

All-inclusive and value creation in hospitality: Evidence from a mature destination, 2001–2017[☆]

Aleix Calveras

Department of Business Economics, Universitat de les Illes Balears, Spain



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ABSTRACT

This paper studies all-inclusive in hospitality at a mature destination. The analysis, using data from the hotel industry in the Balearic Islands, years 2001–2017, shows that all-inclusive is more likely to arise in the market the more value it creates, either through cost efficiencies or demand convenience. Moreover, data shows a large increase in the supply of all-inclusive offerings in the period 2001–2010, an increase that took place in parallel with two other (potentially explanatory) trends: a rise in the price of the complementary services available at the destination, and the adoption by hotel establishments of revenue management techniques that make it easier to host a wider variety of visitors with different boarding options, among them, the all-inclusive one.

1. Introduction

All-inclusive (AI) offerings in hospitality remain a highly controversial issue, with criticisms ranging from the alleged negative impact that all-inclusive resorts may have on the local economy, to the working conditions of their employees (Tavares & Kozak, 2015; Tourism Concern, 2014). The industry, instead, explains all-inclusive as being merely a business response to a demand in highly competitive markets (Aguilo & Rossello, 2012). This rationale at a developing country is plausible: in case of a lack of trustworthy and quality suppliers of complementary services, tour operators and hotel firms might choose to bundle accommodation with meals and other components of the tourism product (e.g. Issa & Jayawardena, 2003). At a mature destination in a developed nation, however, the wide availability of complementary services of diverse quality (restaurants, etc.) may reasonably cast some doubts on the industry's rationale.

The focus of this paper is, precisely, to understand and analyze all-inclusive offerings in hospitality at such mature destinations, testing empirically this view that all-inclusive is the result of firm rivalry in competitive markets. While most of the literature on all-inclusive has focused solely on its demand rationales, this paper considers both supply and demand factors behind the AI offerings (Alegre & Pou, 2006, 2008, p. 17; Aguilo & Rossello, 2012). In particular, the analysis considers all-inclusive as a case of product bundling in competitive markets: hospitality and restaurants are industries with strong competition

where even large firms enjoy little market power. Consequently, product bundling (e.g., accommodation plus meals, etc.) is expected to arise when there are cost efficiencies and/or a presence of a demand convenience, at least for some consumers (Evans and Stadler, 2005; 2008; Calveras, 2019). Thus, all-inclusive will more likely be the result of market competition when it entails a larger value creation to the parties involved than other available modes of accommodation; in particular, absent value creation, product bundling (all-inclusive) would not arise in the market.

In order to test this Hypothesis, the analysis uses a unique dataset from the hospitality industry in the Balearic Islands in Spain, 2001–2010, and some more limited official regional data for year 2017. Overall, the results provide a strong support to the view that achieving a larger value creation is indeed the driving force behind AI offerings, sometimes in terms of cost efficiency, others as a response to a customer demand. Data, however, also shows a striking evolution of all-inclusive offerings over time in the period under study, 2001–2010/2017: the percentage of establishments in the Balearic Islands offering AI as one of its boarding options has gone up from a mere 6.3% in year 2001 to a 26.1% in year 2010, with a similar number for the Balearic island of Majorca in year 2017, 24%.

It is noteworthy that such evolution of AI coincides over time with two parallel trends. On the one hand, the prices in the destination for restaurants have increased disproportionately compared to the general prices in the same destination and in the tourists' origin countries. This

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E-mail address: aleix.calveras@uib.es.

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Table 1
Proxies for value creation with all-inclusive board.

Establishment's size	Larger value creation of all-inclusive at larger establishments
Establishment belongs to a chain	Larger value creation of all-inclusive at establishments part of a chain
Tourists' profile (i.e. families)	Larger demand convenience (value creation) of all-inclusive for families
Tourists' preferences (i.e., for sun-and-sea)	Larger demand convenience of all-inclusive for tourists that prefer sun-and-sea, and smaller for tourists that prefer cultural tourism, biking, etc.
Establishment's location (i.e. in the city)	Smaller demand convenience of all-inclusive at a city hotel establishment
Quality of the establishment	Smaller value creation of all-inclusive at premium establishments

might increase the demand for AI in order to hedge against price uncertainty (Alegre & Pou, 2006, 2008; Aguilo & Rossello, 2012; Tavares & Kozak, 2015; Bladh & Holm, 2013; see also Armstrong, 2014, for an economic analysis of such rationale). On the other hand, since the beginning of the century, hotel firms have increasingly adopted new revenue management techniques allowing for more extensive price discrimination while hosting a larger variety of customers with different boarding options (Talón-Ballesteró & González-Serrano, 2012). Accordingly, this would have provided establishments with an incentive to increase the supply of AI altogether with other boarding offers.

The next section explains the theoretical framework and derives the Hypothesis linking AI to value creation. Section 3, then, presents the available data and the variables used to test the hypothesis in the empirical analysis. Section 4 provides a first look (descriptive statistics) of all-inclusive in the Balearic Islands, 2001–2017, and section 5 tests with regression analysis the main hypothesis of the paper. Section 6 provides potential rationales behind the increase of AI, and section 7 concludes with a discussion of the results, limitations of the analysis and avenues for future research.

2. Theory and hypothesis

The analysis considers all-inclusive in hospitality at a mature destination in a developed nation as a case of product bundling in competitive markets: at such a destination, hospitality and the complementary service sectors (restaurants, etc.) are likely to exhibit rather strong rivalry, with even large players showing little market power. While product bundling has been extensively studied in economics, most of the analysis has focused on bundling as a device used by firms to exploit their market power (Belleflamme & Peitz, 2010). Thus, the current analysis is based on Evans and Salinger (2008) theoretical framework and, then, Calveras (2019) building on their work: a model of product varieties where three goods may be part of the market configuration; good 1 (say, accommodation), good 2 (say, complementary goods such as food and beverages), and the bundle of both goods 1 and 2 (the all-inclusive offer). This model of product varieties includes, from the supply-side, potential efficiencies in marginal as well as in fixed costs when a firm offers the bundle of the two goods rather than a single one of them. And, from the demand-side, some consumers who derive a convenience value from buying the bundle rather than the individual goods (Aguilo & Rossello, 2012; Alegre & Pou, 2008).

Intuitively, cost efficiencies and a demand convenience linked to product bundling are key to provide incentives to both firms and consumers to make the bundle a part of the market configuration. As Evans and Salinger (2008) and Calveras (2019) show, with firm competition, all-inclusive will be part of the equilibrium market configuration when value created to the parties directly involved is larger than at an alternative market configuration where only the individual goods are available; otherwise, it would not be a sustainable configuration. For tourists it would then be better to consume separately the individual goods in order to further achieve scale economies since complementary services are also purchased by the local population (not interested in accommodation services). Overall, thus, it is expected that a larger and more likely supply of all-inclusive in the market is linked to a larger value creation with all-inclusive offerings (Calveras, 2019).

Accordingly, the main Hypothesis follows:

Hypothesis. *An all-inclusive offering is linked to a larger value creation in terms of cost efficiencies and/or a demand convenience.*

In general, thus, bundling will more likely be part of the equilibrium market configuration when it increases value creation to the two parties involved, the firm offering the bundle, and the consumer purchasing it. If, however, such a bundle generates externalities, say, on the local economy, it might very well be the case that what is optimal for the parties directly involved is not necessarily optimal from a social point of view. It is thus important to stress at this point that the focus of the analysis is the link between all-inclusive and *private* value creation, either through costs or demand. This is further discussed in the last section of the paper.

