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Articles

The impact of all-inclusive offerings in a tourism destination's competitiveness

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Abstract:

This study analyzes the impact of all-inclusive offerings on a destination's competitiveness. When the rise in all-inclusive offerings causes a negative externality on complementary services, it creates a market-size effect. This results in an excessive supply of all-inclusive offerings in the market. Imposing different taxes on all-inclusive and non-all-inclusive offerings is more effective than a cap on the supply of all-inclusive offerings. Taxes can implement the optimal allocation. We expect the market-size effect to be harmful to competitiveness in mature destinations.

Keywords: All-inclusive; competitiveness; hotel industry; externalities; regulation.
JEL Classification: Z30; D62; L10.

El impacto del todo-incluido en la competitividad de un destino turístico

Resumen:

Este artículo analiza el efecto del todo-incluido en la competitividad de un destino turístico. Cuando el aumento de la oferta del todo-incluido causa una externalidad negativa en los servicios complementarios, se crea un efecto tamaño de mercado. Esto resulta en una oferta excesiva de todo-incluido en el mercado. La imposición de impuestos turísticos diferenciados para las ofertas todo-incluido y no todo incluido, es más efectiva que limitar la oferta del todo-incluido. Los impuestos implementan la asignación óptima. Se espera que los efectos negativos del efecto tamaño de mercado tengan lugar en mercados maduros.

Palabras clave: Todo incluido; competitividad; industria hotelera; externalidades; regulación.
Clasificación JEL: Z30; D62; L10.

1. Introduction

Not only is all-inclusive a major mode of vacation among Europeans, but it also seems to be increasingly important. About 20% of Europeans said that the all-inclusive package was the type of holiday for more than three days they most often took in year 2015 (Eurobarometer, 2016). Ernst & Young (2013) claims that in some destinations there is "an increasing trend towards all-inclusive packages". For specific destinations, scattered data points to the increasing importance of all-inclusive offerings in hospitality. Thus, for instance, in the Balearic Islands, the percentage of establishments offering all-inclusive boards went from a bit over 6% in the year 2001 to about 24% in the year 2017 (Calveras, 2019a). In the Canary Islands in 2006, 13% of tourists purchased an all-inclusive board, while 34% did so in year 2014 (Arbelo et al., 2017).

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Despite the steady increase in this mode of vacation, all-inclusive is a controversial product both in nascent as well as in mature tourism destinations, and its impact on the destination's overall competitiveness has received little attention (Farmaki et al., 2017). Most of the literature on all-inclusive analyses the factors behind customers' demand, for instance, as a desire to hedge against price uncertainty at the destination (Garcia et al., 2015; Heung and Chu, 2000; Aguiló and Rossello, 2012; Alegre and Sard, 2015). Other studies investigated its partial effects on the tourism and hotel sector, particularly on the complementary services industry, as all-inclusive customers tend to spend less at the destination (Alegre and Pou, 2008; Aguiló and Rossello, 2012). However, a comprehensive analysis of the effects of all-inclusive offerings on a destination should go beyond those partial effects (Tavares and Kosak, 2015; Tourism Concerns, 2014) by taking into consideration its impact on destination competitiveness (Dwyer et al., 2000; Hong, 2008).

This is precisely the focus of the current paper, an assessment of the effect of all-inclusive offerings in hospitality on the competitiveness of a tourism destination (TD). In a Hotelling model we account for the negative impact those offerings may have on complementary services and non-all-inclusive offers through a *market size effect*. Evidence shows that the quality and variety of the complementary services supplied in a destination depends crucially on the size of such a sector: the larger it is, the more diverse its offerings in terms of quality and variety (see Berry and Waldfogel, 2010; Schiff, 2015). If consumers value variety as in models of monopolistic competition (Dixit and Stiglitz, 1977), willingness to pay for the non-all-inclusive variant will increase with its demand. Then, by stealing consumers from non-all-inclusive offers, all-inclusive offerings generate a negative externality on complementary services. Consequently, there will be an excessive supply of all-inclusive offerings, particularly in mature destinations.

Two alternative regulatory instruments, differentiated taxes on all-inclusive and non-all-inclusive and a cap on all-inclusive supply, are proposed to cope with the externality problem along with the Destination Management Organization (DMO) objective- that is – to improve tourism competitiveness. We show that taxes are superior to the cap on all-inclusive supply as taxes implement the optimal allocation from the point of view of the DMO.

It is difficult to agree on a definition to measure tourism competitiveness. On one hand, the term destination competitiveness entails a comparison that usually is not made, as acknowledged by Iamkovaia et al. (2020) and Mior Shariffuddin, et al. (2023). On the other hand, many environmental, societal, or economic factors, affect the measure of destination tourism competitiveness as stressed by previous literature (Crouch and Ritchie, 1999; Dwyer and Kim, 2003; Dupeyras and MacCallum, 2013; Iamkovaia et al., 2020). The main factors are analogous to those on the literature on regional competitiveness with, however, its specific characteristics (see, for instance, Dwyer et al., 2000; Hong, 2008; Porto et al., 2018). As will become clear below, we follow closely Andergassen, Candela, and Figini (2013) in their characterization of the objective function of the Destination Management Organization (DMO) focusing on the management of a tourist destination (Rodriguez and Hernandez, 2018; Candela and Figini, 2010). While acknowledging the multidimensionality of factors behind a destination's competitiveness, our focus lies on the industry and business aspects, disregarding other destination attributes such as the natural environment and public infrastructures (Enright and Newton, 2004, 2005).

Naturally, not all types of all-inclusive offerings are expected to cause negative externalities. All-inclusive bundles may include local services bundled for organizational convenience, such as transportation, museum entrances, etc. Only the types of all-inclusive packages that compete with or substitute local complementary services would be subject to the market size effect. Moreover, as it is shown in our model, the all-inclusive offer per se is not suboptimal, it depends on the characteristics of the destination, mature vs nascent destinations or urban vs rural. We expect to have a market size effect in destinations where the complementary services are developed. All-inclusive offering may also benefit for a market size effect. As demand for all-inclusive packages increases, we expect hotels to offer more varieties, such as different menus at different restaurants.[1] Nevertheless, because ownership is centralized, the potential benefits of increased demand for varieties and quality in all-inclusive packages will likely be smaller compared to non-all-inclusive packages that compete monopolistically. All qualitative results

[1] We thank an anonymous referee for pointing out this to us.

prevail as long as the benefits from a larger demand are stronger for the centralized all-inclusive offer compared to the decentralized non-all-inclusive offer.

