THE ECONOMICS OF TOURISM DESTINATIONS (C)

Candela and Figini (2012): The Economics of tourism Destinations

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Destination Web Management

- Effects of ICT on destination as a whole and individual businesses
- ICT tool for info, promotion, management of activities in destination
- Single web portal for tourist to reach all relevant information through web links (multimedia (pictures, videos, audio-guides) and detailed information on hotels, restaurants, attractions, directions, etc.
- At least contain contact information for booking center of destination to reserve and safely pay holidays. Ideally unified and linked to international payment systems
- ICT should provide coordinated management services for tourism businesses operating in destination by gathering and monitoring data regarding arrival, overnight stays, integrate with statistics on number of contacts, quantity, quality, type of info seen online by tourists

Destination Web Management

- Web portal must offer internet visibility and support services especially for small businesses with limited technical competences
- Each destination should be integrated with main Global Distribution Systems (GDS) as well as most popular online travel agencies to efficiently compete against similar destinations
- Web portal could post files for downloading onto tablets or smart phones for a deeper virtual experience while visiting destination or allow forms of social networking by experieced tourists for benefits of potential ones (let them post rankings and comments)
- To reach all above goals, destination must count on a crew of well-trained operators. Destination with limited ICT loses significant market power compared to competing domestic & international destinations

Destination Web Management

- ICT improves quality of tourism services, satisfaction of tourists' needs, competitiveness of destination, profits earned by tourism firms
- But easier for tourists to choose holidays based on price of similar alternatives, so shrink market power
- ICT bring tourism substitutes into market: Video conferences (for business trips), multimedia museums (for cultural trips), audioguides (for tourism services).
- ICT captures essence of market competition:
  - Globalization of markets and increasing returns to scale allows destination to increase benefits from positive reputation
  - Leaves room for creation, development, and promotion of niche markets from which small destinations can benefit

The Pricing Policy of the Destination

- Supply price/quantity combination of good to maximize profits
- Destination intended as combination of different firms operating in territory must forgo goal of aggregate profit maximization because
- 1. destination does not have same decision power of individual firm
- 2. computation skills needed to gather and elaborate data on production cost of hundreds of individual units not available
- Hence primary goal: maximization of aggregate gross revenue coming from tourism exploitation of available resorces → finding combination of price/pvernight stays that maximizes tourists' spending
- (a) tourist decision driven by holiday price, (b) also take overal quality of tourism resources at destination into account, (c) two stage: 1. whether or not to travel to a destination, 2. how many nights to spend

Price, Overnight Stays, Tourism Expenditure

- Set value of *N* in destination *r* for type of tourism *i* solely as function of the unit daily price *v* of holiday: *N=f(v)*
- Relation between tourism demand and expenditure:
- *S=vN=vf(v)* where *S* is aggregate expenditure
- If planning and policy makers want to study how expenditure varies with price, must consider two effects:
- 1. change in daily holiday price has direct effect on tourist spending
- 2. indirect inverse effect on number of overnight stays (demand)
- Rise of *v* increases amount of daily spending for given length of stay in destination but decreases length of stay and hence number of stays and overall amount of spending associated with the holiday.
- Hence total effect ambiguous: net difference between two effects

Price, Overnight Stays, Tourism Expenditure

- Optimal price strategy (to maximize tourism expenditure) depends on elasticity of demand.
- Identify price associated with highest tourism expenditure: derivative of S with respect to *v* must equal zero:
- $\frac{\partial S}{\partial v} = N + v\frac{\partial N}{\partial v}$ (chain rule)
- Second order condition, to ensure critical point is a maximum (not a minimum) is satisfied under normal assumptions on demand function.
- Multiply and divide $\frac{\partial N}{\partial v}$ by *N* and keep in mind definition of ε gives:
- $\frac{\partial S}{\partial v} = N(1 - \varepsilon)$
- Gives relationship between sign of first derivative of *S* and value of ε

Price, Overnight Stays, Tourism Expenditure

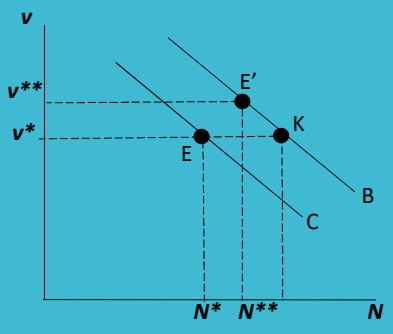
- 1. if $\varepsilon<1$ then $\frac{\partial S}{\partial v}>0$; when demand is inelastic, tourism expenditure is in direct relationship with price: as price rises, tourists' spending also increases and vice versa.
- 2. if $\varepsilon>1$ then $\frac{\partial S}{\partial v}<0$; when demand is elastic, tourism expenditure is in inverse (negative) relation with price: as price rises, tourists' aggregate spending decreases and vice versa.
- 3. if $\varepsilon=1$ then $\frac{\partial S}{\partial v}=0$; unitary elasticity hence no change. Null first derivative! Greatest amount of tourism expenditure in destination, also known as Cournot point.
- Destination must identify daily holiday price for which price/overnight stay combination point on demand curve where elasticity unitary.