2.1. Value creation with all-inclusive

Value creation is not directly observed within the dataset, neither the cost efficiencies nor the demand convenience. Instead, then, the empirical analysis uses several proxies for value creation with all-inclusive in those establishments effectively supplying it: (i) the size of the establishment, (ii) being part of a chain, (iii) the tourists' profile and preferences, (iv) the location of the establishment, and (v) the quality of the establishment (see Table 1 for a summary):

- (i) Larger value creation with all-inclusive is likely to arise at a larger hotel establishment. On the one hand, for a small establishment it is costlier to incorporate all the facilities required to offer an all-inclusive board to its customers (in terms of space, kitchen, etc.). On the other hand, it is also likely that the demand convenience from consuming the all-inclusive bundle is larger at a larger establishment.
- (ii) When part of a chain, value creation with all-inclusive is also likely larger: cost efficiencies with bundling might increase, for instance, because of the chain's larger scale economies in, say, purchasing or through revenue management techniques.
- (iii) Consumers may derive convenience from the all-inclusive board depending on their profile and preferences. Notice first that the role of an all-inclusive board as a mechanism to hedge against price uncertainty in complementary services can be represented precisely with the demand convenience from buying the bundle. Then, since this convenience value of AI should increase with the size of the party, larger parties (i.e. families with children) should be more interested in an all-inclusive board (Anderson, 2007; Garcia, Juaneda, Raya, & Sastre, 2015). Moreover, consumer valuation from buying the all-inclusive offering may arise also for other reasons. Specifically, some tourists who prefer sun-and-sea vacations may show little interest in going outside the hotel facilities to eat and visit the destination; and vice versa, tourists interested in cultural experiences, biking, etc., will have a small, null or even negative demand convenience from the bundle.
- (iv) There are two rationales for taking the location of the establishment as a proxy for demand convenience. First, there is evidence suggesting that all-inclusive offers are addressed to more price conscious consumers as a means to hedge against price uncertainty (Aguilo & Rossello, 2012; Alegre & Pou, 2006, p. 17, 2008; Tavares

& Kozak, 2015). Consumers (families) face uncertainty with respect to the price they will have to pay for the complementary services (meals, etc.), an uncertainty that an all-inclusive board should reduce. When a hotel establishment is located at a densely populated area with plenty of complementary services (e.g., many restaurants), such price uncertainty is likely to be reduced because of higher competition among suppliers. Accordingly, Bladh and Holm (2013) do show that hotels further away from the city or the destination center are those more likely to offer all-inclusive, a way to address the hold-up problem faced by tourists once at the hotel. A simpler (and non-contradictory) alternative explanation for taking the location of the establishment as a proxy for the value created by AI is that a tourist who chooses to stay at a city hotel likely prefers the amenities offered by the city, exhibiting a low convenience value from consuming the bundle.

(v) It is unlikely that all-inclusive increases value creation at premium hotel establishments. Notice first that the evidence on the existence of diseconomies of scale and scope with quality in the restaurant industry. As Berry and Waldfogel (2010) indicate, increased restaurant quality arguably raises marginal cost at a fairly rapid rate. In the fine-dining segment of the restaurant industry, the best restaurants seem to be small: there are few truly gourmet restaurant chains because diseconomies of scale and scope seem to set in at a very small size at these firms (for instance, because of the need of individual attention demanded by customers, and innovative menus taking advantage of locally available fresh high quality ingredients; see Gwartney, Stroup, Sobel, & Macpherson, 2013). It is thus likely that marginal and fixed cost efficiencies of product bundling are smaller (or even negative) with top premium quality. Moreover, from a demand perspective, a negative correlation between the convenience value of AI as a way to hedge against price uncertainty, and the consumer's willingness to pay for quality is expected. A consequence of these two factors is that an all-inclusive offering is less likely to create value at a premium quality establishment.

Overall, then, an establishment's size, whether it belongs to a chain, the type of its tourists and their preferences, its location and its quality to proxy for larger (or smaller) value creation when an all-inclusive board is offered (this is summarized in Table 1).

3. Data and variable construction

The Hypothesis is tested with data from the hotel industry in the Balearic Islands (which includes the islands of Majorca, Menorca, Ibiza and Formentera) in Spain. Spain is among the top three world tourism destinations measured by international tourist arrivals, while the Balearic Islands, with just one million inhabitants over the 45 million of the whole Spain, received international tourist arrivals which account to almost one fifth of all of Spain, making of these islands one of the leading tourist destinations of the whole Mediterranean (World Tourism Organization, 2010, 2017).

There are two datasets; the main one is for years 2001–2010, and it is used to fully test the Hypothesis with regression analysis. It was obtained from a questionnaire survey applied to a representative sample of the hotel establishments that operate in the Balearic Islands. The relevant population of the hotel industry in the Balearic Islands includes 1586 hotel establishments listed in the official census of tourism companies. The sample was selected after stratifying this population according to three characteristics that make it heterogeneous: geographical location (island), hotel category (the number of stars), and size (the number of beds of the establishment). The final sample includes over 300 respondents per each year 2001, 2004, 2007 and 2010; some respondents (establishments) are followed and interviewed for more than one period, but others are not. For years 2001 through 2010, therefore, the data is thus representative of the whole population of

hotel establishments in the Balearic Islands, with a 95.5% confidence level.

The questionnaire was developed with the aim to obtain relevant data about the strategy and competitiveness of the hotel industry of the Balearic Islands, given that the publicly available data provides insufficient information. The questionnaire was applied in the summers of each year, and answered by the managers of the selected hotel establishments via personal interviews (see appendix I for a summary of the survey, with its main questions used in this paper) The survey includes specific questions about the products offered by the establishment such as whether the establishment offers all-inclusive accommodation or not, as well as the other types of available board (no food, breakfast, half board, and full board). Additionally, it also includes hotel establishment characteristics such as the number of stars of the establishment (the official rating), its capacity (number of beds), the chain to which it belongs (if any), customer characteristics and loyalty, among others.

In addition to this survey data for years 2001 through 2010, there is available official data for year 2017 on the whole population of hotel establishments in Majorca, the largest of the Balearic Islands (over two thirds of its hotel industry is located in Majorca). The data, provided by the regional government, includes information on the population of the 993 hotel establishments in Majorca: on whether hotel establishments offer all-inclusive or not, possibly with other boarding options; and on the number of beds, the number of stars, and the location of each establishment. Such limited information on the characteristics of the establishments, and none on its customers, forces the econometric analysis to rely on the survey information from years 2001–2010. In any case, as it will become clear below, the official data for year 2017 provides robustness to some of the findings based on the survey data.

3.1. Variable construction

The survey includes several items on the type of accommodation offered by the establishment. Specifically, the survey asks about which boards the hotel offers to its customers among the following possibilities (the survey respondent may choose more than one option): no food, breakfast, half-board, full-board, and all-inclusive (see appendix I). Thus, the analysis considers several dependent variables, in all cases taking into account whether the hotel establishment offers all-inclusive or not, but also considering in some cases whether all-inclusive is jointly offered with other boarding options, or not (see Table 2).

Table 3 includes all explanatory and control variables used in the empirical analysis specifying in each case the years for which they are available. It is useful to distinguish between those variables related to the establishment's characteristics (supply), and those related to customers' characteristics and preferences (demand). Keep in mind that the available information concerning the profile and preferences of the hotel's clientele is information provided by the hotel manager; these variables on clientele's characteristics are available for years 2004, 2007 and 2010, not for year 2001. (See also appendix I for the questions in the survey related to these variables).

Table 2
Variables on all-inclusive offerings.

ALL-INCLUSIVE (AI): A categorical variable, takes value 0 or 1, denoting whether the establishment offers all-inclusive board (possibly among other boarding options) or not. It is available for all years.
AI-ONLY (ALL-INCLUSIVE ONLY): A categorical variable, takes value 0 or 1, denoting whether the establishment only offers all-inclusive board or not. It is available for all years.
AI-ALSO (ALL-INCLUSIVE ALSO): A categorical variable, takes value 0 or 1, denoting whether the establishment offers all-inclusive board jointly with other board options, or not. It is available for all years.
AI3: This is a categorical variable which takes value 0 if the establishment does not offer all-inclusive, takes value 1 if it offers all-inclusive as well as other boarding options (AI-ALSO = 1), and takes value 2 if it only offers all-inclusive board (AI-ONLY = 1). It is available for all years.

Table 3
Explanatory and control variables.

