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"Not always sunny in paradise: prices and brand diversity in touristic areas supermarkets"

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Abstract

Using a dataset from consumption patterns in the island of Gran Canaria collected by the authors, this paper attempts to quantify some non-positive effects of tourism on local destination retail markets for goods and services. In particular, we empirically prove, controlling by factors such as population, size of supermarkets or number of competitors, two main effects: first, that supermarkets located in touristic areas charge higher prices than those in non-touristic areas; and second, that brand diversity is lower in the same stores, particularly in the case of smaller ones. These results confirm that local population do not always benefit from living in a touristic city and possibly provide a more balanced view on the positive and negative side of tourism.

JEL classification: L83, L13.
Keywords: tourism effects, prices, brand diversity, supermarkets, Canary Islands.

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1. Introduction

Foreigners often see living in a touristic destination with envy. During a large part of the year, and without suffering the nuisances of packed travelling or inconvenient accommodations, local residents enjoy at home the benefits from a benign climate, beautiful surroundings, and – sometimes – a dynamic society with plenty of cosmopolitan atmosphere. This paper does not negate this evidence. The authors know them very well. However, and without pursuing any victimizing approach, we intend to show that there also exists an extra cost in living in such paradisiacal places.

With some notable exceptions and purely due to geographical reasons, most popular beach and sun destinations tend to be located in countries or regions with lower GDP per head than the places where touristic flows originate. According to Eurostat (2011), more than 150 million people from the UK, Ireland, Germany and the Scandinavian countries fly southbound every year to the Mediterranean shores of Spain, Greece or North Africa or to the Atlantic beaches in Portugal or the Canary Islands.[1]

One of the most widely studied positive effects of this phenomenon is the revitalization of local economic activity brought by higher income visitors. When arriving at their destination tourists buy goods and services. Most surveys show that the longer their stay abroad the higher tends to be their spending per head. Their expenditure also increases when the difference with locals in terms of purchasing power parity (as compared to their prices and wages at home) is larger. When tourists stay at non-hotel accommodations (apartments or privately rented houses) or travel by themselves (instead of booking holidays packages or all-inclusive programs) their spending at local stores is generally larger and more frequent.[2]

Of course, managers and local retailers see this richer demand segment as an opportunity to make profits. Although some goods and services providers (crafts or souvenirs sellers, touristic restaurants and bars, etc.) may decide to specialize on this particular clientele, others (groceries, supermarkets, bookshops, etc.) will sell both to tourists and locals and, since price discrimination

[1]Note that although the focus of this paper is on European tourism flows, the analysis can be easily extended to farther destinations in the Caribbean or the Indian Ocean, where the differences between locals and visitors' GDPs per head are even larger.

[2]These trends are confirmed, for example the *Encuesta de Gasto Turístico* (Tourism Expenditure Survey), published by the Spanish Ministry for Tourism. The latest data are available online at www.iet.tourspain.es.

seems unfair (and barely legal), it can be expected that (large) tourism inflows on certain destination areas will induce – as a result of a simple income effect – higher (average) prices in most typical consumption baskets.

However, price is not the only decision variable that consumers care about. In horizontally differentiated markets most retailers offer a number of brand varieties for the same product in order to attract consumers with different tastes or preferences. Differentiation is then supported with the help of advertising (either in place or via the media), attractive packaging or specific promotion policies and discounts. But all these resources have a weaker effect on tourists, whose command of local language is limited. Therefore, and particularly in smaller shops – where selling space is more valuable – we can expect that brand diversity in stores of touristic areas will be lower than in non-touristic ones.

Are these expected negative effects relevant enough? Should they be included in any balanced review on the effects of tourism from now on? After a short review of the related literature (Section 2), this paper addresses these two questions from an empirical viewpoint by providing evidence from a 2010 Canary Islands panel dataset.[3] As explained in Section 3, our source includes very detailed information on prices and brand varieties for a wide subset of commodities in a representative sample of all the supermarkets of the island of Gran Canaria. An additional relevant feature of our data is that stores have been exactly located using GIS techniques, which allows a precise (but flexible) definition of geographic markets in connection with the influence areas of touristic flows. We then estimate in Section 4, several price and brand variety equations in order to test the impact of tourism on each supermarket according to its location (or not) within a touristic municipality. We control by the store size and the existence (or not) of nearby competitors and produce estimates that confirm our expected results, which are finally analyzed and summarized in Section 5. In most cases they are numerically relevant; thus, it seems after all that the sun does not always shine in paradise.