Price, Overnight Stays, Tourism Expenditure

Point *E(N*,v*)*: price-stay combo leading to max tourist expenditure. Lower price increases expenditure when *N<N**, decrease when *N>N**
*Recall N<N** → $\varepsilon>1$ → v↓ → exp↑
*N>N** → $\varepsilon<1$ → v↓ → exp↓

If demand shifts, at same prices E→K. But elasticity less than unitary. *N* in denominator in elasticity so decreases ε.

Best response: increase unit price to *v*** to achive *N*** so that → E'
In K, N too much so v↑ → exp↑
hence increase to *v***



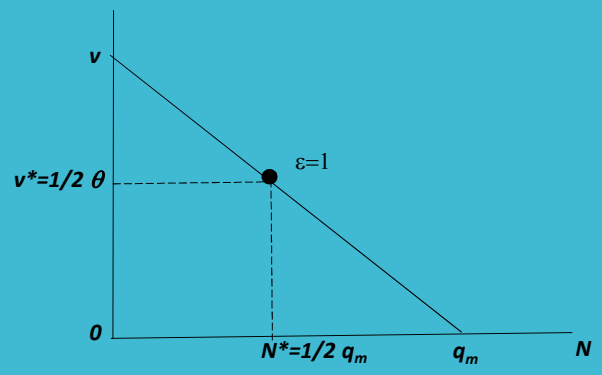
Price, Overnight Stays, Quality of Tourism

- Consider tourism destination that wants to invest in quality α of its tourism product, α depends on degree of exploitation of tourism resource of given amount *R*
- Ratio *q=N/R* intensity of exploitation of resource by tourism sector
- Quality of tourism inverse relation with intensity *q*, so that $\alpha(q)$ exhibits negative derivative $\frac{\partial \alpha}{\partial q} < 0$. Let *R=1*, then *q* is number of overnight stays, *q=N*. Also $q_m = N^o$ is max stay that resource tolerates beyond which exploitation of resource unsustainable.

Price, Overnight Stays, Quality of Tourism

- Define quality of resource: $\alpha(N) = 1 - \frac{N}{q_m}$ with $N \leq q_m$
- Takes value $\alpha(N^\circ) = 0$ if max exploitation and $\alpha(0) = 1$ if none.
- Price directly depends on quality of tourism resource through θ, a quality premium.
- It rises as number of overnight stays decrease and vice versa
- $v(N) = \theta\alpha(N) = \theta\left(1 - \frac{N}{q_m}\right)$ with $\theta > 0$
- Inverse function of tourism demand that accounts for quality.
- Aggregate tourism: $S = Nv(N) = \theta N - \frac{\theta N^2}{q_m}$.
- F.O.C: $\frac{\partial S}{\partial N} = \theta - \frac{2\theta N}{q_m} = 0$ which yields $N^* = \frac{q_m}{2}$ and $v^* = \frac{\theta}{2}$

Price, Overnight Stays, Quality of Tourism



Price, Overnight Stays, Quality of Tourism

- Also in this case formal solution of tourism expenditure max problem given by Cournot point. N^* lies in middle of segment $0q_m$.
- Also $N^* < q_m$: if tourism has impact on resource, and tourists positively value its quality, optimal strategy for destination should achieve only partial exploitation of tourism resource.
- Since tourists value quality and price decreases with depletion, full exploitation suboptimal for destination, greatest revenue only achieved with number of overnight stays less than max sustainable.
- That is, set price higher than that associated with N° as it provides stronger force than negative effect on aggregate expenditure due to decrease of overnight stays.

Price, Overnight Stays, 2-Tier Tourism Demand

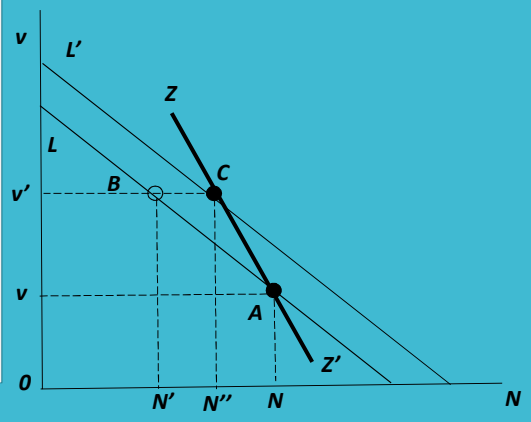
- Tourism measured by 1. arrivals, 2. length of stay, decided when planning the holiday
- New: first decide whether or not to travel, then how long to stay
- Number of overnight stays: product of arrivals and avg length of stay
- *N=Ad*
- Duration *d* decreasing in daily price: *d=d(v)* with $\frac{\partial d}{\partial v} < 0$
- Assume linear relationship: $d = D_1 - D_2 v$ with $D_1; D_2 > 0$
- Choice of arrival binary: «yes» or «no» but consider complex set of services that characterize tourism product as well as average price, plus the «accumulation effect»: building on own or other tourists' preferences, and on how fashionable or popular destination is: *A=A(.)*

