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Spatial Displacement and Sustainable Heritage Tourism

Silvia Caserta
Antonio Paolo Russo

Tinbergen Institute
The Tinbergen Institute is the institute for economic research of the Erasmus Universiteit Rotterdam, Universiteit van Amsterdam and Vrije Universiteit Amsterdam.

Tinbergen Institute Amsterdam
Keizersgracht 482
1017 EG Amsterdam
The Netherlands
Tel.: +31.(0)20.5513500
Fax: +31.(0)20.5513555

Tinbergen Institute Rotterdam
Burg. Oudlaan 50
3062 PA Rotterdam
The Netherlands
Tel.: +31.(0)10.4088900
Fax: +31.(0)10.4089031

MORE MEANS WORSE

Asymmetric information, spatial displacement and sustainable heritage tourism

Silvia Caserta

Antonio Paolo Russo

Tinbergen Institute, Erasmus University Rotterdam

Abstract

This paper analyses the market transformations in heritage tourism destinations when excessive tourism demand determines the emergence of a class of excursionists among visitors. Building on the approach of Keane (1997) and Shapiro (1983), our model highlights some important dimensions of sustainable tourism development. The lesser capacity of excursionists to learn the true quality of the tourist goods increases the convenience for producers to cut back on quality. To continue to serve high quality goods and keep up the reputation of the destination as demand continues to grow, producers need to gain a mark-up on price that might not be sustained in a competitive market. Hence the decline in "high-paying" demand segments which are increasingly susbstituted by visitors with lesser quality expectations. In the end, the dynamics explained with this approach are consistent with – and represent an economic reinterpretation of – the class of evolutionary models known as "destination life cycle", when they are applied to heritage cities.

The regulator achieves a sustainable growth if it could enforce quality or information standards. However, the process should be managed at a spatial level that is rarely matched by formal administrative competencies. Traditional tourism strategies are seldom successful when they try to prevent excessive growth by discouraging daily visits. This model helps to identify alternative and more appropriate policy instruments.

Keywords: Sustainable tourism, heritage tourism, excursionists, quality, reputation.

1. Introduction

The progressive enlargement of the spatial scale of tourism activity is a recurrent feature of tourism development in historical sites and heritage cities. The increasing popularity of cultural tourism brings about development and physical transformation in historical cities, but it faces the constraint placed by the limited and inflexible nature of central premises and resources. As a consequence, the tourism industry – though privileging proximity to the central assets – is pushed to expand and diffuse in *tourist regions* that could be conceived as "functional regions" with respect to the central destination areas. Such spatial dynamics are by no means without consequences for the viability of cities, and the sustainability of the process of change is questioned.

The possibility for tourist destinations to stagnate and decline after growth and maturity is explicitly considered in the class of evolutionary models known as "destination life-cycle", introduced in geographic studies by Christaller (1963) and made popular as a conceptual scheme for tourism development by Butler (1980). According to this model, the different stages of development are the result of changes in the demand as determined by excessive pressure on environmental and social assets. Despite its widespread influence in tourism studies, the "deterministic" nature of the life-cycle and its unclear consideration of demand-supply interaction has attracted criticism which is best encapsulated in Haywood (1986, 1998). However, even as descriptive models, life-cycles have never been very popular with regard to urban tourism, and in particular heritage tourism. One reason may be that the late development of cultural tourism (compared to leisure and "3S" vacations) does not offer many examples of complete cycles to be observed and analysed. Moreover, the very meaning of "decline" is in this case ambiguous: heritage destinations do have peculiar characteristics that make the straightforward application of the life-cycle scheme not as credible as in other contexts. The cultural assets inherited from the past are irreproducible and highly specific to the local historical context and cultural and identity. Demand is therefore relatively inelastic and it is difficult to grasp how in practice a "decline" in tourism can occur.

Yet, there are clear signs that tourism might become *unsustainable* for many heritage destinations. The huge increase in visitors/residents ratios, as well as the on-going "banalisation" of tourism products, indicate that tourism is growing too much, and in an unbalanced way. Excessive economic and physical pressure from tourist affects other urban functions which are vital for tourism itself to endure as an economic systems, such as the maintenance of a lively social fabric and the preservation of cultural assets. In the end, this may cause tourism itself to stagnate and decline, as it is foreseen by the life-cycle scheme: a real drama for cities that have developed increasingly dependent on tourism economy. So far, this is nothing new for the life-cycle supporters.

However, to be made operational as a normative tool, the life cycle needs to be economically founded and made fit to represent the peculiar context of heritage destinations. Russo (2001) proposes to analyse the sustainability of tourism development in heritage cities in a spatial setting. The life-cycle dynamics may be conceived as the result of a persistent increase in the share of excursionists among visitors. These have a peculiar visitation pattern that in practice supports the decline in

the quality of tourist products, a further stimulus to the decentralisation of tourist flows. This "vicious circle" may persist until tourist regions become so "large" respect to inner cities that the receipts from tourism are hardly internalised and reinvested in the maintenance of the quality and integrity of cultural resources. A permanent decline of tourist attractiveness for the whole urban region may then follow.

This article focuses on the economic mechanism that is at the core of the process described above, that of quality decline. What are the incentives for a highly visited heritage destination to supply high-quality tourism services? This issue of quality and pricing of tourist destinations has been addressed by Keane (1996, 1997), utilising the toolkit of reputation models developed by Shapiro (1983). In his works, Keane rightly suggests that information asymmetries between visitors and producers may lead to a loss of competitiveness of tourist destinations. However, his analysis misses the important distinction between different classes of visitors, as it is assumed that all consumers have the same access to information.