The paper proceeds as follows. Section 2 presents the model and solves the market equilibrium. Section 3 associates the term competitiveness with a welfare measure and summarizes the main results, while section 4 studies regulation to restore efficiency. Finally, section 5 concludes with a discussion of the results.

2. A model of all-inclusive offerings at a destination

Consider a tourist destination where two product varieties are supplied. Such destination is modelled as a Hotelling line of distance 1 where each extreme holds one of such varieties; say, at 0 there is product variety *A* (all-inclusive), and at 1 there is product variety *B* (not all-inclusive). We assume there is one firm per variety, with no fixed costs and zero marginal costs of production.

On the one hand, variety *A* represents a bundle including accommodation plus meals and other complementary services. On the other hand, product variety *B* (non-all-inclusive visit at the destination) is modelled in a reduced form, to represent the independent purchase by the consumer (the tourist) of at least two separate goods (accommodation and complementary services, say, food and beverages), for simplicity subsumed into variety *B*, as a composite good.

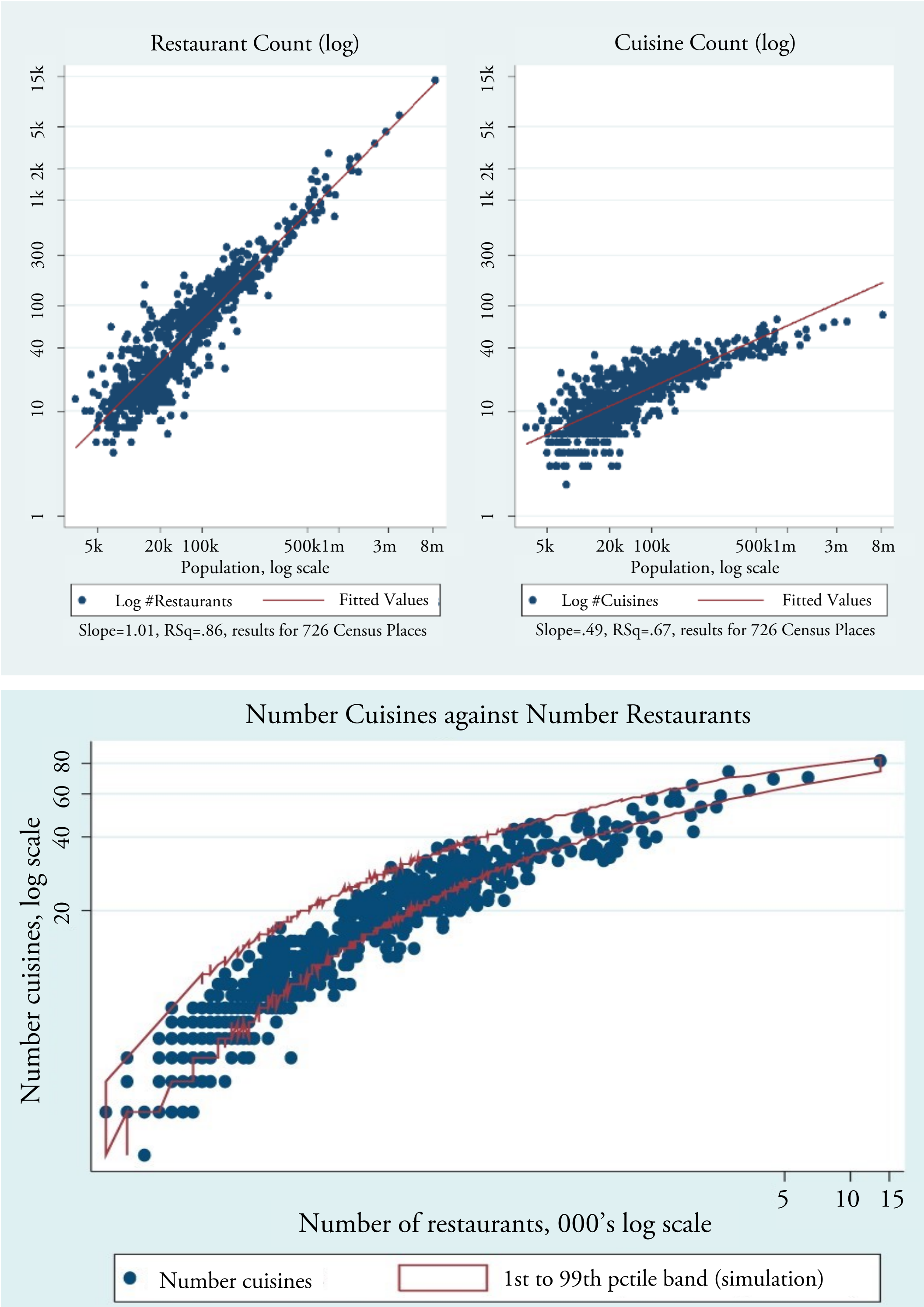
There is a continuum of consumers with mass one buying at most one unit of either variety. Consumers have zero reservation utility and are distributed uniformly along the line of distance 1. The utility $u\ (x, i)$ obtained by a consumer located at x, $0< x <1$, when buying variety i=*A, B* is, respectively:

$$u\ (x, A) = r - \ p_A - t \cdot \mathrm{d}(x, A),$$
$$u\ (x, B) = r - \ p_B - t \cdot \mathrm{d}(x, B) + \delta(D_B),$$

where *r* stands for the utility that the tourist obtains from consuming either good, p_i is the price paid by variety $i = \{A, B\}$, *t* is the unit transportation cost, and $d(x, i)$ is the distance from the location of the consumer to variety *i=A,B*. Notice that such a distance can be seen as characterizing consumer's preference for either variety. Finally, $\delta(D_B) > 0$ characterizes the market size effect of the complementary services sector on consumer's utility, with D_B being variety *B*'s overall sales (the number of consumers purchasing it). We assume for the time being $\delta(D_B)$ is a linear function, namely $\delta(D_\mathrm{B}) = \delta \cdot D_B$, with $\delta > 0$, and $t > \delta$, and discuss below alternative functional forms.