SIZE: The natural logarithm of the number of rooms of the establishment in order to avoid fluctuations on the non-transformed variable, which is the usual practice in studies of the hotel sector (Chung and Kalnins, 2001). Available for all years.
STARS: A categorical variable, the number of stars of the establishment, ranging from 1 to 4, where 1, 2 and 3 represent 1 star, 2 stars and 3 stars hotels, and where 4 includes 4 and 5 stars hotels, grouped together because of the small number of 5 stars hotels and minimal differences in the requirements between 4 and 5 stars. It is available for all years. The analysis uses dummy variables for STARS which are explained below in the text when used in Table 8.
CHAIN: A binary variable, takes value 1 if the hotel establishment belongs to a chain and 0 otherwise. Available for all years.
FAMILY: Takes value 0 or 1 depending on whether the hotel hosts 'families with children', or not. Available for years 2004, 2007 and 2010.
SUN-AND-SEA: It takes value 1 if the hotel hosts tourists who prefer 'sun-and-sea', possibly among other options; and 0 otherwise. Available for years 2004, 2007 and 2010.
OUTSIDE: Takes values 0 through 4, depending on the number of different types of activities the hosts of the establishment have a preference for, among the following: EXCURSIONS; CULTURAL TOURISM; BIKING; and BUSINESS. 0 means none, and 4 means a preference for all four of them. Notice that these are all tourism activities to be developed outside of the resort-establishment. Available for years 2004, 2007 and 2010.
LOY: A continuous variable, measures customer loyalty with the percentage of repeat visitors of the establishment, taking values from 0 to 1. Available for all years.
INTERM: A continuous variable, the percentage of accommodation capacity of the hotel distributed by any intermediary (a tour operator, a travel agency, or a central reservation system), as opposed to direct distribution (with telephone, fax, or directly through internet). Takes values from 0 to 1, adding up the percentages distributed by tour operators, travel agencies and central reservations systems. It is available for years 2004, 2007 and 2010.
TTOO: a dichotomous variable, takes value 1 if the hotel distributes part of its accommodation capacity with at least one tour operator, and 0 otherwise. It is available for all years.
MONTHS: The number of months of the year the hotel is open (it ranges from 1 to 12). It measures hotel's seasonality. Available for all years.
OCCUPANCY: Occupancy rates (in percentage) range continuously from 0 to 1. Available for all years.

The analysis also includes as control variables the way the establishment distributes its capacity (using both TTOO and INTERM), and the establishment's customer loyalty (LOY). Given the fact that the supply of an all-inclusive board increases the establishment's fixed costs (even in the presence of scale and scope economies), a tour operator (or any intermediary) distribution might be appropriate to the extent that it may guarantee a larger demand and, thus, justify such an investment. A positive relationship between the offering of all-inclusive by an establishment and a larger level of intermediation in the distribution of its capacity is thus expected.

There are two factors at play in the relationship between all-inclusive and customer loyalty. On the one hand, since the convenience value from buying the bundle is linked to hedging against price uncertainty, it is probably going to be largest for price conscious consumers. On the other hand, an all-inclusive board reduces the importance of the destination characteristics on the tourists' experience. In other words, all-inclusive offerings tend to decrease product differentiation, both in relation to other hotels located in the same destination, as well as in relation to other establishments located in other destinations. As a consequence of these two factors (price conscious consumers and lower product differentiation), it is likely that customer loyalty will be lower for those hotels supplying all-inclusive. Moreover, repeat visitors enjoy better information about the destination, including knowledge about complementary services' prices, which probably decreases the price uncertainty they face, hence having less need to rely on all-inclusive to hedge against such uncertainty (Aguilo & Rossello, 2012; Alegre & Pou, 2006, 2008; Garcia et al., 2015).

4. All-inclusive in the Balearic Islands: descriptive statistics

Tables 4A and 4B shows the summary statistics for the main

Table 4a
Summary statistics of the main variables, 2001–2010.
Source: Own survey data, 2001–2010

Variable	Obs	Mean	Std. Dev.
ALL-INCLUSIVE	1333	0.155	0.362
AI-ONLY	1333	0.055	0.229
AI-ALSO	1333	0.099	0.299
SIZE	1333	4.240	1.040
STARS	1333	2.391	1.006
CHAIN	1333	0.392	0.488
FAMILY	1002	0.536	0.499
SUN-AND-SEA	1002	0.936	0.245
OUTSIDE	1002	0.630	0.964
BUSINESS	1002	0.128	0.334
EXCURSION	1002	0.214	0.410
CULTURE	1002	0.147	0.354
BIKING	1002	0.143	0.350
TTOO	1333	0.767	0.423
INTERM	989	0.627	0.363
MONTHS	1333	7.971	2.478
LOYALTY	1198	0.246	0.220

Table 4b
Summary statistics of the main variables, Majorca, 2017
Source: Regional government, 2017

Variable	Obs	Mean	Std. Dev.	Min	Max
ALL-INCLUSIVE	993	0.241	0.428	0	1
AI-ALSO	993	0.211	0.409	0	1
AI-ONLY	993	0.029	0.168	0	1
SIZE	993	4.392	1.049	1.609	6.700
STARS	968	3.150	1.097	1	5.5

Table 5
All-inclusive and establishment and demand Characteristics.

		ALL-INCLUSIVE			% AI
		No	Yes	Total	
SIZE		4.06	5.21	4.23	15.5%
CHAIN	No	771	40	811	4.9%
	Yes	355	167	522	32.0%
	Total	1126	207	1333	15.5%
STARS	1	330	10	340	2.9%
	2	298	10	308	3.2%
	3	364	145	509	28.5%
	4	134	42	176	23.9%
	Total	1126	207	1333	15.5%
CITY	No	1040	207	1247	16.6%
	Yes	86	0	86	0.0%
	Total	1126	207	1333	15.5%
FAMILY	No	415	50	465	10.7%
	Yes	401	136	537	25.3%
	Total	816	186	1002	18.5%
SUN-AND-SEA	No	62	2	64	3.1%
	Yes	754	184	938	19.6%
	Total	816	186	1002	18.5%
OUTSIDE	0	488	139	627	22.1%
	1	165	28	193	14.5%
	2	109	15	124	12.1%
	3	38	3	41	7.3%
	4	16	1	17	5.8%
	Total	816	186	1002	18.5%
TTOO	No	301	9	310	2.9%
	Yes	825	198	1023	19.4%
	Total	1126	207	1333	15.5%

variables in both datasets (appendix II includes the tables of correlations among variables in both datasets, and appendix III compares both datasets).

Tables 5 and 6 show in detail the relationship between all-inclusive

Table 6

All-inclusive and establishment characteristics, Majorca, 2017
Source: Regional government data, 2017

		ALL-INCLUSIVE			% AI
		No	Yes	Total	
SIZE		4.12	5.23	4.39	24.5%
STARS	1	107	1	108	0.9%
	2	99	4	103	3.8%
	3	194	98	292	33.5%
	4	283	130	413	31.4%
	5	47	5	52	9%
	Total	730	238	968	24.5%
CITY	No	657	238	895	26.5%
	Yes	73	0	73	0.0%
	Total	730	238	968	24.5%

and the main independent variables: (i) establishments that offer all-inclusive tend to be larger, and (ii) the percentage of hotels offering all-inclusive is largest among those belonging to a chain. Also, (iii) not a single hotel establishment located in the Palma city center offers all-inclusive board. Finally, in relation to quality, (iv) the percentage of establishments offering all-inclusive is largest among those with 3 stars, decreasing somewhat among those with 4/5 stars in the data for years 2001–2010 (see Table 5). When looking at Table 6, with data for year 2017, it is clearer that premium establishments (those with 5 stars) show a significantly lower proportion of all-inclusive offerings (see also Fig. 1). This is all consistent with the view that value creation with bundling (all-inclusive) is smaller for premium establishments.

Focusing on demand characteristics in Table 5, survey data shows that (v) hotel establishments hosting tourists with a FAMILY profile are more likely to offer AI, 25% versus 10% those without families. With respect to the tourists' preferences, (vi) the number of establishments offering AI when the establishment's tourists do not prefer SUN-AND-SEA is extremely small (only 2 out of 186). This is strongly suggestive of a relationship between consumer preferences for this type of tourism and the offering of all-inclusive. Still related to the demand preferences, (vii) establishments hosting tourists with a preference for OUTSIDE activities (such as CULTURE, EXCURSIONS, BIKE, BUSINESS), are less likely to offer AI. Finally, all-inclusive offerings are clearly linked to a

Table 7

Hotel characteristics, per year.

