THE SUPPLY OF TOURISM SERVICES: HOSPITALITY, TRANSPORT, ATTRACTIONS

?

The Hospitality Sector

- Size: range from B&B with limited rooms to big hotels for hundreds
- Quality: range from essential (yet functional) to most luxurious, offering complementary services like conference venue, spa, pool
- Property: range from family-run hotel to large international chains
- International classification between hotels (1 to 5 star) and other collective accommodation (camp site, self-catering, hostel, farmhouse, apartment for rent, B&B
- Hotels direct source of competition for other tourism firms, competitive advantage comes from priviledged contact with tourist (hotels renting bikes affects bike rental market)
- Accommodation attraction in itself. Spa hotels (both accommodation and wellness). Hotel=destination! Profit also from massage, beauty,…

The Hospitality Sector

- Organizations with complete or partial accommodation services
- Self-catering organizations such as (a) apt or room for rent, (b) timeshare properties (ownership only limited to certain periods of year), (c) villas and cottages, (d) youth hostels, (e) campsites
- Supporting structures for tourists with caravan homes, motor homes
- Accommodation insides a means of transport (cruise ship, ferries, trains, (orient express, singapore-bangkok), airlines (first-class)
- Other forms: (a) health care facility (high quality service for patient's relatives and friends, also mix between hotel and nursing home, (b) overnight stay of guests at relatives' home

Costs and Prices of Hospitality Firms

- Fixed costs (not vary with nr of rooms); unit (avg) fixed cost depends on total nr of services sold (occupacy rate of hotel). Occupacy rate up means fixed costs spread over larger nr of services. lease of building and equipment, advertising cost, insurance premium
- Variable cost change according to nr of services used (overnight stays): purchase of food for restaurant, bar, water, heating, commission paid to travel agencies, electricity bills.
- Occupacy rate is of strategic importance for hotel, because fixed cost the largest share of total costs
- Total cost: $TC = FC + VC$ with $VC = cN_H$
- Average cost: $\mathrm{U}C = \frac{FC}{N_H} + c$

The Full Cost

- price set with reference to avg variable cost, *c*. Mark-up a percentage of *c* to cover fixed costs and earn profits. If *m* mark-up, price:
- $p = c(1 + m) = c + mc$
- Set hotel's markup to reach at least minimum of return to investment
- 1.Hubbart formula: starts from target rate of profit to be reached and then back to optimal price and markup needed to reach that profit
- 2.Dollar-per-thousand rule: for each additional $1000 invested in room price goes up by $1: if each hotel room costs $50,000, then price of room service should be around $50.
- Total revenue: $TR = pN_H = c(1 + m) = VC(1 + m)$
- Profits: $\pi = TR - TC$

The Target Profit

- K: Financial value; N: nr of beds (nr of available services)
- n: estimated payback time (years)
- r: target profit of investment (rate)
- Overall profits: $\pi = \frac{K}{n} + rK$
- q: avg occupancy rate
- Nr of overnight stays: $N_H = \text{qn}$
- Profits (target): $\pi = pN_H - TC = pN_H - FC - cN_H$
- $\frac{K}{n} + rK = pqN - FC - cqN$
- $p = \frac{(\frac{K}{n} + rK + FC)}{qN} + c$

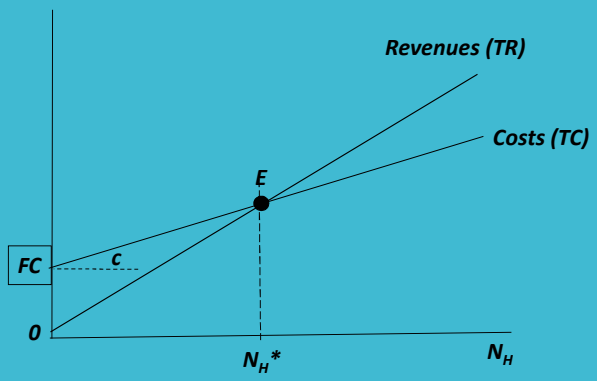
Comparison of the two Methods

- Two methods substantially different:
- Policy of fixed prices: rooms offered at same price, only change seasonally or extraordinary
- Price varies according to quality: different price for different characteristics. For example, large room with jacuzzi or terrace higher
- Price varies according to demand: price do not change to reflect different costs, but respond to characteristics of different market segments.
- Non-linear pricing: prices vary according to the quantity purchased. Makes hotel set a price that decreases with nr of overnight stays, applying discount on quantity. Price discrimination with p(N_H) decreasing in N_H (discount on Sunday if book Friday and Saturday)