The presence of a market size effect from buying variety *B* is a key assumption in our analysis, driving our main results. To understand the functional form of the market size effect, assume that consumers buying *B* consume restaurant services that compete monopolistically (Dixit-Stiglitz, 1977) and consumers value variety, such that the extra utility from buying from *B* is $\delta(\sum_{j=1}^{n}(q_j)^\rho)^\rho$, with *n* being the number of varieties and ρ the elasticity of substitution among varieties, q_j the quantity of variant *j* bought. The linear functional form of $\delta(D_\mathrm{B})$ emerges when it is assumed that all varieties are sold at the same price and the same quantity (*q*) and ρ =1, as $\delta(\sum_{j=1}^{n}(q_j)^\rho)^\rho\ = \delta(nq^\rho)^\rho\ = \delta nq = \delta. D_B$. In such a context, *B* can be understood as a composite good with demand D_B. Note that, monopolistic competition in the restaurant industry is a rational assumption at least in urban areas, as shows Schiff et al. (2023) for the case of New York. The fact that the quantity, quality, and variety of complementary services available (i.e. restaurants) increase with 'the size of the market' has been stressed in different ways by Berry and Waldfogel, (2010) and Schiff, (2015). Berry and Waldfogel (2010) show empirically that, on the one hand, in the restaurant industry, where quality is produced largely with variable costs, the range of qualities on offer does increase in market size. On the other hand, in daily newspapers, where quality is produced with fixed costs, the average quality of products increases with market size. But, the market does not offer much additional variety as it grows large. Notice that in some of the complementary services in the tourism industry, for instance, water parks, quality is also produced mainly with fixed costs. Schiff (2015) also shows that demand aggregation has a significant impact on product variety. In particular, it shows that the likelihood of having a specific cuisine in the restaurant industry is increasing in population and population density, with the rarest cuisines found only in the biggest, densest cities (see figure 1 showing graphs from Schiff, 2015).

FIGURE 1.
The market size effect in restauration (extracted from Schiff, 2015)



The CI were culculated by drawing the number of restaurants for each city from the empirical distribution with replacement. I then take the 1st and 99 percentiles of the number of cuisines, drawing separately for each city.

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Thus, the market size effect implies that, the more consumers buy variety *B*, the larger their utility will be (since it is, for instance, more likely they find a specific service acutely fit to their tastes). As a consequence, when a consumer chooses variety *A* at the expense of variety *B* it generates a '*negative externality*' by decreasing by an amount δ the other consumers' utility and willingness to pay for variety *B*.

Next, we solve for the market equilibrium considering two scenarios; one where the market is not covered, namely, when some consumers choose not to buy either variety, leaving for the following subsection the analysis of the scenario where the market is covered, that is, when all consumers buy one variety or the other.

2.1. The market is not covered

Assume now that *r* is small enough and that, as a consequence, the market is not covered; that is, there are some consumers on the Hotelling line who do not purchase any variety. As figure 2 shows, this means that demand for variety *A*, D_A, is given by x^* while demand for variety *B*, D_B, is given by $(1\text{-}y^*)$. Consumers in between x^* and y^* in the Hotelling line do not buy either variety because their utility would be negative (while zero is their reservation utility).

Figure 2.
Distribution of consumers with an uncovered market

Then, demand for each variety is given respectively by the consumer indifferent between buying that variety and not buying at all, that is, $r - p_A - \mathrm{t} \cdot x^* = 0$, and $r - p_B - \mathrm{t} \cdot (1 - y^*) + \delta \cdot (1 - y^*) = 0$. Then, $x^* = \frac{r - p_A}{t}$, and $(1 - y^*) = \frac{r - p_B}{\mathrm{t} - \delta}$. Notice that when the market is not covered, demands are independent from each other.

As we said, we suppose all along the paper that there is only one firm supplying each variety. Assuming that each firm can satisfy as much demand as it gets, it sets its price p_i in order to maximize its profits Π_i, *i=A,B*:

$$\Pi_A = p_A \cdot D_A = p_A \cdot x^*$$

$$\Pi_B = p_A \cdot D_B = p_A \cdot (1 - y^*)$$

Then, solving for prices maximizing profits, equilibrium market prices are obtained: $p_A^E = \frac{r}{2}$, and $p_B^E = \frac{r}{2}$. Notice that because $\delta(\mathrm{D}_B)$ is a linear function, p_B^E does not depend on δ; but it is easy to show that revenue and profits of firm *B* do depend on δ through its effect on the demand function. Namely, firms *A* and *B* profits are $\Pi_A = \frac{r^2}{4 \cdot t}$ and $\Pi_B = \frac{r^2}{4 \cdot (t - \delta)}$, respectively. This all leads to the following result:

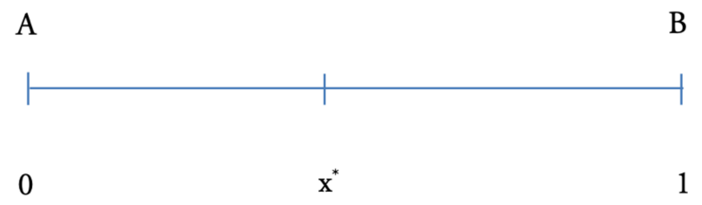
Result 1: When the market is not covered, firms' decisions (market prices), sales and profits are independent from each other.

If the market is not covered, firms set monopoly prices as if they were not competing. This results in equilibrium prices that are independent of rival's price. In this scenario, then, there is no negative externality of increasing variety *A*'s sales at the expense of variety *B*'s, provided that the increase in variety *A*'s sales does not reduce the demand for variety *B*. There is no market size effect for the uncovered market.