Source: Survey data, the Balearic Islands, 2001–2010

	2001	2004	2007	2010	2017 ^a
ALL-INCLUSIVE	6.3%	13.3%	16.3%	26.1%	24.0%
AI-ONLY	5.1%	4.5%	5.3%	7.2%	2.9%
AI-ALSO	1.2%	8.7%	10.9%	18.9%	21.1%
SIZE	4.18	4.22	4.21	4.32	4.39
CHAIN	31%	37%	40%	47%	–
STARS	2.27	2.34	2.38	2.55	3.15
FAMILY	–	0.62	0.52	0.45	–
SUN-AND-SEA	–	0.95	0.93	0.91	–
OUTSIDE	–	0.5737	0.7426	0.5733	–

^a Regional gov't data, Majorca only, 2017

distribution by at least one tour operator (TTOO).

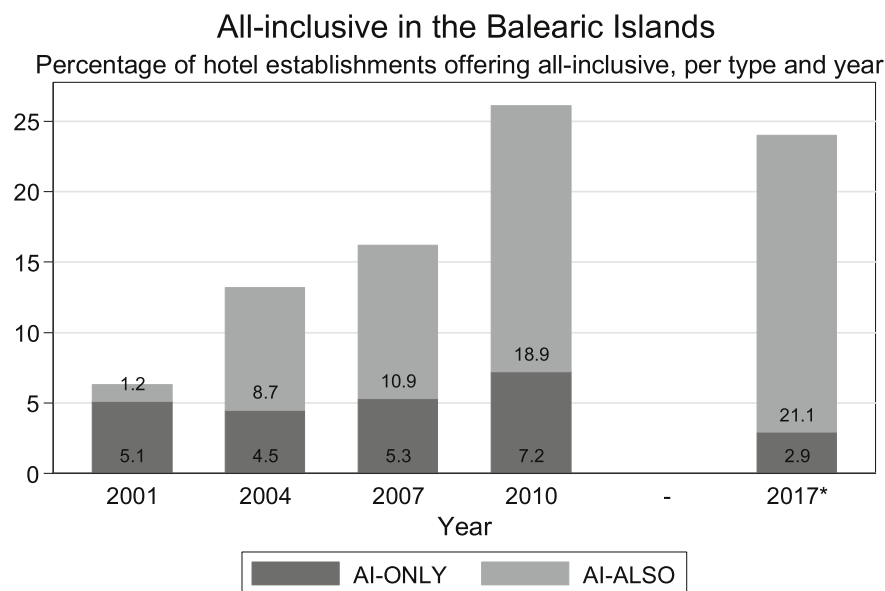
Overall, thus, this preliminary statistical analysis shows a rather strong support to the hypothesized link between all-inclusive offerings and a larger value creation; in the following section, the Hypothesis is tested with regression analysis and control variables. But first, the evolution of all-inclusive over time is described.

4.1. The evolution of all-inclusive over time, 2001–2017

When looking at the evolution of all-inclusive over time, three facts stand out (see Table 7 and Figs. 1–3). First, there has been a large increase in the number of establishments offering all-inclusive, from a mere 6.3% in year 2001 to a 26.1% in 2010, decreasing slightly for year 2017.

Second, the increase has mostly occurred in establishments offering AI in addition to other board options (AI-ALSO), while the proportion of those establishments only supplying AI has remained relatively constant until year 2010, diminishing significantly in 2017 (AI-ONLY).

And third, the largest increase in the establishments offering AI has been among those with 4 or 5 stars: only 2.9% of these hotels offered all-inclusive in 2001, while 41% of them did in 2010 (see Fig. 2). A similar pattern can be observed in year 2017 with regional government data on Majorca only, providing robustness to the survey data (see Fig. 3). Notice that the average number of stars has increased from a 2.55 in year 2010 to a 3.15 in year 2017 (when computing the average



*Regional gov't data, Majorca only

Fig. 1. All-inclusive in the Balearic Islands Percentage of hotel establishments offering all-inclusive, per type and year.

*Regional gov't data, Majorca only.

All-inclusive in the Balearic Islands

% of establ. with AI-ONLY (dark) and AI-ALSO (light), per number of stars

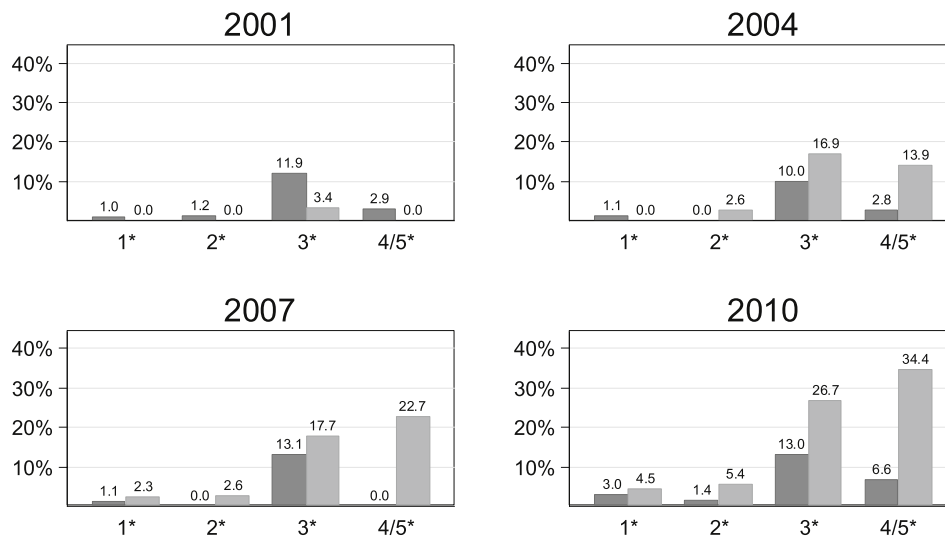


Fig. 2. All-inclusive in the Balearic Islands % of establ. with AI-ONLY (dark) and AI-ALSO (light), per number of stars.

number of stars in year 2017 a 4 for a 5 stars hotel has been assumed, following the same numbering in years 2001–2010; see Table 10). This likely shows the upgrade undertaken by many establishments over time through investments and modernization.

5. All-inclusive and value creation: regression analysis

Since data in the previous section shows a rather different trend in all-inclusive offerings depending on whether they are supplied jointly with other boarding options, or are the sole offer of the establishments, two models are proposed. Model 1 estimates an empirical Logit model with ALL-INCLUSIVE as the dependent variable, without considering whether all-inclusive offering is the sole offer of the establishment or not. Model 2, instead, estimates a multinomial logit with AI3 as the

dependent variable, studying the potentially different impact of explanatory variables on the all-inclusive offerings of the establishment, depending on whether it is offered jointly with other boarding options or not. The empirical models used are thus as follows:

Model 1 (Logit regression)

$$\text{ALL-INCLUSIVE}_{it} = f(\text{SIZE}_{it}, \text{CHAIN}_{it}, \text{STARS}_{it}, \text{FAMILY}_{it}, \text{OUTSIDE}_{it}, \text{CONTROL VARIABLES}_{it}) + \varepsilon_{it}$$

Model 2 (Multinomial logit regression)

$$\text{AI3}_{it} = f(\text{SIZE}_{it}, \text{CHAIN}_{it}, \text{STARS}_{it}, \text{FAMILY}_{it}, \text{OUTSIDE}_{it}, \text{CONTROL VARIABLES}_{it}) + \varepsilon_{it}$$

where ε_{it} is the disturbance term. Both models have been estimated with standard errors robust to heteroscedasticity and clustered at hotel