Comparison of the two Methods

- Post price within price range that reflects degree of heterogeneity among customers (both min and max price for low season and higher min and max for peak season
- Hotel's pricing policy reduced to single price, p, interpreted as avg weighted by nr of stays, of different prices charged by hotels.
- TR and TC to identify profit as their difference
- If $N_H < N_H^*$ the hotel faces a loss since TC>TR
- If $N_H > N_H^*$ the hotel faces a loss since TC<TR
- N_H^* represents nr of stays with perfect equality between TC and TR
- Managerial control. True for hospitality sector since N_H^* encompasses main issues related to cost-benefit: avg p (slope of TR), unit variable cost c determines slope of TC, fixed cost FC y-axis intercept of line TC

Cost, Revenues, and Profits for the Hotel



Determination of Markup

- Depends on the degree of monopoly
- 1. direct competition: other hotels operating in same segment and same destination (4 star hotels in same city, small family hotels competing for same customers). Services that are close substitutes
- 2. indirect competition: other forms of accommodation. 4 star hotel with special offer often alternative to 3 star hotel. This competition affected by tourist's change in preferences.

Hotel Management Barometers

- We saw N_H^* and p are two key variables in hotel management
- Break-even point identifies degree of utilization of hotel below which business gets a loss
- Avg price identifies customer mix that helps determining profitability
- Now we introduce
- 1. The Occupancy Rate
- 2. The Average Daily Rate

The Occupancy Rate

- Ratio between real and potential production over period of time
- Potential output: nr of accommodation services (nr of bed places), N, times length of period under scrutiny
- Real output: nr of accommodation services sold in same period N_H
- Two ways to calculate occupancy rate:
- Generic occupancy rate, $OR_g = \frac{N_H}{365N}$
- Specific OR (seasonal hotels open for D days): $OR_s = \frac{N_H}{DN}$
- Two indexes related to each other since $OR_g = OR_s U$ with $U = \frac{D}{365}$
- U defines rate of seasonal use of structure, 2 indexes same if U=1
- Occupancy rate linked to unit fixed cost and good proxy for break-even

Average Daily Rate

- Monitors price rather than quantity (as opposed to OR)
- ADR calculated by dividing total revenue out of number of overnight stays in the hotel: $ADR = \frac{TR}{N_H}$
- This is exactly avg price, p! but can analyze different ways to rent room
- Example: hotel with 150 beds, open 100 days, 2 different prices
- Price of 100 for individual travelers and 70 for organized groups
- In 100 days total overnight stays is 12000 of which 4500 for groups organized by tour operators
- ADR=1,065,000/12,000=88,75
- OR_s=12,000/(100x150)=12,000/15,000=0.8
- OR_g=12,000/(365x150)=12,000/55,720=0.22

Factors Affecting ADR

- General economic conditions: discounts at times of economic crisis or no discount in periods of bonanza or in response to investment in destination's infrastructure that makes it more appealing for tourists
- Political conditions: easiness of travelling or circulating in the country, conditions of potential danger, crime, terrorism, turmoil, often offset by hotels' special price reductions
- Environmental conditions: environmental decay is one reason why hotels most commonly engage in price discounts
- Particular features of destination: seashore hotels rarely reduce price, cultural destinations rarely offer discounts, business destinations?
- Type of hotel: whether or not it belongs to chain or if is in city center

Variation in Hotel's Market Mix

- Still 150 bed places with total 12000 overnight stays but different customer mix. Different ADR from different nr of stay for each type, which are weights used to calculate the ADR

mix	stays	price	revenue
individual	2,250	100	225,000
business	4,500	85	382,500
expo	3,000	70	210,000
congress	1,500	75	112,500
discount	750	50	37,500
total	12,000		967,500
ADR		80.63	

mix	stays	price	revenue
individual	1,500	100	150,000
reserve	4,500	85	382,500
Tour op.	3,750	70	262,500
congress	1,500	75	112,500
discount	750	50	37,500
total	12,000		945,000
ADR		78.75	

