	Δ 39.672%***	∇ 22.397%***
	Family.	∇ 28.821%***	Δ 47.909%***	∇ 19.088%***
Farewell.	1 if someone goes to see off the passenger at the airport, 0, otherwise.	∇ 3.672%***	∇ 6.579%***	Δ 10.252%***
Hotel.	1 if passengers are staying at a hotel or other paid-for accommodation, 0, otherwise.	Δ 6.608%***	Δ 6.674%***	∇ 13.281%***
House of Friends&Relatives.	1 if passenger is staying with family or friends, 0, otherwise.	∇ 10.772%***	∇ 11.328%***	Δ 22.101%***
Wald Chi ² without clusters (p-value)				6051.330(0.000)
Pseudo R ²				0.3406

Note: Standard errors robust to heteroscedasticity and clustered by airport of origin. One, two or three asterisks indicate coefficient significance at the 10%, 5% and 1% levels, respectively.

categories (see Castillo-Manzano & Lopez-Valpuesta, 2010, for a description of the utility of these models for this type of research).

However, multinomial logit coefficients cannot be interpreted directly and, in other respects, the odds ratios obtained only allow an examination of the substitutability relations between options set in pairs. In order to overcome these two shortcomings we calculate the marginal effects at the mean $\left(\frac{\delta p_{ij}}{\delta x} = p_{ij}[\beta_j - \bar{\beta}_i]\right)$ where $\bar{\beta}_i = \sum_l p_{il}\beta_l$ across all considered options. The coefficients and the odd ratios are available from the authors upon request.

The marginal effects enable us to show a direct substitutability relationship between the three trip reasons in Table 1, specifically, the increase (Δ) or decrease (∇) in the likelihood that the trip is taken for each of the three reasons analyzed (Business, Leisure and VFR) and resulting from each of the 25 explanatory variables used.

The first thing that catches the attention is the large number of significant results, over 80%, with the majority statistically significant at 1%, despite the quite strict correction for heteroscedasticity of clusters by airport of origin being used. This means that there are major differences between passenger profiles depending on the reason for their trips. What is more, unlike what would be expected, VFR

passengers cannot be stated to be more similar to leisure passengers, even though tourism is the activity to which VFR passengers will, a priori, devote most time, broadly-speaking guided by relatives and friends (Young, Corsun, & Baloglu, 2007).

These differences range from the socio-demographic profile to the attributes that define the trip. With respect to the former we see how, for example, a 50-64 year old Spanish male with a university education is approximately 44% more likely to travel for reasons of business than foreign women of under 30 years of age with no level of education. This 44% increase is obtained by adding together the marginal effects of the Sex ($\Delta 11.166\%$), Age ($\Delta 3.297\%$ multiplied by two), Spanish ($\Delta 6.143\%$) and Education ($\Delta 10.158\%$ multiplied by two) variables.

In other regards, and to the contrary of what might be anticipated a priori, we see how LCC airlines are the habitual habitat of travelers for leisure reasons (Dresner, 2006) and less that of VFR passengers. There is obviously a more frequent presence of the former on charter flights, although it is once again surprising that this is at the expense of a lesser presence of VFR and not business passengers.

Leisure passengers are those that most opt for the traditional channel of ticket purchase, in an office and through an intermediary, the travel agent's (Castillo-Manzano & Lopez-Valpuesta, 2010). They are also the most cosmopolitan given their greater presence for international destinations, both within and outside Europe, and they are also those who most travel in the company of adult friends and relatives. They have a greater presence at weekends and are those that to a much greater extent arrive at the airport in courtesy buses, despite their being accommodated in hotels to the same extent as business passengers.

Some differentiating features of VFR passengers that most stand out are that they are the passengers who most often travel with children (Seaton & Palmer, 1997), but also those who travel with fewest adults. They are the greatest users of public transport and those who use rent-a-cars, taxis and courtesy buses the least. As would be anticipated, they are those who least stay in hotels (Young et al., 2007) and most at the houses of friends and relatives who, also frequently, accompany them to see them off. Unlike what might have been expected, their natural habitat is regular airlines rather than charters. Our findings show that they are the passengers with the lowest level of education, but also those that make the longest journeys (unlike other studies, such as McKercher, 1996; Seaton & Palmer, 1997) and they are also the greatest users of the Internet, making purchases directly on the airline's website (Castillo-Manzano & Lopez-Valpuesta, 2010).

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REFERENCES

- Castillo-Manzano, J. I., & Lopez-Valpuesta, L. (2010). The decline of the traditional travel agent model. *Transportation Research E: Logistics and Transportation Review*, 46, 639–649.
- Dresner, M. (2006). Leisure versus business passengers: Similarities, differences, and implications. *Journal of Air Transport Management*, 12, 28–32.
- Martínez-García, E., Ferrer-Rosell, B., & Coenders, G. (2012). Profile of business and leisure travelers on low cost carriers in Europe. *Journal of Air Transport Management*, 20, 12–14.

- McKercher, B. (1996). Host involvement in VFR travel. *Annals of Tourism Research*, 23, 701–703.
- Seaton, A. V., & Palmer, C. (1997). Understanding VFR tourism behaviour: The first five years of the United Kingdom tourism survey. *Tourism Management*, 18, 345–355.
- Young, C. A., Corsun, D. L., & Baloglu, S. (2007). A taxonomy of hosts. Visiting friends and relatives. *Annals of Tourism Research*, 34, 497–516.

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TOURIST ACTIVITIES FOCUSING ON ANTARCTIC PENGUINS

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Ecological tourism or ecotourism has spread to the most pristine areas of the world such Antarctica. Currently, Antarctica receives about 26,500 tourists visiting several sites roughly Antarctic Peninsula and South Shetland Islands (IAATO, 2012). Benefits from tourism are important social and economically, and can become a powerful tool for the conservation of flora and fauna (Ceballos-Lascuráin, 1993).

Among the marine fauna, penguins are one of the most important tourist resources in booming in Antarctica mainly because the assessment to their colonies (Boersma, 2008). There is pressure from the tourist industry to increase the current access to the penguin colonies, and from the tourists themselves to have access and proximity to get your precious photo of penguins.

It is a common perception that penguins are not affected by the proximity of large groups of humans, mainly since the lack of evident behavioural response particularly during the stage in which penguins are nesting (Seddon & Ellenberg, 2008, chap. 9). However, penguins could show both behavioural and physiological changes related to a response to visitors, which may impact negatively on breeding and survival (Villanueva, Walker, & Bertellotti, 2012). Long-term decline in the breeding success due to human disturbance may result in decreases in population. The colony of Adélie penguins at Cape Hallett was reduced while an Antarctic Base worked there between 1959 and 1968 (Wilson, Culik, Danfeld, & Adelung, 1991). Furthermore, a plunge in Adélie penguins at Cape Royds between 1955 and 1963 was attributed to disruption of visitors (Thomson, 1977). Another problem's tourism is the unintentional introduction of pathogenic agents. Even if ships follow all the cleaning rules, yet the possibility of carrying pathogens is imminent. Consequently, penguins could be exposed to pathogens for which they probably have no immune adaptation.