[3]The case of the Canary Islands seems a particularly appropriate example to test the claims made in this paper because this archipelago, located 1,500 kilometres southwest of Spain, receives regularly every year more than 12 million European visitors, whereas the local population is about 2,1 million. More than 30% of tourists come from the British Isles, 25% from Germany and Central Europe, 22% from mainland Spain, and the rest from Sweden, Norway, Finland and other countries. On average, the ratio visitors/locals are above 6, although in some touristic municipalities these figures are closer to 10-12(*ISTAC*, 2010).

2. What the literature says about the negative side(s) of tourism

Since the positive effects from tourism for local economies have been widely recognized by international evidence, the main objective of our research is not to question them at all. Instead, we intend to shed some light onto its *dark* side, namely, the negative impacts of tourism over the host community.

The existing literature on this topic has traditionally divided these impacts into three broad categories: environmental, social effects, and *purely* economic impacts. The first of these research lines is the most extensive (see for example, Lindberg and Johnson, 1997; Orams, 1995; Mihalic, 2000; Romeril, 1989; Krippendorf, 1982, among others). It has mainly focused on the relationship between tourists and residents in terms of conflicting preferences over environmental conservation (see Bujosa and Roselló, 2007), or the alternative uses of existing natural resources (Concu and Atzeni, 2012). The second category identifies the disruption of social relations (also Lindberg and Johnson, 1997; Thyne *et al.*, 2006), or the changes in residents' attitudes and perceptions about foreigners (Diedrich and García-Buades, 2009; Mason and Cheyne, 2000; Lawson et al, 1998; Ross, 1992; Butler, 1980, among many others) as the main social negative impacts of tourism.

The third category of negative effects has been much less studied so far and, in particular, there are few studies on how the destination markets for goods and services are affected by touristic flows. Harcombe (1999) and Mason (2008), for example, follow a macroeconomic approach. They include as negative economic consequences of tourism both the opportunity costs for a society (of developing the tourism industry rather than other economic activities, with the subsequent risk associated to sectorial over-dependence) and the tourism-driven inflation instability (caused by an extra and often fluctuating demand on local services), but do not quantify these effects. Following a different approach, Sharpley and Telfer (2002) develop a theoretical analysis of the consequences of tourism on prices. They show that tourism may result in demand-triggered inflation at destinations when visitors bring additional financial resources into host communities where the supply of goods and services is not fast enough to adapt to the new demand. Sancho et al (2007) also explicitly considers tourism as a source of inflation, not only form commodities and basic products, but also in housing and land prices.

From an empirical point of view, Lawson *et al* (1998) provide some evidence about the idea that tourism inflates the cost in living for locals. In their study for New Zealand, they find that price increases in touristic places may be so high that they even exclude some New Zealanders. Another empirical study is García and Sancho (2000), who quantify how local population in four touristic Spanish regions perceived the causes of increased local prices. Torres (2003) argues that tourists normally do not enjoy their leisure activities in places with higher prices than their home-cities, and shows that their demands induce a price increase at destinations.

Surprisingly enough, it is difficult to find other studies on the impact of tourism on other market mechanisms at the microeconomic level (in terms, for example, of product differentiation, location, entry or consumption patterns). Similarly, none of the most widely cited empirical papers on pricing and differentiation in supermarkets that consider different consumer groups,[4] make special consideration for tourism. Therefore, to best of our knowledge, there exists a gap in the empirical literature analyzing the negative economic consequences of tourism on destination markets. Our contribution provides a novel approach to this problem focused on prices and brand variety at touristic areas supermarkets.

3. Data and variables

The empirical analysis carried out in this paper is based upon a dataset collected by the authors in January and April 2010 which includes information on the prices and brand varieties for a wide subset of commodities sold at supermarkets in the island of Gran Canaria, in the Canary Islands.[5] It is a very representative sample since it is built on all the stores located in municipalities with at least 15,000 inhabitants. This represents 93.2% of all the island supermarkets (688 out of a total of 738, according to the Regional Government Business Census; ISTAC, 2010). A stratified random procedure by size was used in the sampling design. **Table 1** shows the overall size distribution of supermarkets and the sample considered for each category. Note that almost all the supermarkets larger than 1,000 m^2 (which also enjoyed larger market shares) were surveyed.