- Yield per room: 967,500/(100x150)=64,47 and 945,000/(100x150)=63

Hotel Comparison

- Hotel A has better ADR and hotel B has better OR
- Both hotels have same daily revenue (=31,500), little can be concluded about relative profitability

Indicator	Hotel A	Hotel B
Bed places	500	500
Occupancy rate (x 100)	70	90
Average Daily Rate	90	70

Transport Sector

- Estimation of avg cost and price setting heavily depends on fixed cost
- Both sectors operate in oligopoly and use complex pricing strategy
- Difference is avg size of transport company (investment needed to start business). Think of air, rail, cruise sector
- Accessibility depends on transport network and is area of influence exerted on territory by a transport terminal (airport, station, port)
- Terminal is structure where one enters or exist transport network,
- Area of influence of airport high, of train station limited
- Accessibility of destination depends on type and nr of terminals
- Transport can become product: (a) train: palace on the wheels in India, Orient Express and Eastern&Orient Express, (b) air: vintage concorde, (c) marine products such as theme cruise or daily trips

Transport by Waterway

- (a) ocean transport lines, (b) cruises, (c) short distance travel by sea, (d) service on domestic waterway routes, (e) private recreational craft
- Historically important but suffered substantial decline
- High managerial cost and competition with air transport
- Forced shipping companies to increase comfort of services (shops, entertainment, casino, sport), increase cruising speed, ship size
- seasonal basis, aimed at tourists with special needs or lot of free time
- Cruise represents most important case of integration between maritime transport and tourism. Many short stops in ports, intense onboard organization of leisure activities
- Sold with air or bus tickets to allow to reach remote areas
- Ferries for short distance due to increase in use of private cars

Rail and Bus Transport

- Marked historical development of tourism when railways first built to connect large cities to nearby beaches.
- Combine great comfort with high speed (TGV, AVE, Frecciarossa)
- Medium-haul distance (national/international) competitive with air
- Possibility to walk in craft, deliver landscape, more environmentally friendly, stations in city center
- Bus popular in some regions for 2 reasons: (a) low cost, (b) possibility of «door-to-door» transport. Important over short and medium distance (transfers from hotels to airport or seaports, guided tours to cities or outside, organized trips by tour operators, groups, etc.) Over long distance only competitive with train up to maximum distance, less comfort, technically slower, suffers more congestion

Air Transport

- Most popular form of transport for international tourism flow
- High speed and long distance covered
- Not necessarily most expensive: economies of speed which reduces complementary expenditure during the trip, important for business
- 1. scheduled service: timetable, operated regardless of load factor. To decrease risk of empty flights code-sharing: plan connection between two airports at same time using only one aircraft reaching full capacity, second only when demand is high.
- 2. charter: Air-brokers are intermediaries between air company and demand for flight. Satisfy demand to specific destination in specific dates, demanded by tour operators for transport of their package tourists. Seat only, higher load factor, significant different in avg cost.

Low-cost Airlines

- 3. low-cost: began in North America in 90s and spread across Europe.
- Ryanair is best example of how social and economic changes, when properly exploited, can create company in just few years that revolutionalized the competition in market, now world leader.
- Unique aircraft model, no cabin service, small airport, innovative marketing strategy, i.e. massive use of internet and pricing strategies.
- Compete with charter and scheduled flights, so that both had to change their sales and pricing policy, marketing tools, industrial strategies. Even tourism destinations shifting policy to low-cost connection

Price of Transport

- Avg cost depend crucially on load factor of vector
- Pure service that cannot be stored
- Strict rules that each free seat = service produce (and paid for) but unsold (as case of accommodation).
- Must operate continuous monitoring of load factor, L, like OR:
- L=P/N where P is number of passengers and N available seats
- When near 1, excessive wear, deterioration, decline in quality.
- When small, rise in cost per passenger and inefficient management
- Identify "Optimal load factor" above which carrier should increase nr or size of vectors and "break-even load factor" below which loses.
- Avg cost UC (cost o f providing seat on flight) described as:
- UC=FC/P+VUC= FC/LN+VUC, with $dUC/dFC>0, dUC/dL<0, dUC/dVUC=1$