All-inclusive in Majorca in year 2017

% of establishments offering all-inclusive, per number of stars

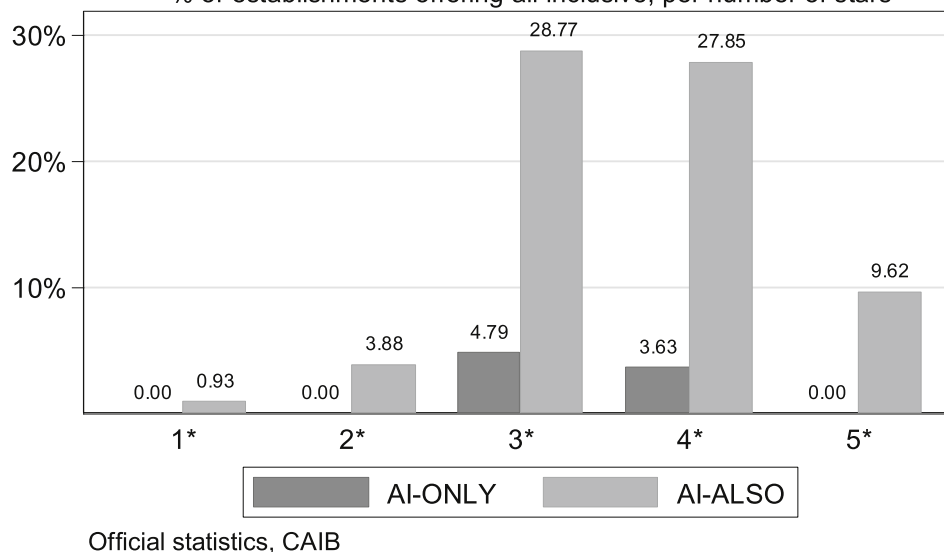


Fig. 3. All-inclusive in Majorca in year 2017 % of establishments offering all-inclusive, per number of stars. Official statistics, CAIB.

Table 8
Model 1 (logit regression) dependent variable all-inclusive

	(1)	(2)	(3)	(4)	(5)
SIZE	1.099*** (0.148)	1.237*** (0.162)	1.167*** (0.193)	1.052*** (0.190)	
CHAIN	1.141*** (0.295)	1.062*** (0.290)	1.055*** (0.326)	0.931*** (0.314)	1.172*** (0.303)
1.STARS	−0.0351 (0.488)	0.0959 (0.487)	0.163 (0.540)	0.334 (0.574)	−1.006* (0.515)
2.STARS	−1.298*** (0.379)	−1.254*** (0.365)	−1.125*** (0.399)	−1.020*** (0.389)	−1.574*** (0.451)
4.STARS	−0.578* (0.308)	−0.708** (0.305)	−0.353 (0.318)	−0.195 (0.335)	−0.0805 (0.322)
FAMILY			0.251 (0.254)	0.265 (0.260)	0.564** (0.256)
OUTSIDE			−0.351*** (0.111)	−0.268** (0.118)	−0.287** (0.113)
INTERM				0.988* (0.559)	1.364*** (0.505)
LOYALTY				−1.512** (0.694)	−1.639** (0.664)
MONTHS				−0.0222 (0.0616)	−0.00866 (0.0601)
2.YEAR		0.857** (0.365)			
3.YEAR		1.200*** (0.346)	0.444* (0.227)	0.497** (0.225)	0.448** (0.220)
4.YEAR		1.872*** (0.338)	1.050*** (0.270)	1.153*** (0.278)	1.105*** (0.278)
_CONS	−7.250*** (0.738)	−8.983*** (0.884)	−7.902*** (0.971)	−7.709*** (1.211)	−3.144*** (0.777)
N	1333	1333	1002	989	989
Pseudo R ²	0.260	0.305	0.298	0.306	0.259

Standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 9
Model 2 (multinomial regression) dependent variable AI3 reference variable IS
NO all-inclusive

	AI-ALSO	AI-ONLY		
SIZE	1.045*** (0.198)	1.049*** (0.208)	1.334*** (0.331)	1.199*** (0.326)
CHAIN	0.664** (0.297)	0.689** (0.303)	1.941*** (0.750)	1.867** (0.783)
1.STARS	−0.341 (0.582)	−0.300 (0.586)	1.976* (1.021)	2.227** (1.044)
2.STARS	−0.941** (0.429)	−0.901** (0.447)	−2.055** (1.001)	−1.732 (1.062)
4.STARS	0.00769 (0.347)	0.0951 (0.349)	−1.470*** (0.549)	−1.387*** (0.525)
FAMILY		0.0233 (0.286)		1.282*** (0.454)
OUTSIDE		−0.223* (0.126)		−0.366 (0.233)
INTERM	0.340 (0.531)	0.318 (0.535)	4.332*** (1.088)	4.063*** (1.111)
LOYALTY	−1.040 (0.692)	−0.892 (0.699)	−4.843*** (1.523)	−4.925*** (1.557)
MONTHS	−0.0798 (0.0585)	−0.0583 (0.0610)	0.0460 (0.112)	0.0781 (0.115)
2007.YEAR	0.431 (0.268)	0.485* (0.269)	0.382 (0.375)	0.575 (0.399)
2010.YEAR	1.100*** (0.313)	1.122*** (0.318)	1.042** (0.471)	1.321*** (0.500)
_CONS	−6.887*** (1.328)	−7.052*** (1.358)	−13.82*** (2.208)	−14.15*** (2.214)
N	989	989	989	989
Pseudo R ²	0.280	0.291	0.280	0.291

Standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

chain level in order to control for correlation in the error terms among establishments that belong to the same chain. Notice this also implies controlling for correlation in error terms among the same establishments across time since establishments do not switch or drop from chains. Fixed effects are not included in the regressions in either model because the main source of variability is at the cross section level, and fixed effects would be absorbing part of the heterogeneity across hotels that the empirical model tries to capture. Finally, notice that robustness tests using fixed effects and the statistic of the Hausmann test suggest that both models provide consistent estimators and that there is no unobserved heterogeneity biasing the results. [Tables 8 and 9](#) report the estimates from the pooled logit and multinomial logit estimators.

5.1. Discussion of the results

The majority of the estimated coefficients in all regressions support the [Hypothesis](#) linking all-inclusive with a larger value creation. To begin with, notice that the estimated coefficients for SIZE and CHAIN are positive as expected; clearly, larger establishments and those belonging to a chain offer to a larger extent all-inclusive in both models (see [Tables 8 and 9](#)).

The effect of quality or the number of STARS on all-inclusive offerings is more nuanced (dummies are used since STARS is a categorical variable). In model 1 ([Table 8](#)) establishments with three stars offer more all-inclusive than those with two stars (not true in general with respect to establishments with one star, but this might be because of the small number of such 1 star establishments). What about 4/5 stars establishments with respect to the benchmark (3 stars)? The coefficient for the dummy 4.STARS (takes value 1 if the establishment has 4 or 5 stars; 0 otherwise) is non-significant when controlling for FAMILY, OUTSIDE, LOYALTY, etc. It is only negative and significant (and by not that much) when there are few controls. This result does not support the expected negative relationship between premium quality establishments and product bundling (all-inclusive). In model 2 ([Table 9](#)) where multinomial regression analysis distinguishes between exclusive all-inclusive offerings (AI-ONLY) and all-inclusive with other boarding options, results differ. The coefficients for 4.STARS with AI-ONLY are indeed significant and negative with respect to the 3 stars benchmark; not so with the coefficient for AI-ALSO. This finding is consistent with the evolution of all-inclusive shown above, where the pattern followed by AI-ALSO and AI-ONLY are quite different. Thus, for years 2001–2010, the expected negative relationship between all-inclusive and premium quality would only hold for those establishments offering exclusively all-inclusive, not for those supplying all-inclusive jointly with other boarding options. Notice, however, that for year 2017 (not present in the regression analysis) establishments with 5 stars (basically absent in the 2001–2010 data) show a significantly lower level of AI offerings, both for AI-ONLY as well as AI-ALSO (see [Fig. 1](#)).

The estimated coefficient for FAMILY is positive in all regressions, but only strongly statistically significant in [Table 9](#) with AI-ONLY (also for model 1 when SIZE is dropped; likely because of its high positive correlation with FAMILY; see table of correlations in the appendix). Thus, it is only in model 2 that FAMILY is positive and strongly significant in relation to AI-ONLY; namely, a family type clientele increases strongly the likelihood that the establishment offers exclusively all-inclusive.