The Decision of Travelling to a Destination

- (a) primary resources and attractions available in the destination
- (b) presence of mobility factors to ease access to destination
- (c) effectiveness of destination marketing, management, planning
- (d) environmental status, degree of exploitation of natural resources
- (e) considerations on safety, distance, relative price of destination
- (f) variety of local products supplied
- *A=A(N)* with *N* also measure of overcrowding: *N=A(N)d(v)=f(N,v)*
- (a) snob effect: escape crowd → arrivals decrease with overcrowding
- $A' = \frac{dA}{dN} < 0$
- (b) bandwagon effect: attracted to crowds → more arrival with crowd
- $A' = \frac{dA}{dN} > 0$

Snob Effect in Tourism

Overcrowding ↑ : L shifts out
Two effects of v → v'
1. Given arrivals, overnights decrease due to lower avg length of stay **Instantaneous price effect**:
A → B and N → N'(<N)
2. Less overnights decreases over-crowding and because of snob effect, arrivals **increase**:
L → L' (amount depends on intensity of snob effect) so B→ C so that N' → N'' (>N')

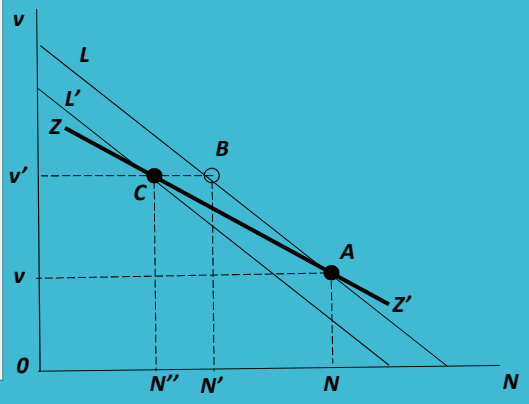


Snob Effect in Tourism

- Final level of overnight stay N'' associated to point C. Only A and C equilibria not B.
- Curve ZZ' is overall two-tier tourism demand! Accounts for «arrivals» component as an inverse function of overcrowding, and the «length of stay» component which is inverse function of price.
- Net effect increases degree of rigidity of overall demand: elasticity along ZZ' is smaller than L
- *Increase in daily price of holiday reduces length of stay and, consequently, lowers overall nr of overnight stays. This reduces overcrowding and introduces wave of new arrivals by snob tourists. Initial reduction is partially compensated and demand becomes less elastic. The more intense the snob effect the lower elasticity will be*

Bandwagon Effect in Tourism

Overcrowding ↑: L shifts in
Two effects of v → v'
1. Given arrivals, overnights decrease due to lower avg length of stay
Instantaneous price effect:
A → B and N → N'(<N)
2. Less overnights decreases over-crowding and because of bandwagon effect, arrivals **decrease**:
L → L' (amount depends on intensity of bandwagon effect) so B→ C so that N' → N'' (<N')



Bandwagon Effect in Tourism

- Final level of overnight stay N'' associated to point C. Only A and C equilibria not B.
- Curve ZZ' is overall two-tier tourism demand! Accounts for «arrivals» component as a direct function of overcrowding, and the «length of stay» component which is inverse function of price.
- Two effects sum up and increase elasticity of overall demand: elasticity along ZZ' is greater than L
- *Increase in daily price of holiday reduces length of stay and, consequently, lowers overall nr. of overnight stays. This reduces overcrowding and arrivals by bandwagon tourists attracted by crowd. New contraction adds up to the initial one so that demand because more elastic. The more intense the bandwagon effect the more elastic.*

Price, Overnight Stays, 2-Tier Tourism Demand

- Linking these Findings together with destination goal of maximization of tourism expenditure and with relationship between expenditure and elasticity, reason why daily price of holiday greater in exclusive destination than popular destination becomes clear.
- In exclusive destinations demand tends to be more rigid, Cournot point corresponds to higher price, and so to a relatively lower number of stays than for popular destinations, where demand is more elastic.

Price, Overnight Stays, 2-Tier Tourism Demand

- Causal relationship between degree of popularity/exclusiveness of destination and price goes from former to latter not vice versa.
- If destination chosen by elite tourism, price optimally set higher
- Destination chosen by «mass» tuorism optimally chooses lower price
- Destination willing to modify nature recommended to not use price tool (from mass to exclusive by increasing price suffers preverse effect of losing former tourists (less attracted by a now less popular destination) without being able to attract new ones (who do not arrive in relatively crowded destinations.