[4]For example, see Blinkey and Connor(1998) who show that less market concentration lowers prices, especially for perishable products. Aalto-Setälä(2002) states that supermarket chains with larger market share enjoy higher mark-ups, whereas Griffith and Harmgart (2008) conclude that barriers to entry may increase equilibrium prices.

[5]In 2010 Gran Canaria had 838,397 inhabitants, which constitutes approximately 40% of the population of the archipelago. The island is divided in 21 municipalities and receives every year about 2.2 million visitors. More detailed info can be found at the official website www.grancanaria.com.

Table 1: Overall size distribution of supermarkets and sample size

Size (*)	Number of supermarkets	Sample	Percentage of sampled supermarkets
Size 1: Less than 120 m^2	341	40	12%
Size 2: Between 120 and 399	208	24	12%
Size 3: Between 400 and 999	68	6	9%
Size 4: More than 1,000 m^2	51	50	98%
Total	668	120	18%

Source: Own elaboration based on the Official Business Census of the Regional Government.
(*) Supermarket size categories were defined according to tax criteria.

The second step in our research was to distinguish between touristic and non-touristic supermarkets. Although the entire island of Gran Canaria is a touristic destination for many European countries, most of them stay during their visit at hotels and apartments located in the southern part of the island, where most beaches and touristic resorts are located. In order to develop a rule to separate between touristic and non-touristic municipalities, we considered standard geographic criteria and built up a ratio of the number of touristic beds (both in hotels and apartments) per inhabitant as a proxy of the potential impact of tourism on the destination markets as compared to the local population. **Table 2** shows that only two municipalities, *San Bartolomé de Tirajana* and *Mogán*, concentrate the tourism supply (they even have more beds than inhabitants)[6] and can be separately considered as touristic areas.

[6]According to the Spanish National Statistical Office (*INE*, 2010) both municipalities had the largest occupation index, 77.07% and 76.60% respectively in the island in 2010. Therefore, they also concentrated most of the touristic demand.

Table 2: Definition of touristic municipalities

Municipality (*)	Population	Number of touristic beds	Touristic beds per 1,000 inhabitants	Is it a touristic area?
Agüimes	29,431	68	2,31	NO
Arucas	36,745	41	1,12	NO
Gáldar	24,473	66	2,70	NO
Ingenio	29,640	34	1,15	NO
Mogán	**22,638**	**36,419**	**1608,76**	**YES**
Las Palmas de Gran Canaria	383,308	7,298	19,04	NO
San Bartolomé de Tirajana	**53,288**	**92,417**	**1734,29**	**YES**
Santa Brígida	19,135	194	10,14	NO
Santa Lucía	64,845	525	8,10	NO
Telde	100,900	128	1,27	NO

Source: Own elaboration based on the Regional Government statistical data (ISTAC, 2010).
(*) The table only includes the 10 municipalities with sampled supermarkets (pop. > 15,000)

Table 3 finally presents the detailed size distribution of sampled supermarkets in each municipality. Once each supermarket was identified and precisely located within each municipality, a pollster visited it twice, in January and April 2010, and collected information on prices, product packaging and number and brands of closer substitutes for a selected basket of 30 products, representative of a typical consumption basket. The products included in the study were rice, cornflakes, spaghetti, noodles, *gofio*,[7] white bread, chicken breast, fillet, ham, canned tuna, eggs, milk, yoghurt, banana, olive oil, water, lentils, potatoes, beer, cola, coffee, rum, chocolate, sugar, salt, toothpaste, mop, and detergent.[8] To allow comparisons, the definition of each product was homogenized by size and presentation, i.e., we gathered the price of a box of white medium grain

[7] *Gofio* is the name given in the Canary Islands to toasted flour made from wheat or corn. It is a basic ingredient in the local inhabitants' diet and, since it is seldom bought by foreigners, allows us to consider (and discard) differentiated price effects between *touristic* and *non-touristic* products.
[8] Several of these products were not included in the brand varieties analysis (chicken breast, fillet, ham, potatoes and bananas), due to their homogeneous characteristics.

rice (no basmati rice, or others varieties) of 1 kilogram, and the number of this type of rice that each supermarket offered.