Regarding OUTSIDE, in model 1 its coefficient is always negative and statistically significant at the 1% or at the 5%, providing thus strong support to the [Hypothesis](#), as OUTSIDE is a proxy for a smaller demand convenience of all-inclusive. It is worthwhile mentioning that variables SUN-AND-SEA and CITY have not been incorporated into the regression analysis because they show too little variability: almost all establishments offering AI host tourists who prefer sun-and-sea; and not one city hotel offers AI. In model 2 ([Table 9](#)) OUTSIDE is negative in both cases, but only significant for AI-ALSO (for AI-ONLY the p-value is 11,6%).

Regarding control variables, coefficients are basically as expected, positive for INTERM, and negative for LOY in model 1 (Table 8). Table 9 (model 2) shows that such estimated coefficients are driven mainly by its effect on AI-ONLY.

Overall, regression analysis shows that an establishment's likelihood of supplying all-inclusive does indeed depend on its characteristics, and on the characteristics of its customers; and it does so to a large extent in the manner predicted by the assumed relationship between all-inclusive offerings and the proxies for a larger value creation.

6. Explaining the evolution of all-inclusive offerings over time

Why have all-inclusive offerings in the Balearic Islands increased so much since the beginning of the century, especially in the period 2001 through 2010, and in particular those offerings that coexist with other boarding options (see Figs. 1–3 above)? By paying attention to those establishments present in the sample for two consecutive periods, appendix IV looks at the factors that drive them to incorporate AI into their offerings. As the appendix details, on average, establishments that incorporated all-inclusive offerings, (i) are larger, (ii) are more likely to belong to a chain, (iii) have a larger number of stars, (iv) are more likely to host families, (v) are less likely to host tourists that prefer 'outside' activities; and (vi) a larger share of their capacity is distributed through an intermediary. Notice that these determinants are the same ones found in the pooled logit and multinomial regression analysis done above. In any case, data does indeed show such an increase in AI offerings (e.g., in the year dummies in the regressions), and characterizes the factors driving establishments to incorporate AI over time, but cannot explain why the number of establishments adopting AI has increased. This is why, next, two trends that run parallel to the increase in AI offers since the beginning of the century are posited as potential explanations.

6.1. A demand increase and a higher price uncertainty

Data on the evolution of demand for an all-inclusive board is not available. Google Trends shows, instead, an increase over time in the interest by internet searchers on the term all-inclusive in the major origin countries of the Balearic Islands (see Fig. 4). While there are many possible rationales behind such trend, the literature has shown that one rationale for an AI demand lies in its convenience as a way to

Table 10

Inflation, 2002–2010.

Source: Eurostat, Instituto Nacional de Estadística

	General	Restaurants and cafés
EUROZONE	17.26%	24.75%
GERMANY	13.66%	11.96%
SPAIN	24.02%	34.51%
BALEARIC ISLANDS	22.14%	31.80%

hedge against the price uncertainty in the purchase of the complementary services at the destination (Alegre & Pou, 2006, 2008; Aguilo & Rossello, 2012; Tavares & Kozak, 2015; Bladh & Holm, 2013; see also; Armstrong, 2014). In this regard, the official statistics show that, for the whole period when the increase in all-inclusive offerings were substantial, 2001–2010, prices for restaurants, cafes and alike in the Balearic Islands increased significantly more than general prices in Spain, in the Eurozone and specially in Germany, to take the main country of origin of the tourists going on vacations to the Balearic Islands. Thus, as shown in Table 10, while the general price index had only increased 13.6% in Germany in years 2002–2010, restaurant prices increased 31.8% in the Balearic Islands. Hence, to the extent that such a significant relative increase in the prices for complementary services in the Balearic Islands is a good proxy for a higher price uncertainty, the observed rise in AI might have been caused by tourists demanding it as a way to hedge against it.

6.2. Revenue management techniques

While revenue management techniques are adopted in the US hotel industry in the late 80s, in Spain its adoption does not begin until the late 90s, beginning with chains and followed by independent establishments (Kimes, 1989; Talon y Gonzalez, 2012). According to Figueroa, Talon, and Vices (2008), "on average, yield management activities start in year 2003; the new job title Revenue Manager and weekly meetings start in 2004. Most hotels, however, implement the Yield Management (YM) philosophy and software in year 2005." According to Talon-Ballesteros y Gonzalez-Serrano (2012), nearly 60% of hotels in Madrid that claim to apply YM, implemented it in the period between 2003 and 2006.

Thus, it is precisely in the period where hotels increasingly adopt

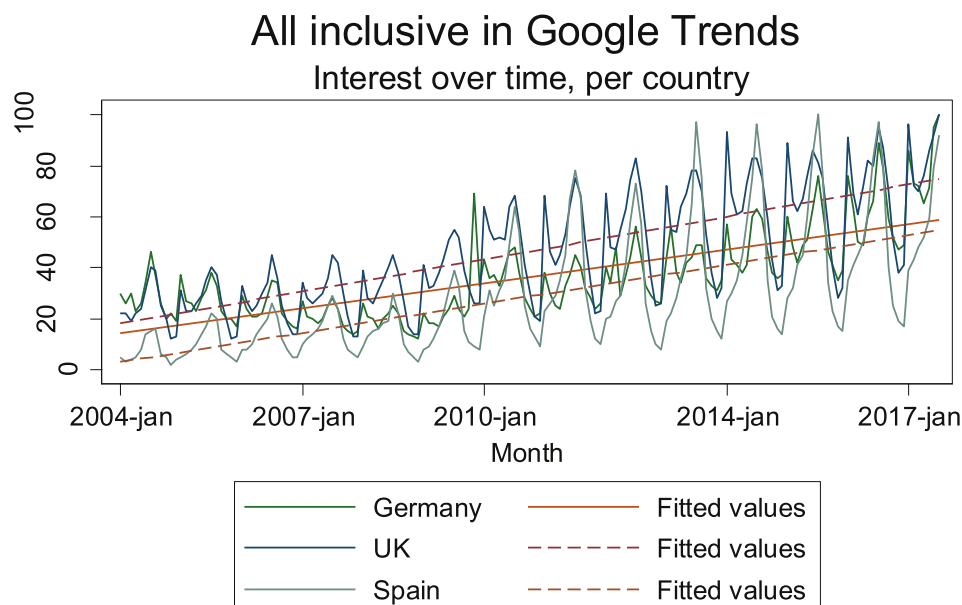


Fig. 4. All inclusive in Google Trends Interest over time, per country.

Table 11

Number of establishments depending on the number of different boards offered, per year.

Source: Own survey data.

#Boards	Year				Total
	2001	2004	2007	2010	
1	295	214	213	166	888
2	34	72	62	83	251
3	2	25	26	31	84
4	0	10	17	32	59
5	0	10	20	21	51
Total	331	331	338	333	1333
Average #Boards	1.11	1.58	1.72	1.98	1.60

Possible boards: no food, breakfast, half board, full board and all-inclusive.

YM techniques that they also start offering AI as an additional boarding option to their customers. It seems likely that Yield Management and Revenue management software has made it easier to supply a larger variety of boarding options to customers with potentially different tastes-demands. As a matter of fact, data shows that it is indeed the case that in the period 2001 through 2010 establishments increase the number of boarding options they offer, and this is not only about all-inclusive, as can be seen in Table 11. These new revenue management techniques would have thus made it more convenient for the establishments to incorporate all-inclusive as an additional boarding option.

7. Discussion and concluding remarks

This paper contributes to the debate surrounding all-inclusive by providing evidence and analysis on two fronts. First, on the increasing prevalence of all-inclusive offerings at a mature tourism destination such as the Balearic Islands. Since the beginning of the century, the percentage of establishments supplying AI as one boarding option, often among others, has gone up from a bit over 6% in 2001 to just over 24% in year 2017. While this is a striking figure, keep in mind that it is about the establishments offering AI, not about the number (or percentage) of tourists effectively purchasing it. Unfortunately, data on this latter figure is not available (see also Arbelo et al., 2017, and Farmaki, Georgiou, & Christou, 2017, for data on significant increases in AI in the Canary Islands and Cyprus, respectively).