Price of Transport

- FC is fixed cost for each flight (lease or depreciation charge, fuel, crew member, parking fee, taxes, freight) and VUC is variable unit cost that are to be incurred for each passenger (mainly airport fees), while P,L,N already defined.
- if we consider N as a technical parameter for size of aircraft, unit cost directly depends on fixed cost and variable cost, and inversely on load factor.
- This last relationship gives difference between scheduled and charter flights. Load factor higher in charter.
- Ability to reach high load factor due to higher flexibility of low-cost, easily switch aircrafts across different routes to meet demand.

Tourism Attractions

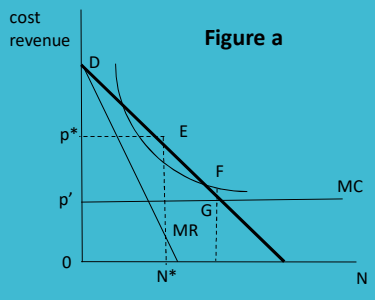
- Site-specific: related to geographical location, part of the "variety" that characterizes destination. Tourist identifies destination with its attraction (Pisa tower) or destination itself is attraction (Disneyland)
- Events: cultural, sport event. Timing matters rather than location. Can be staged to complement site-specific attraction (classical tragedy in Greek Theater of Taormina)
- Natural attractions: site-specific (landscape, climate, waterfall, forest)
- Human-made attractions: site-specific or events, primarily identified with cultural heritage (monuments, museums, archaeological sites) and live performances (concerts, festivals). Also artificial attractions like theme parks (Legoland in Denmark) or amusement parks (Tivoli in Denmark)

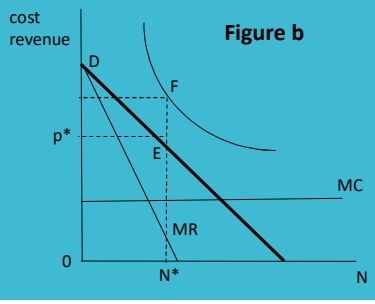
Prices and Costs in Tourism Attractions

- The striking feature of cost structure: great share of fixed costs if compared with variable costs → initial investment required to create and subsequent investments needed to develop, upgrade, maintain
- 1. attractions need to operate with very large nr of visitors to reduce incidence of fixed costs: their break-even point is high
- 2. massive amount of capital required to start raised by borrowing or by means of specific joint ventures.
- 3. local government may contribute to payment of some costs to start project (grants, loans, shareholding, land, infrastructure, transport)
- Fixed costs have economic nature of sunk costs, so that market is non-contestable and attraction management firms operate as monopolist
- N: nr visitors, π: profit (total revenue TR minus total cost TC)

Prices and Costs in Tourism Attractions

- $\pi = TR(N) - TC(N) \rightarrow \frac{d\pi}{dN} = \frac{dTR(N)}{dN} - \frac{dTC(N)}{\partial N} = 0 \rightarrow$
- $\frac{dTR(N)}{dN} = \frac{dTC(N)}{\partial N}$ → MR=MC , p*≥MC
- Point E, optimal size of attraction, Price determined along demand





Prices and Costs in Tourism Attractions

- Fixed cost relevant, can't rely on marginal cost only
- Solution MR=MC does not guarantee that profit is positive
- Positive only if average revenue (price) > average cost (figure a)
- Otherwise when average cost UC higher than price (figure b) negative
  In this case permanence of firm only guaranteed by subsidy
- Subsidy would be equal to UC-p* (EF in figure b)
- Attraction may decide to set price close to MC (p' in figure a) to be at loss if this would sufficiently contribute to total revenue of destination
- Per visitor loss financed by subsidy equal to UC-p' (GF in figure a)
- Price set strongly depends on price elasticity of demand
- Monopolist prefers to face rigid demand (unique cultural/historical interest, so main if not sole purpose of trip).