Table 3: Distribution of sampled supermarkets by municipality and size

Municipality	Is it a touristic area?	No. of sampled supermarkets	By supermarket size (*)			
			Size 1	Size 2	Size 3	Size 4
Agüimes	NO	4	2	0	0	2
Arucas	NO	4	2	1	0	1
Gáldar	NO	5	3	1	0	1
Ingenio	NO	7	3	1	0	3
Mogán	**YES**	**16**	**9**	**4**	**2**	**1**
Las Palmas de Gran Canaria	NO	36	6	3	1	26
San Bartolomé de Tirajana	**YES**	**25**	**9**	**10**	**2**	**4**
Santa Brígida	NO	2	1	1	0	0
Santa Lucía	NO	9	2	1	1	5
Telde	NO	12	3	2	0	7
Total	-	120	40	24	6	50

Source: Own elaboration based on the Official Business Census of the Regional Government.
(*) Supermarket size categories are the same as in **Table 1**.

Apart from price (***PRICE***) and the number of varieties per brand (***NVARIETIES***) as dependent variables, our empirical strategy – whose results are summarized in next section – made use of the following explanatory variables:

- ***SAMEXMETERS***$_{jc}$. This variable includes the number of supermarkets of the same chain located close to sampled supermarket *j* at municipality *c* in a radius of *X*meters. It has been constructed using GIS techniques for all the supermarkets in Gran Canaria and establishes a flexible hypothetical customers' attraction circle around each sampled supermarket of X meters, between 50 and 1,500, as usual in the literature on supermarket analysis (see Gómez-Lobo *et al*., 2011). Since same-chain supermarkets do not act as competitors, we expect the sign of the

estimated parameter for this variable to be positive with respect to prices and negative for brand varieties.

- ***RIVXMETERS***$_{jc}$.This variable represents the number of supermarkets of different chains (competitors) located close to sampled supermarket *j* at municipality *c* in a radius of *X* meters. Its construction procedure is similar to the previous one, but expected signs are just the opposite.

- ***POPULATIONXMETERS***$_{JC}$. This variable is the local population surrounding the supermarket *j* in municipality *c* (that is the potential number of customers).[9] It captures the effect of market size on the supermarkets' behaviour. A priori, it should be positive in prices and in brand varieties.

- ***TOURISTIC***$_{JC}$. This is a binary variable directly built from Table 2. It takes value 1 if the supermarket *j* is located at a touristic area (that is, the municipalities of San Bartolomé de Tirajana or Mogán), and 0 elsewhere. This is the main variable in our model: a significant coefficient would confirm a different behaviour explained by tourism.

- ***SUPERSIZE***$_j$. This variable controls the category size of supermarket *j*, as described in Table 3. Indirectly, it captures scale and other size economies, that could yield to lower prices when size increase, and to a higher number of brand varieties.

- ***NUMBERHOTELS***$_c$. This is a variable that takes into account the number of hotels located in municipality *c*. Since many tourists staying at hotels do not tend to buy at local supermarkets we intended to control by any potential distortion in foreigners' consumption patterns.

We also included a binary variable to control the seasonal differences (***SEASON***$_t$), a binary variable to differentiate branded from unbranded (white-label) products (***UNBRANDED***$_i$) and others to identify fixed effects of supermarket chain (***CHAINSUPER***$_j$) and type of product (***PRODUCT***$_i$).

[9] All distances obtained are Euclidean ones. They have been calculated using *Matlab* codes. Population was analyzed assuming a uniform distribution within municipalities. In fact, we used detailed micro data on population units smaller than municipalities (*núcleos poblacionales* in the Spanish Statistical nomenclature) aggregating them with *ArcGis* software.

Table 4: Descriptive statistics

Variable	Observations	Average	S.D.	Minimum	Maximum
Touristic areas					
Price	1498	2.45	4.1	0.19	39.75
Same in 250 meters	3420	0.18	0.5	0	2
Rivals in 250 meters	3420	3.57	3.8	0	16
Population in 250 meters	3420	545.1	581.2	4	1910
Supermarket category size	3420	1.92	1.0	1	4
Unbranded	3420	0.33	0.4	0	1
Number of hotels	3420	46.3	13.2	30	57
Non-touristic areas					
Price	4482	2.57	4.7	0.17	92
Same in 250 meters	7024	0.06	0.2	0	1
Rivals in 250 meters	7024	1.51	1.5	0	7
Population in 250 meters	6660	1652.0	1333.2	2	5160
Supermarket category size	7024	2.9	1.33	1	4
Unbranded	7024	0.33	0.47	0	1
Number of hotels	7024	18.7	19.9	0	42

Source: Own elaboration. S.D. is Standard Deviation.