2.2. The market is covered

Assume now that r is large enough so that the market is fully covered, that is, all consumers located on the line buy one variety, deciding which variety to buy comparing one with the other (see figure 3). Demand for each variety is thus determined by the indifferent consumer who stands in between varieties A and B at location x*, where $u\,(x^*, A) = u\,(x^*, B)$. Namely, consumers to the left of indifferent consumer x^* will buy variety *A*, while consumers to the right, variety *B*; namely, $D_A = x^*$ and $D_B = 1 - x^*$

Figure 3.
Distribution of consumers with a covered market



Indifferent consumer x* is such that $u\,(x^*, A) = u\,(x^*, B)$, that is:

$$r - p_A - t \cdot x^* = r - p_B - t \cdot (1 - x^*) + \delta \cdot (1 - x^*).$$

It is obtained that,

$$x^* = \frac{-(p_A - p_B) + t - \delta}{2t - \delta}.$$

Demand function for each variety thus depends on relative prices, transportation costs and the extent of the market size effect. Then, each firm sets its price in order to maximize its profits, $\Pi_A = p_A \cdot D_A = p_A \cdot x^*$, and $\Pi_B = p_B \cdot D_B = p_B \cdot (1 - x^*)$. Therefore, equilibrium prices are:

$$p_A^E = t - \frac{2}{3}\delta,$$

$$p_B^E = t - \frac{1}{3}\delta,$$

Let $p^E \equiv p_A^E - p_B^E$. Then $p^E = -\frac{1}{3}\delta$.

Given this, indifferent consumer or *A*'s market share is,

$$x^E = x^* = \frac{t - \frac{2}{3}\delta}{2t - \delta}.$$

From all this analysis, the following result is obtained:

Result 2: When the market is covered, the presence of a market size effect in variety *B*:

1. intensifies price competition between product varieties, decreasing equilibrium prices.
2. increases the equilibrium market share held by variety *B*.
3. decreases industry profits.

Intuitively, a stronger market size effect on the willingness to pay for variety B provides both firms with an additional incentive to cut prices since relative market share affects the consumers' relative willingness to pay ($\frac{\partial p_A^E}{\partial \delta} < 0$ and $\frac{\partial p_B^E}{\partial \delta} < 0$). The effect of an increase in the market size effect δ on the demand faced by product variety A is negative, $\frac{\partial x^E}{\partial \delta} < 0$, namely, a larger δ increases the attractiveness of variety *B* with its corresponding impact on relative market shares. Finally, notice that since an increase in δ increases the intensity of price competition without increasing overall industry demand, the industry's profits end up being lower with a larger market size effect on variety *B*.

3. Destination's competitiveness or DMO welfare

In the previous section the market equilibrium was analyzed; in this section, equilibrium all-inclusive offerings are assessed in terms of their effect on the destination's competitiveness or welfare. Usually, social welfare is assumed to be a weighted average of industry's profits and consumer surplus. When dealing with a tourism destination, however, it is unlikely that a Destination Management Organization (DMO) includes in its objective function consumer surplus, namely, tourists' welfare: tourists are often non-residents, hence alien to the concern of a DMO. The current analysis thus follows Andergassen, Candela and Figini (2013) in their assumption that a DMO maximizes tourism revenues. The underlying assumption is that increasing tourism receipts will eventually also benefit destinations' residents-workers, in addition to firms and shareholders, thus enhancing the destination's competitiveness in a holistic way, benefiting the residents as well as the industry (Crouch and Ritchie, 1999; Hassan, 2000).

In order to find the welfare maximizing allocation/solution for the destination, the DMO chooses the prices p_A, p_B maximizing destination's welfare or competitiveness, namely tourism revenues:

$$Max\ W = p_A \cdot D_A + p_B \cdot D_B .$$

Note that we will only consider situations where it will be optimal to have both variants, which is the case for $t - \delta > 0$. As in the previous section, we can distinguish two cases: when it is optimal from the DMO point of view to deal with an uncovered market (which happens when *r* is small enough), when *r* is large enough, the DMO sets optimal prices such that the market will be fully covered. Next, we will analyze two scenarios and present the main results of the paper.

3.1. Summary of main results

Scenario (i): the market is not covered at the optimal prices

When *r* is small enough, the DMO sets the monopoly price for each variety, which does not depend on the other firm's (variety's) pricing decisions (see Result 1 above). It is straightforward to see that the welfare maximizing solution (the prices maximizing tourism revenue) coincide in this case with the uncovered market equilibrium.

Result 3: When *r* is small enough, the market is not covered, the market equilibrium and its all-inclusive offerings are optimal, that is, optimize destination's competitiveness.

Intuitively, when the market is not covered, for instance, at a nascent destination, market equilibrium quantity of all-inclusive offerings is optimal as it does not negatively affect the development of non-all-inclusive offerings (variety *B*). Maximizing welfare (tourism receipts) when the market is not covered yields the same first order conditions as in the market equilibrium when there is one firm per variety and each firm chooses its own price independently. Since there is just one firm per variety setting both monopoly prices, the market equilibrium optimizes the destination's competitiveness. Optimal prices maximizing welfare (tourism revenue) are then (as shown above in the analysis leading to result 1): $p_A^W = \frac{r}{2}$, and $p_B^W = \frac{r}{2}$, with optimal relative prices $p^W \equiv p_A^W - p_B^W = 0$.

Scenario (ii) The market is covered in the competitive equilibrium.