In any case, the paper presents two trends that run parallel to such an increase in the Balearic Islands and that might potentially explain it: on the one hand, an increase in the price uncertainty faced by tourists in relation to the complementary services, possibly increasing AI convenience and demand; and, on the other hand, the wide adoption by establishments of revenue management techniques that facilitate price discrimination and hosting guests across a wide array of different boarding options, AI among them.

The second front in which the paper contributes to the debate on AI is by showing with the analysis of the data that AI offerings by hotel establishments respond to a logic of value creation. That is, hotel establishments supply AI either because it is cost efficient to bundle both accommodation and complementary services such as food and beverages, and/or because at least a segment of consumers put an extra value to it.

7.1. Managerial recommendations

The analysis also yields some straightforward managerial recommendations. To begin with, when deciding whether to supply AI as one of the establishment's options, a manager should pay attention to the potential cost efficiencies of AI offerings as well as to its effect on its customers' convenience (or willingness to pay). The analysis provides several clues through which such cost efficiencies might arise: the establishment's size, its category and location, and whether it belongs to a

chain. And some demand segments which might specially value AI offerings: families, and tourists who prefer sun-and-sea, and are not on vacations in order to pursue *outside* activities such as biking, hiking, cycling and cultural tourism. In such instances it is when AI generates higher value to both parties and, accordingly, it is then that a manager should consider its offering. An additional factor to be considered by the manager is the lower loyalty shown by AI customers, probably related to the fact that AI diminishes the establishment's ability for product differentiation (see also Garcia et al., 2015). This, together with the apparent incompatibility suggested by the data between AI and premium quality (as measured by the number of stars), are clearly important considerations in the design of the hotel's long term strategy.

It is worthwhile pointing out that the analysis has considered the establishment as the basic unit of analysis, even though being part of a chain has been a key factor. It is likely, however, that decisions regarding AI, even though dependent on the establishment's characteristics, are taken at a higher level than the establishment's management board, for instance, at the chain level. Thus, additional factors not considered in the analysis (such as chain strategy) might play a role in explaining AI. Available data, however, is not representative at the chain level and, thus, does not allow dealing with these issues that are left for future research.

7.2. Private versus social value creation

It is crucial, at this point, to notice and stress that, throughout the paper, the analysis has discussed AI offerings and *private* value creation, that is, the value created between the two parties directly involved: the hotel establishment offering AI and consumers buying it. This clearly does not settle all controversies surrounding AI in mature destinations: the creation of private value does not preclude the presence of negative externalities and, thus, does not settle the inquire on the impact that AI offerings have on the creation of *social* value at any given destination (see Calveras, 2019). As a possible example of negative externalities, think that, to the extent that AI negatively affects the supply of complementary services (its price, quality and variety), this has a negative effect on the not all-inclusive supply of other establishments (consumer value and willingness to pay depends on the whole of the tourism product, not only on accommodation; see Alegre & Pou, 2008).

7.3. Policy implications

The focus of the analysis on private rather than social value (mainly, because of data availability) clearly restricts the extent to which policy implications at the destination level can be derived, thus limiting the contribution of the analysis to various of the controversies surrounding all-inclusive. The current analysis showed that the supply and demand of AI responds to a logic of private value creation; as a consequence, any regulatory intervention should, first of all, identify which market failures in relation to AI offerings, if any, are present, and how important they are. As explained above, there are indeed potential candidates: in addition to negative externalities, there are also relevant coordination issues. As an example, think about the geographical distribution of AI offerings: is it better for the destination that AI is locally concentrated or, rather, scattered throughout the territory?

Needless to say, acknowledging the potential presence of such market failures does not warrant the regulation of AI at the destination. On the one hand, it is not clear the extent of these externalities and, therefore, whether they require any regulation; on the other hand, all-inclusive might also a priori generate positive externalities (for instance, reducing congestion on the road and at the beach). Finally, even if important market failures are potentially present in the supply of AI in the hotel sector, the regulator should also consider to what extent private solutions may already provide some remedy (even if partial). Think, for instance, on the potential role that tour operators play in the coordination of the supply and demand of AI in the sector (see Calveras

& Vera-Hernández, 2005). The paper's analysis did show that tour operators (intermediaries in general) play a prominent role in the distribution of those establishments exclusively offering all-inclusive boards; at this point, however, it is not possible to discern among some of its potentially different rationales.

In any case, even though the analysis did not consider the general impact of AI offerings on the whole of the destination, the paper provides various and interesting insights to the general debate on all-

inclusive. Clearly, though, a richer dataset should allow a more complete analysis delving into more general aspects of the relationship between AI and the destination and, therefore, provide a fuller and more adequate analysis of policy and regulation.

Author contribution

Full and sole author of the paper.

Appendix A. The questionnaire

The survey, intended for a project titled “Innovation in the Balearic hotel industry”, was designed to gather information about each hotel establishment's characteristics (e.g., number of stars, number of beds, etc.), and about a variety of hotel's decisions regarding their innovation practices, labour relations, distribution modes, etc. The survey included the following sections: establishment characteristics, property and management, innovation, economic activity of the establishment, human resources, and corporate social responsibility.

IDENTIFICATION CARD

Category: Number of stars.

Number of beds.

Number of opened months/year.

PROPERTY AND MANAGEMENT STRUCTURE.

WORKS IN THE MARKET:	☐ Independently	Name
	☐ Inside a:	
	Hotel Chain (only accommodation)	

DISTRIBUTION:

c) *Percentage of repeating guest (% loyalty):*

d) *Booking manner (% approximate total booking):*

- ☐ *Tour-Operator:* *How many?*
☐ *Travel Agencies:*
☐ *Central Reservation Systems:*
☐ *Guest reservations by Telephone or fax (directly)*
☐ *Guest booking by Internet (directly):*

CUSTOMER TYPE (can check more than one):

- ☐ *Families with children*
☐ *Couples*
☐ *Singles*
☐ *Seniors*

CUSTOMER PREFERENCES (can check more than one):

- ☐ *Sun & Sea*
☐ *Business*
☐ *Cycling*
☐ *Hikers-Excursion*
☐ *Artistic/Cultural Heritage*

BOARD SERVICE AVAILABILITY (can check more than one):

- ☐ *No food*
☐ *Breakfast*
☐ *Half Board*
☐ *Full board*
☐ *All inclusive*

Appendix B. Table of correlations

Table B1

Correlations among the main variables, Nalearc islands, 2001–2010.

	ALLINCLUSIVE	AI-ONLY	SIZE	STARS	CHAIN	FAMILY	SUN-AND-SEA	PROFILE	LOYALTY	TTOO	INTERM
ALLINCLUSIVE	1										
AI-ONLY	0.5654***	1									
SIZE	0.4023***	0.2449***	1								

(continued on next page)

Table B1 (continued)

	ALLINCLUSIVE	AI-ONLY	SIZE	STARS	CHAIN	FAMILY	SUN-AND-SEA	PROFILE	LOYALTY	TTOO	INTERM
STARS	0.2843***	0.1272***	0.6962***	1							
CHAIN	0.3647***	0.2351***	0.5852***	0.5575***	1						
FAMILY	0.1869***	0.1681***	0.3715***	0.2745***	0.2777***	1					
SUN-AND-SEA	0.1037***	0.0642**	0.1835***	0.0706**	0.1387***	0.0679**	1				
OUTSIDE	−0.1233***	−0.0892***	−0.0957***	0.0158	−0.0132**	0.0504	−0.2651***	1			
LOYALTY	−0.1313***	−0.1364***	−0.1379***	−0.0533*	−0.1557***	−0.0351	−0.0191	0.1484***	1		
TTOO	0.1919***	0.1102***	0.5512***	0.498***	0.3725***	0.2227***	0.1846***	−0.1546***	−0.1442***	1	
INTERM	0.2673***	0.1818***	0.5751***	0.5142***	0.4256***	0.2069***	0.1895***	−0.1611***	−0.2297***	0.7873***	1
MONTHS	−0.0727***	−0.0448	−0.0488*	0.05*	−0.0408	0.0408	−0.3139***	0.3515***	0.0747***	−0.1671***	−0.198***

***, **, * correlation significantly different from zero at the 1%, 5%, and 10% level, respectively.

Source: Own survey, The Balearic Islands, 20001-2010

Table B2

Correlations among the main variables, Majorca, 2017.