Some descriptive statistics are presented in **Table 4**, distinguishing between touristic and non-touristic areas. Supermarkets in the first group show an average price of 2.45 euros, while in non-touristic is 2.57 euros (note the different number of observations). Considering (as an example of

X), a 250 meters radius, touristic areas are more concentrated than the rest of the municipalities: each sampled supermarket has 0.18 supermarkets of the same chain within this radius, while a retailer located at a non-touristic area has 0.06. The number of rivals follows a similar pattern (3.5 against 1.5). On average, the surrounding population is equal to 545 people in a radius of 250 meters around each store in touristic areas, while this figure is 1,652 in non-touristic ones. With regard to supermarket size, those located in touristic areas tend to be smaller. Finally, as naturally expected, the number of hotels is larger in touristic municipalities.

4. Results

Table 5 and **Table 6** summarize the main results of our estimations. We have first considered an empirical model that explained the price of each product *i* at supermarket *j* located at municipality *c* at time *t* as a function of being located at a touristic area while simultaneously controlling by other factors that could explain the demand and the degree of competition in the market. In particular, the price equation

$$PRICE_{ijct} = \beta_0 + \beta_1 Same\text{Xmeters}_{jc} + \beta_2 \text{RivXmeters}_{jc} + \beta_3 \text{PopulationXmeters}_{jc} + \\ + \beta_4 Touristic_{jc} + \beta_5 \text{Supersize}_j + \beta_6 Numberhotels_c + \beta_7 Period_t + \beta_8 Unbranded_i \\ + \sum \beta_n \text{Chainsuper}_j + \sum \beta_n \text{Product}_i + \varepsilon_{ijct}$$

has been estimated using alternative definitions of the radius X (from 50 to 1500 meters, since the literature considers that when precise data on the demand for each particular supermarket is missing a safe way to approach it is by attraction circles (see for example Abe and Kawaguchi, 2010, for the case of Japan, or Gómez-Lobo *et al*., 2011, precisely for the Gran Canaria market).

The results in Table 5 clearly support the first hypothesis tested in this paper. For a wide subset of commodities in a typical consumption basket, supermarkets located in touristic areas charge on average higher prices, as compared vis-à-vis with equivalent supermarkets at non-touristic areas. Since competition factors have been controlled for, the explanation could lie in a pure income effect. The parameters are positive and highly significant for alternative definitions of the market size and their value grow with the radius X. The other control variables seem less relevant, although the population has a small positive effect for X > 500 meters and the presence of unbranded products seems to increase competition (as expected). The seasonal variable is also positive, thus indicating that prices increased in April with respect to January.

Table 5: Estimation results of the price models

Variable	Model 1 (X= 50 m)	Model 2 (X= 100 m)	Model 3 (X= 250 m)	Model 4 (X= 500 m)	Model 5 (X= 750 m)	Model 6 (X= 1000 m)	Model 7 (X= 1250 m)	Model 8 (X= 1500 m)
Same chain supermarkets in X meters	-0.21	-0.06	0.09	0.07	0.03	0.02	0.03	0.03
Rival chainsupermarkets in X meters	0.05	0.02	0.001	-0.01	-0.005	-0.004	-0.004	-0.005
Population in X meters	0.001	0.0001	0.0001	0.00002**	0.0001**	8e-6**	6e-6**	5e-6**
Touristic	**0.26****	**0.24***	**0.30****	**0.37****	**0.40****	**0.47*****	**0.50*****	**0.56*****
Supermarket size	-0.02	-0.02	-0.15	-0.02	-0.02	-0.012	-0.004	0.001
Unbranded	-1.01***	-1.01***	-1.01***	-1.01***	-1.01***	-1.01***	-1.01***	-1.01***
Number of hotels	-0.003	-0.003	-0.004	-0.004*	-0.004*	-0.005*	-0.01**	-0.01**
Season	0.14**	0.15**	0.15**	0.15**	0.15**	0.15**	0.15**	0.15**
Fixed effects by supermarket chain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects by product	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	5,801	5,801	5,801	5,801	5,801	5,801	5,801	5,801
F test	170.97***	170.87***	170.94***	171.08***	171.07***	171.07***	171.12***	171.22***
R^2	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61

Note: *** 1%, ** 5%, *10% significance test.