When r is large enough all consumers buy in the market equilibrium: they compare varieties providing firms with incentives not to increase prices too much. In such a situation, however, a DMO trying to maximize tourism receipts is, the facto, acting as a multiproduct monopoly, and has incentives to increase prices for both varieties: if a consumer switches variety, this is also revenue for the DMO. The constraint on the DMO to keep raising prices is that, at some point, some consumers will stop buying both varieties. Think of the indifferent consumer, if r is sufficiently large, losing the indifferent consumer and selling at the uncovered prices may not be profitable for the DMO. Thus, the maximization program of the DMO incorporates the restriction that utility is non-negative for all consumers. In practical terms it is enough to check that the indifferent consumer has no negative utility at the given prices chosen by the DMO (since all other consumers enjoy higher utility by construction). It is straightforward to see that the restriction should hold with equality; a strict inequality, that is, that the indifferent consumer enjoys strictly positive utility, would mean that the DMO leaves money on the table: it would be optimal to raise prices a bit and the indifferent consumer would still buy one of the varieties. From all this, it follows that the DMO chooses prices in order to solve the following maximization problem:

Max $\Pi_A + \Pi_B = p_A \cdot x^* + p_B \cdot (1 - x^*)$

subject to $r - p_A + t \cdot x^* = 0$.

Recall that $x^* = \frac{-(p_A - p_B) + t - \delta}{2t - \delta}$; we isolate p_B from the restriction condition and obtain $p_B^* = \frac{1}{t}[(2t - \delta)r - (t - \delta)(p_A + t)]$; then substitute this within the objective function and derivate with respect to p_A. Solving the First Order Condition we find that

$$p_A^W = p_B^W = r - \frac{(t - \delta)t}{(2t - \delta)}.$$

We are interested in comparing the optimal prices with those in the market equilibrium, namely $p_A^E = t - \frac{2}{3}\delta$, and $p_B^E = t - \frac{1}{3}\delta$, with $p^E = -\frac{1}{3}\delta$.

Table 1 summarizes previous results:

Table 1.
Prices, demands, and DMO welfare.

	E uncovered	W uncovered	E covered	W covered
p_A	$r/2$	$r/2$	$t - \frac{2}{3}\delta$	$r - \frac{t(t-\delta)}{2t-\delta}$
p_B	$r/2$	$r/2$	$t - \frac{1}{3}\delta$	$r - \frac{t(t-\delta)}{2t-\delta}$
D_A	$r/2t$	$r/2t$	$\frac{2}{3} - \frac{t}{3(2t-\delta)}$	$\frac{t-\delta}{2t-\delta}$
D_B	$\frac{r}{2(t-\delta)}$	$\frac{r}{2(t-\delta)}$	$\frac{1}{3} - \frac{t}{3(2t-\delta)}$	$\frac{t}{2t-\delta}$
W	$\frac{r^2(2t-\delta)}{4t(t-\delta)}$	$\frac{r^2(2t-\delta)}{4t(t-\delta)}$	$\frac{18t(t-\delta)+5\delta^2}{9(2t-\delta)}$	$r - \frac{t(t-\delta)}{2t-\delta}$

It is straightforward to obtain Lemma 1:

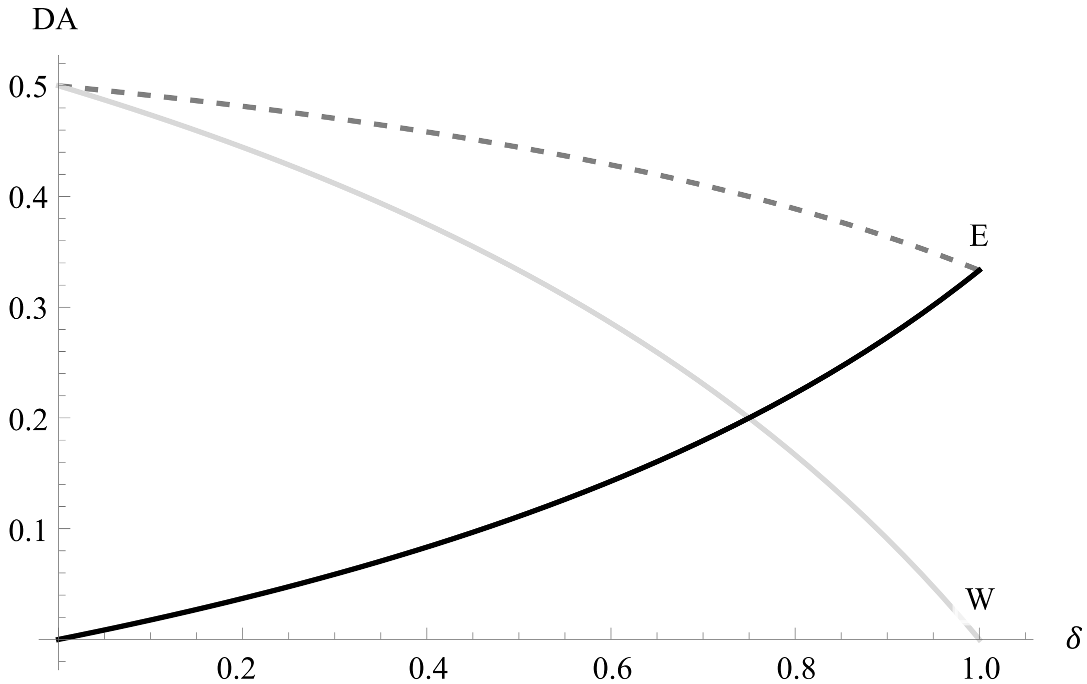
Lemma 1 For the covered market $p^W > p^E$. In particular, $p^W - p^E = \frac{1}{3}\delta$.

Notice that $p^W > p^E$ is equivalent to $p_A^W - p_A^E > p_B^W - p_B^E$. Thus, $\delta > 0$ implies that the optimal increase in the price of variety *B* (non-all-inclusive) should be smaller in order to internalize the market size effect. The DMO would optimally set relatively higher prices for the all-inclusive variety than those set at equilibrium. Consequently, variety *A*'s optimal market share decreases directly at the expense of that of variety *B*'s: $x^W - x^E = -\frac{1}{3}\frac{\delta}{2t-\delta} < 0$, implying that $x^W < x^E$. The following result summarizes the implications of the analysis done for the covered market:

Result 4: When the market is covered, the market equilibrium entails excessive all-inclusive offerings from a welfare point of view.