	ALLINCLUSIVE	AI-ALSO	AI-ONLY	SIZE	STARS
ALLINCLUSIVE	1				
AI-ALSO	0.919***	1			
AI-ONLY	0.308***	−0.089***	1		
SIZE	0.454***	0.410***	0.157***	1	
STARS	0.179***	0.168***	0.045	0.491***	1

***, **, * correlation significantly different from zero at the 1%, 5%, and 10% level, respectively.

Source: Regional Gov't, 2017

Appendix C. Comparing datasets

The paper's analysis relies on two datasets, one based on survey data on a sample for the whole of the Balearic Islands in years 2001–2010, and another one based on official data provided by the regional government on Majorca for year 2017 (Anderson, 2012, provides some descriptive statistics about the supply of all-inclusive in Majorca, with some of its figures closely matching some of this paper's gross statistics, in particular, in relation to the size, number of stars and proportion of establishments in Majorca supplying all-inclusive, in years 2004–2006, the time period for which Anderson has available data.). Even though most of the analysis relating all-inclusive with value creation is done with the dataset based on the survey (basically, because of the variables available), it is interesting to compare both datasets for consistency and because both are used to show the evolution of all-inclusive over time, 2001–2017. Next, data survey on Majorca for year 2010 with the official data for Majorca for year 2017 are compared.

Table C1

Summary statistics for size and stars, Majorca, 2010, 2017

	Obs.	Mean	Std. Dev.	Min	Max
SIZE/Balearic Islands, 2010	241	4.37	1.002	2.302	6.699
SIZE/Majorca, 2017	993	4.39	1.04	1.609	6.699
STARS/Balearic Islands, 2010	241	2.67	1.002	1	4
STARS/Majorca, 2017	968	3.150	1.005	1	4

Source: Own survey, and Regional Gov't data

Table C1 shows, with regards to SIZE, a strong similarity among both datasets in terms of its mean and its standard deviation, as well as their density function (see below figure C1). With regards to STARS, table C1 shows a significant difference in its mean across datasets, showing the upgrade undertaken by establishments in their categories over years 2012 and 2016 (CAIB, 2017).

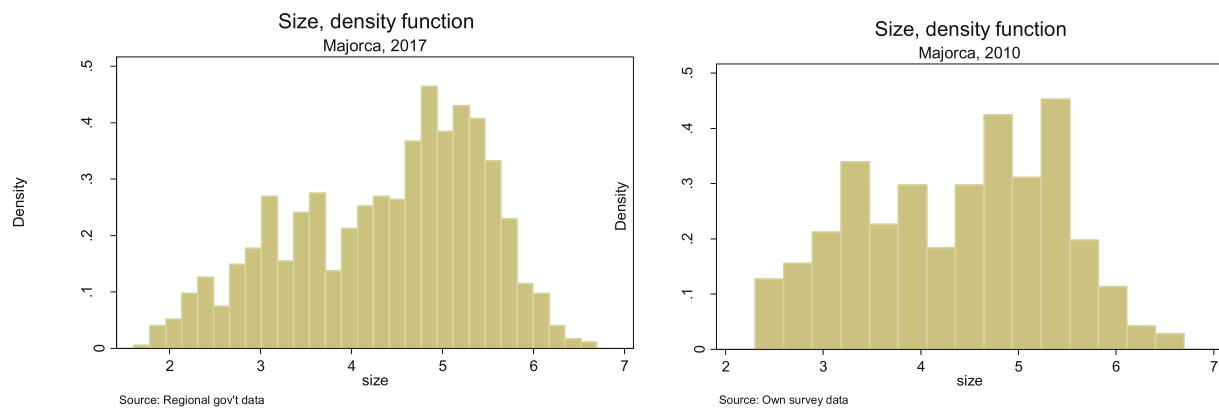


Fig. C1.

Appendix D. Dynamics

In this appendix, the establishments for which data is available for at least two of the consecutive periods are analyzed. Table D1 shows for each year the number of establishments according to their evolution over time in relation to variable AI3. Recall that $AI3 = 0$ if the establishment does not offer all-inclusive, $AI3 = 1$ if it offers all-inclusive as well as other boarding options ($AI-ALSO = 1$), and $AI3 = 2$ if it only offers all-inclusive board ($AI-ONLY = 1$). It is available for all years. Thus, table D1 shows the number for each type of change $AI3(t-1) > AI3(t)$. Thus, for instance, $2- > 0$ refers to those establishments which offered $AI-ONLY$ ($AI3 = 2$) and the next period offered no all-inclusive at all ($AI3 = 0$). Or, as another example, $0- > 1$ denotes those establishments that in the previous period did not offer any all-inclusive ($AI3 = 0$), and then, the next period offered all-inclusive along with other boarding options ($AI3 = 1$). As can be seen in table D1, aside from those establishments that continued not offering all-inclusive ($0- > 0$), the most frequent group are those that did not offer AI and decided to incorporate AI altogether with other boarding options ($0- > 1$).

Table D1

AI3 change, from one period to the next, 2001–2010

AI3(t-1)- > AI3(t)	2004	2007	2010	Total	Percent
2- > 0	9	1	0	10	1.2
2- > 1	3	1	3	7	0.84
1- > 0	1	4	6	11	1.32
0- > 0	235	239	185	659	79.3
1- > 1	2	17	24	43	5.17
2- > 2	5	9	11	25	3.01
0- > 1	21	15	18	54	6.5
1- > 2	1	2	1	4	0.48
0- > 2	7	5	6	18	2.17
Total	284	293	254	831	100

Table D2 shows the descriptive statistics for each type of observed change in the period. Thus, on average, establishments that incorporated all-inclusive ($0- > 1$; or $0- > 2$), when compared to those that did not ($0- > 0$), (i) are on average larger, (ii) are more likely to belong to a chain, (iii) have a larger number of stars, (iv) are more likely to host families, (v) are less likely to host tourists that prefer ‘outside’ activities; and (vi) a larger share of their capacity is distributed through an intermediary. These results are all analogous to the pooled logit and multinomial regression analysis done above and, thus, mostly match the intuitions derived from results in Tables 8 and 9 above.

Table D2

Hotel characteristics, average, per ai3 change, 2001–2010

	AI3(t-1)- > AI3(t)								
	2- > 0	2- > 1	1- > 0	0- > 0	1- > 1	2- > 2	0- > 1	1- > 2	0- > 2
SIZE	4.99	5.70	4.72	3.99	5.25	5.44	4.98	5.65	4.96
CHAIN	0.80	0.86	0.64	0.31	0.81	0.96	0.72	1.00	0.89
STARS	2.70	3.29	3.27	2.26	3.16	2.88	3.07	3.00	2.83
FAMILY	0.80	0.86	0.36	0.50	0.65	0.92	0.67	1.00	0.78
SUN-AND-SEA	1.00	1.00	1.00	0.92	0.98	1.00	0.98	1.00	1.00
OUTSIDE	0.30	0.00	0.27	0.72	0.53	0.24	0.46	0.50	0.22
TTOO	1.00	1.00	0.91	0.69	0.95	0.96	0.92	1.00	1.00
INTERM	0.81	0.83	0.64	0.57	0.82	0.91	0.76	0.82	0.89
LOYALTY	0.16	0.11	0.22	0.29	0.23	0.15	0.23	0.12	0.13
MONTHS	6.00	7.43	7.00	8.03	7.65	7.28	7.69	9.50	7.78

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Aleix Calveras is Associate Professor at the Department of Business Economics in the Universitat de les Illes Balears. He holds a PhD in Economics, UAB, 1999, and a Master in Economic Analysis, UAB, 1995. He has been a pre-doctoral fellow at the IDEI (University of Toulouse, 1997), and a post-doctoral fellow at the CSEF (University of Salerno, 2000). He is a researcher specializing in Business Strategy and Industrial Organization in general, and in the Economics of Tourism, and Corporate Social Responsibility, in particular.