Table 6: Estimation results of the brand variety models

Variable	Model 1 (X= 50 m)	Model 2 (X= 100 m)	Model 3 (X= 250 m)	Model 4 (X= 500 m)	Model 5 (X= 750 m)	Model 6 (X= 1000 m)	Model 7 (X= 1250 m)	Model 8 (X= 1500 m)
Same chain supermarkets in X meters	-0.63***	-0.43***	-0.42***	-0.18***	-0.13***	-0.07***	-0.04***	-0.02
Rival chain supermarkets in X meters	0.07***	0.07***	0.07***	0.03***	0.02***	0.02***	0.02***	0.02***
Population in X meters	-0.001	-0.00004	-0.00004**	-1e-4	-1e-4***	-9e-6***	-0.00001***	-9e-6***
Touristic	**-0.68*****	**-0.65*****	**-0.82*****	**-0.86*****	**-1.08*****	**-1.09*****	**-1.19*****	**-1.22*****
Interaction Touristic-Supermarket size	**0.19*****	**0.17*****	**0.20*****	**0.22*****	**0.26*****	**0.19*****	**0.18*****	**0.16*****
Supermarket size	**0.53*****	**0.53*****	**0.51*****	**0.53*****	**0.53*****	**0.51*****	**0.52*****	**0.53*****
Fixed effects by supermarket chain	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fixed effects by product	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of observations	2,939	2,939	2,939	2,939	2,939	2,939	2,939	2,939
F test	97.45***	97.53***	99.09***	98.45***	99.98	99.62***	100.30***	100.56***
R^2	0.61	0.61	0.62	0.61	0.61	0.62	0.62	0.62

Note: *** 1%, ** 5%, *10% significance test.

Our second estimation, in **Table 6**, was an empirical model that explained the number of varieties of each product *i* at supermarket *j* located at municipality *c* again as a function of being located at a touristic area while simultaneously controlling by other factors. In this case, the brand equation

$$NVarieties_{ijc} = \beta_0 + \beta_1 Same\text{Xmeters}_{jc} + \beta_2 \text{RivXmeters}_{jc} + \beta_3 \text{PopulationXmeters}_{jc} + \beta_4 Touristic_{jc} + \beta_5 \text{Supersize}_j + \beta_6 InteractionT\text{-}S + \sum \beta_n \text{Chainsuper}_j + \sum \beta_n \text{Product}_i + \varepsilon_{ijc}$$

additionally includes an interaction variable (***INTERACTIONT-S***) that attempts to capture the specific effects of supermarket size at touristic areas.[10]Different models using alternative definitions of the radius X were estimated and the results also endorse our hypothesis: the estimated coefficients for the ***TOURISTIC*** variable are highly significant but negative. At this time the explanation lies in the size effect, as confirmed by the estimated coefficients of the supermarket size and the interaction variables.

5. Conclusions

This paper is about the negative sides of tourism. However, as opposed to mainstream literature on this field, it does not claim that tourism has perverse effects on the natural resources or the social harmony of the host communities. Our thesis is that in areas where tourism inflows outnumber or represent a large proportion as compared to local inhabitants the functioning of the markets for goods and services may be affected by tourists' consumption patterns. In particular we argue that prices and brand varieties found in supermarkets of touristic areas are significantly different from those found in their counterparts outside these areas.

[10]The *SEASON* effect was not included in this second equation because in most products the number of brand varieties did not change between January and April 2010. That explains the use of fewer observations in Table 6.

Using a representative dataset from supermarkets in the island of Gran Canaria, our estimations of different price and brand variety equations seem to confirm the thesis that prices at touristic municipalities are higher and the number of varieties is smaller when compared to non-touristic municipalities in the same island, once other factors that might explain these differences are controlled for. The reason that explains the first result is a simple income effect, whereas the second one lies in the fact that touristic supermarkets are smaller and do not benefit from offering a wide range of brands to customers (tourists) who do not appreciate the difference (due to lack of local language skills).

Arguably, these effects are not only negative. The upwards shifts in the demand curve does not only increases prices but also quantities (and, indirectly, the level of economic activity) at the host community. This effect will be higher the more elastic the supply curve. Similarly, an excessive degree of differentiation is not always positive for consumers. In any case, the point in discussing these two effects of tourism on local markets' prices and brand diversity is not to question whether they exist or not, but to what extend are they relevant as compared to other – more widely studied – impacts of tourism (both positive and negative). We think that only by providing estimates as we do, a balanced cost-benefit of all the consequences of tourism can be performed.

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