Intuitively, when the market is covered (say, at a mature destination), relative market prices for all-inclusive offerings are too low from a welfare point of view. Firm *A* (all-inclusive) does not internalize the effect that it generates on all other consumers' willingness to pay for variety *B* (non-all-inclusive) generating a negative externality that makes market equilibrium suboptimal. Figure 4 visualizes this result assuming *t=1*. The graph illustrates the all-inclusive variant market share at the market equilibrium, the welfare maximizing market share, and the resulting excessive market share in terms of competitiveness, for $\delta \in (0,1)$. There is an excess supply of all-inclusive services at the destination, which increases with the complementary services market size effect, (δ), creating a divergence between market equilibrium and welfare maximizing optimal market share.

FIGURE 4.
All-inclusive market share as a function δ for *t=1* (E: Equilibrium, dashed line; W: Welfare maximizing in light gray and excess supply in black)



A vicious circle

Thus, all-inclusive offerings may negatively impact the destination's competitiveness: all-inclusive decreases the size of the market for complementary services diminishing consumers' willingness to pay for non-AI, further increasing the relative attractiveness of all-inclusive. This may generate a vicious circle where all-inclusive offerings are in excess and reinforce themselves overtime (see Figure 5).

A clearer visualization of this potential vicious circle can be obtained assuming that the market size effect shows increasing returns to scale (unlike the linear functional form assumed in the rest of the analysis); namely, that:

$$\delta(D_B) = \begin{cases} 0 & if\ D_B < \overline{D}, \\ \Delta & if\ D_B \geq \overline{D}, \end{cases}$$

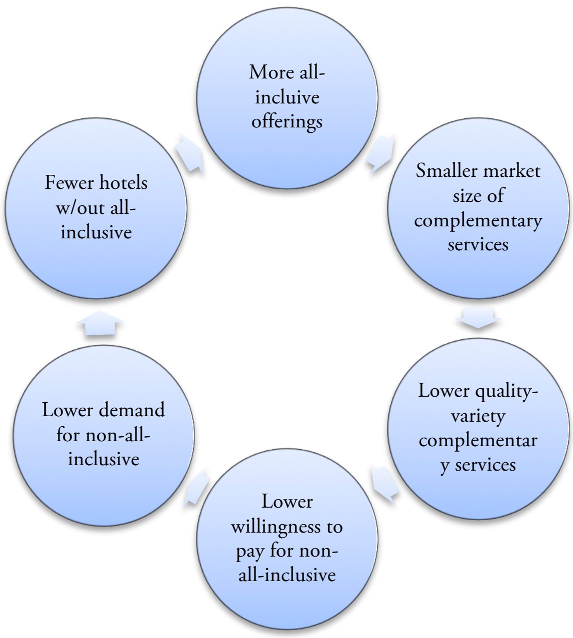
where $\overline{D} \in (0,1)$ is the size of the market for non-all-inclusive variety beyond which consumers exhibit a larger willingness to pay, and $\Delta > 0$ is the size of such an effect.

It is not difficult to show that, with the market size effect exhibiting increasing returns to scale, there might exist two market equilibria, one with all-inclusive offerings enjoying a larger market share, and another with a smaller one. In particular, when $\overline{D} \in \left(\frac{1}{2}, \frac{1}{2} + \frac{\Delta}{6t}\right)$, there are two possible equilibria: equilibrium (i) where $p_A = p_B = t$, and $x^* = \frac{1}{2}$, and equilibrium (ii) where $p_A = t - \frac{\Delta}{3}$, $p_B = t + \frac{\Delta}{3}$, and $x^* = \frac{1}{2} - \frac{\Delta}{6t}$. It is not difficult to compute destination's welfare (tourism revenues) for each equilibrium: $W(i) = t\frac{1}{2} + t\frac{1}{2} = t$, while $W(ii) = \left(t - \frac{\Delta}{3}\right)\left(\frac{1}{2} - \frac{\Delta}{6t}\right) + \left(t + \frac{\Delta}{3}\right)\left(\frac{1}{2} + \frac{\Delta}{6t}\right) = t + \frac{\Delta^2}{9t}$, Clearly $W(ii) > W(i)$.

Noticeably, equilibrium (ii) entails a lower market share for all-inclusive offerings and, correspondingly, a larger one for non-all-inclusive with a larger willingness to pay and, as a consequence, a larger welfare and competitiveness for the destination (more tourism receipts). The rationale should be clear: in equilibrium (ii), the market size effect for non-all-inclusive allows the firm supplying variety *B* to charge a higher price and capture a larger market share than in equilibrium (i).

The multiplicity of equilibria arising in this static game sheds light on the possible consequences of a destination's development, and how convergence to a particular equilibrium, Equilibrium (i), may entail a vicious cycle as the one described in figure 5. If we start with a sufficiently large market share for all-inclusive offerings, a negative externality on non-all-inclusive products is generated through its effect on complementary services, making all-inclusive relatively more attractive and prevalent until we reach the relatively worse Equilibrium (i).

FIGURE 5.
The vicious circle of all-inclusive offerings



4. Regulating all-inclusive offerings at the destination

It has been shown in the previous section that, on the one hand, when the market is not covered, all-inclusive offerings market share is optimal. And, on the other hand, when the market is covered, and there is therefore head-to-head competition between all-inclusive offerings and non-all-inclusive offerings, the market allocation is not optimal for the destination's competitiveness as too much all-inclusive offerings are sold in equilibrium. We study in this section, alternative policies aimed at correct such inefficiency to maximize destination's competitiveness. Notice that, when the market is covered, sub-optimality in the market arises for two reasons: (i) the relative price of all-inclusive with respect to the non-all-inclusive product is too low, and (ii) overall prices are too low. This latter reason is not related to the presence of all-inclusive; it is just the result that price competition at a mature destination when overall demand is given simply reduces revenue. Thus, while the following analysis of regulatory instruments deals with both aspects, the discussion will mainly focus on the former aspect, namely, the inefficiency in relative prices between varieties. Two regulatory instruments available to the DMO are considered, taxes and a quantity restriction.

4.1. Taxes

Among the various possible options, we consider unit taxes paid by firms, possibly a different tax for each firm, τ_A and τ_B, respectively (unit taxes paid by the consumer would yield equivalent results). Notice then that, for firms, unit taxes are equivalent to positive marginal costs. When the DMO taxes firms, its objective function should incorporate tax revenues in addition to tourism receipts. Therefore, the DMO objective function is:

$$W = (p_A - \tau_A) \cdot D_A + (p_B - \tau_B) \cdot D_B + \tau_A \cdot D_A + \tau_B \cdot D_B = p_A \cdot D_A + p_B \cdot D_B.$$

We observe then that the DMO's objective function to be maximized by choosing unit taxes is the same as without taxes since tax revenues are detracted directly from tourism receipts. It is straightforward, then, that optimal taxes (τ_A^*, τ_B^*) are those that make equilibrium market prices with taxes equal to the optimal prices found above absent taxes, namely,

$$p_A^E(\tau_A^*, \tau_B^*) = p_A^W,$$
$$p_B^E(\tau_A^*, \tau_B^*) = p_B^W.$$

Again, as in the welfare analysis in the previous section, the solution depends on r. When *r* is small, the competitive equilibrium with only one firm per variety is optimal, it maximizes DMO welfare (tourism revenues). Consequently, optimal taxes are zero: $\tau_A^* = \tau_B^* = 0$.

When *r* is large, that is, when the market is covered, we saw in the previous section that optimal prices are to be larger than market prices, and tilted in the sense of larger prices for variety *A*. It should be intuitively clear that positive taxes will increase competitive prices. Notice that with taxes (τ_A, τ_B) competitive prices when the market is covered will be,

$$p_A^E = t + \frac{1}{3}(2\tau_A + \tau_B - 2\delta),$$

$$p_B^E = t + \frac{1}{3}(2\tau_B + \tau_A - \delta).$$

In order to increase competitive prices, taxes must be positive. Notice also that $p^E = p_A^E - p_B^E = \frac{1}{3}(\tau - \delta)$, where $\tau = \tau_A - \tau_B$. Then, since as found above, optimal relative prices $p^W = p_A^W - p_B^W = 0$, in order to achieve through taxes the optimal relative prices it is needed that $p^E - p^W = 0$. That is, $\frac{1}{3}(\tau^* - \delta) = 0$. This implies that optimal relative taxes are

$$\tau_A^* = \tau_B^* + \delta.$$

From this, the following result is obtained:

Result 5: (i) Public intervention with unit taxes can implement the optimal allocation; (ii) Optimal tax for variety *A* is larger than that for variety *B*, that is, $\tau_A^* > \tau_B^* > 0$. (iii) The larger the market size effect δ, the larger will be the unit tax on variety *A*.

Public taxation thus restores efficiency by imposing a higher unit tax on all-inclusive offerings, compared to non-all-inclusive. The firm offering all-inclusive internalizes the negative externality generated on the willingness to pay for non-all-inclusive consumers.

4.2. A cap on all-inclusive offerings

As an alternative to taxation, assume the DMO can set an upper limit on the number of consumers who may choose variety A (all-inclusive), at $\bar{x}_A > 0$. In particular, suppose we are in the second scenario when r is sufficiently large and the market is covered. In such a scenario, market equilibrium generates an excessive supply of all-inclusive offerings in equilibrium, as Result 4 shows: $x^W < x^E$. Consider, then, that the DMO sets a cap on the number of consumers that may purchase all-inclusive equal to the optimal level, namely, $\bar{x}_A = x^W < x^E$. The cap policy, in the same manner as taxes, equates the all-inclusive offerings to the optimal level. What are the equilibrium prices under the cap policy? Is the overall revenue at the optimal level as it is with optimal taxes? In general, when r is sufficiently large, price competition among firms in the Hotelling model is very strong and, as a result, prices are too low (all consumers enjoy a strictly positive surplus). While price competition with capacity constraints in Hotelling proves difficult to solve (as a matter of fact, pure strategy equilibria may cease to exist), Boccard and Wauthy (1997) show that the first effect of setting a cap on all-inclusive offerings by firm A is to lower firm A's incentives to price competition (increasing its market share is capped). However, if overall capacity is not binding (as it happens to be the current case since B's capacity is not constrained) firms always engage into price competition and, as a result, prices will be too low from a point of view; namely, lower than those that a DMO would set (Boccard and Wauthy, 1997). In general, thus, while a cap on all-inclusive offerings may yield the optimal supply of all-inclusive offerings, it still generates too much competition among varieties with too low prices and, then, low overall revenues. Consequently, a cap on all-inclusive offerings yields a solution inferior to that with optimal taxation.

5. Discussion and concluding remarks

The analysis shows there is reason for concern regarding all-inclusive offerings at a mature tourism destination. When all-inclusive offerings compete with non-all-inclusive, a potential market failure is produced since it may result in reduced attractiveness and willingness to pay for the non-all-inclusive offering. Thus, all-inclusive may generate a negative externality on non-all-inclusive, potentially hindering the competitiveness of the whole destination. Moreover, this may take the form of a vicious circle whereby all-inclusive offerings reinforce over time at the expense of non-all-inclusive products, more valuable from a DMO point of view.

The extent of the concern on all-inclusive offerings depends on the market size effect. While we assumed a linear effect, alternative functional forms might be more realistic. Thus, it might be the case that, when the size of the market for complementary services is small, increasing demand for those services will result in a significant increase in the range and variety of quality supplied. On the other way around, when the market is already large, further expanding it would have a smaller impact on consumers' willingness to pay. In other words, one might expect $\delta(D_B)$ to be concave (that will be the case for $\rho<1$). In such a framework, all-inclusive offerings would be a problem in terms of competitiveness for a *small destination*, or when they represent a *large market share* of a large mature destination. Such circumstances justify policy intervention.

A nascent versus a mature destination

It is important to stress that the negative effect of all-inclusive on the destination's competitiveness exists when all-inclusive and non-all-inclusive directly compete for customers. As we said, this is likely to be the case at a mature destination. At a nascent destination, however, where the non-all-inclusive is little developed, and all-inclusive offerings do not crowd out non-all-inclusive offerings, such externality is unlikely to exist. This is exemplified in our model by the scenario where the market is not covered, in which case the market equilibrium was shown to be efficient. That is, there were no excessive all-inclusive offerings. In other words, when there is no alternative in the market to the all-inclusive offerings at the destination, the all-inclusive offerings, are an asset that supports tourism development, benefiting the destination's welfare and competitiveness.

It is also true, however, that in the long run the presence of a large all-inclusive sector at a nascent destination might hinder the development of non-all-inclusive offerings. Our static model looks at the impact of all-inclusive in two different scenarios: at a nascent destination within a developing country (a scenario where the market was not covered), and at a mature destination (where the market is covered). Although the model is static, we can still discuss a transition from one scenario to the other. Notice that Calveras (2019b) shows the role of the resident population in the supply of complementary services at the destination: the larger the resident population, the larger and more efficient the complementary services industry will be. Thus, to the extent that economic development in the destination generates an increase in income levels, there would be an increase over time in the supply of complementary services potentially attractive to international tourists. In such a case, the presence of a wide supply of all-inclusive resorts might indeed pose a problem and block the continuing development of such non-all-inclusive sector. Transitioning from a significant reliance on all-inclusive to a more substantial supply of non-all-inclusive boards may require public intervention.

Public regulation: taxes versus a cap on all-inclusive supply

The presence of a market failure in the form of an externality generated by all-inclusive offerings at a mature destination gives room for public intervention to try to restore efficiency and improve destination competitiveness. The extent of the market failure in our model is given by δ, namely, the size of the market effect in the complementary services sector (Berry and Waldfogel, 2010; Schiff, 2015). When such an effect is small (large), efficiency loss and thus the rationale for public regulation is also likely to be small (large). Since, as we said, it is reasonable to expect that the marginal effect of increasing the size of the market will be large when the size of the market is small and then, it will eventually fade out, all-inclusive offerings would likely be a problem in terms of competitiveness for smaller destinations, or when they represent a quite large market share of a large mature destination.

Our analysis showed that taxation is a superior form of public intervention than capping the number of all-inclusive offerings at the destination. The result is not surprising since taxes is the common way to regulate externalities, as it happens to be the source of the current market failure. The analysis provides two rationales for public taxation, one particular to the externality generated by AI, and a more general one. In this latter case, taxes are required to reduce competition among the various suppliers within the destination. Competition between all-inclusive and non-inclusive within the destination diminishes overall revenues, regardless of whether all-inclusive generates a negative externality on non-all-inclusive or not. The negative externality requires taxes for all-inclusive offerings to be larger than for non-AI. In particular, the tax difference between all-inclusive and non-all-inclusive should increase with the market size effect; more generally, when the externality is large, which might happen when all-inclusive offerings account for a relatively large market share at the destination.

Some comparative statics

While the purpose of the paper is to better understand the role of all-inclusive in a destination's competitiveness, our framework is also able to undertake some comparative statics and address some more specific issues. As an example, suppose a bulk of the tourists' countries of origin enter recession or, simply, suffer a depreciation of their currency. What consequence would that have on a destination's market equilibrium? It is likely that such an event would generate two effects. First, a decrease in the destination's demand, fewer tourists visiting the destination. At a mature destination (with a covered market), we could model this as a reduction in the density of consumers distributed along the Hotelling. And second, tourists' tighter budgets because of the recession would likely increase the relative attractiveness of all-inclusive over non-all-inclusive because of its higher value as a hedge against price uncertainty at the destination. We might model this effect by assuming different, rather than the same, *r*, say r_A and r_B, and then consider there is an increase in $(r_A - r_B)$: even if both r_A, r_B would decrease, it is likely that r_A would decrease less than r_B.

Both effects would increase the demand for all-inclusive; directly because of the increase in $(r_A - r_B)$, and indirectly because a decrease in demand would reduce the willingness to pay for variety *B* because of the market size effect. In fact, Alegre and Sard (2015)'s analysis is consistent with our prediction, showing empirically that when the tourists' country of origin experiences an economic crisis, this implies an increase in the supply of all-inclusive in the tourism destination they visit. The overall effect on competitiveness of such an increase in all-inclusive would depend on the actual extent of the market size effect, itself dependent on the specifics of the destination: is it small or large? What is the market share of all-inclusive? Is the market size effect concave or linear? Public policy response in terms of taxation should respond accordingly as we saw in our analysis of public regulation, with taxes differential to vary in proportion to the size of the external effect.

The previous discussion sheds light on the possible implications of endogenizing willingness to pay by investing in quality. Is *B* going to invest more on quality to increase r_B? By doing so, B's market share may increase, which would generate an even larger willingness to pay through the market size effect.

Limitations of the article

To conclude, simply notice that the analysis has three main limitations that do not, however, invalidate its main insights. First, a more general model should include competition within each type of variety. Having said this, if there is competition throughout varieties, pricing decisions with many competitors per variety would still fail to internalize the market size effect for variety *B* and, accordingly, equilibrium market share for all-inclusive would still be excessive. Second, our welfare analysis may be incomplete. At a tourism destination there are other external effects to the one considered, we do not account for congestion or the preservation of natural resources at the destination, a key aspect of competitiveness (Iamkovaia et al., 2020), with varieties having potentially different effects on the environment. Our welfare analysis does not account either for residents' preferences, an important portion of residents may 'reject' the all-inclusive offerings as Ramón-Cardona et al. (2023) shows for the case of Ibiza. It is interesting to note that including missed dimensions like environmental and societal factors would not contradict our main findings. On the contrary, it could justify a further increase in the optimal taxation for all-inclusive offers. A DMO should take them into account when designing the optimal mix of all-inclusive and non-all-inclusive at a destination. And, finally, there is competition between as well as within destinations, the former aspect not considered in our analysis. A full-fledged analysis should also study the implications of competition between destinations on the impact of all-inclusive on a destination's competitiveness.

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