This paper extends Keane's analysis considering distinct types of consumers. A central assumption of the model presented here is that the spatial characteristics of a visit to a city (daily excursions as opposed to "central" overnight stays) influence the market behaviour of the agents. This mechanism, which operates through the informational asymmetries generated by the reduction of time budgets, has important consequences on the sustainability of tourism development. In this setting, it can be shown that repeated purchases of the experience good may not be enough to sustain high quality products. This formalisation fits well in the context of heritage destinations, providing some foundation to the life-cycle dynamics, based on simple market arguments than to hard-to-identify externalities. The next section lays the bases of the model proposed in Section Three. In Section Four the implications of the model are studied, while Section Five refers back to the general problem of tourism development and Section Six concludes with some policy suggestions.

2. Assumptions

We intend to analyse the determinants of pricing and quality in a heritage city. The following assumptions on the market and spatial structure of the local tourist market are made for simplicity of exposition.

Our heritage city consists of a core, or *historical centre*, where all the primary attractions (non reproducible, non transferable, supplied in given quantity and quality) are located; and of a periphery, or *tourist region*, that does not possess historical features but may accommodate hotels and other tourist facilities. The periphery is defined in functional terms as the area that serves the tourist functions of the core. As long as it accommodates tourists, and earns their revenues, it is part of the tourist system centred on the core, no matter what its extension is. In practice, the tourist region extends over the territory that hosts for more than 24 hours or two successive nights visitors who spend a part of their time in the historical centre. Therefore, all the secondary origins of a journey to a tourist destination are included.[1,2]

[1] That is, all those destinations hosting *false* and *indirect* excursionists as defined by van der Borg and Gotti (1995). *Indirect* excursionists to a destination are trippers who visit it from another vacation site

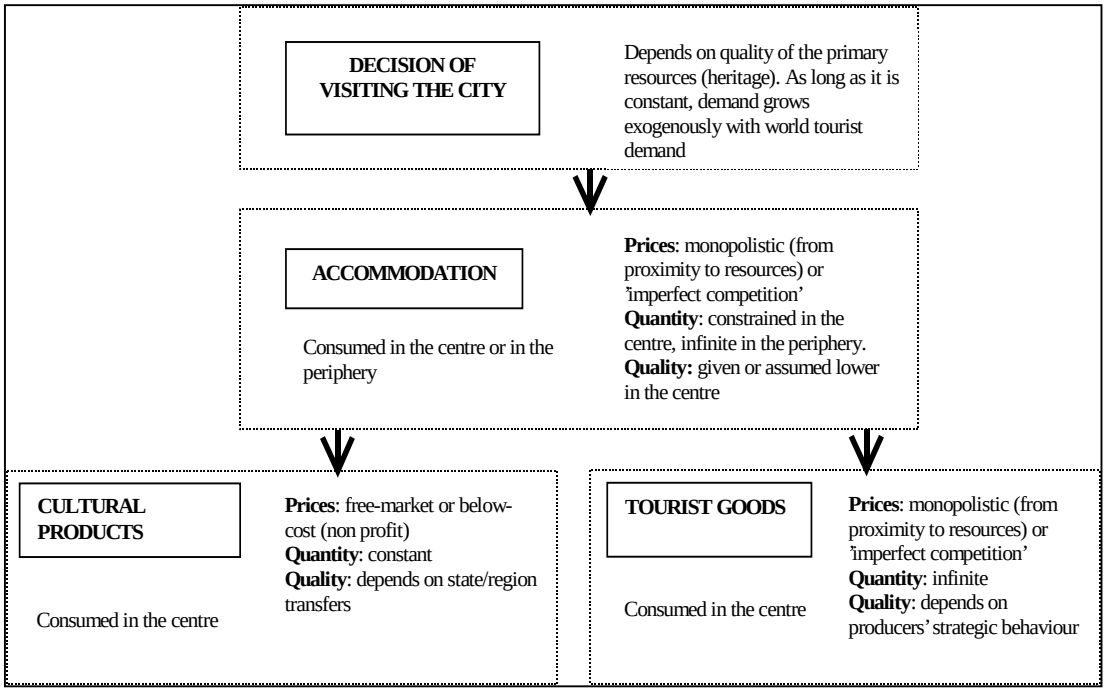

Fig. 1 - Consumption in the heritage city

The city attracts a yearly flow of visitors. A visit to the city implies a sequence of decisions (Fig. 1). The preliminary decision whether to visit the city or not depends on the quantity and quality of its cultural and historical attractions. At this stage, we assume such conditions as given, and the yearly rate of increase in tourist demand is given by world trends. As tourist flows are growing almost everywhere, we can assume that there is an increasing number of visitors that every year chooses a certain city as their destination.

Then, visitors must decide upon the accommodation. They can choose to stay in a central accommodation and visit the city as "tourists", or to stay in a peripheral accommodation within the region and visit the city as "day trippers". The visitors who choose an accommodation in the centre are called *tourists* or *central visitors* (CV). Those who choose a peripheral accommodation are called *excursionists* (EV): to visit the city, they behave just like commuters, reaching the destination during the day and going back to their accommodation site at night. In choosing whether to visit the core

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and go back to that site within the day. *False* excursionists visit the city as the main destination of their journey, but spend the night somewhere else. The visitation pattern of the two categories of excursionists, who add to the "real" day trippers coming from – and returning to – their habitual place of residence, is quite different. The former visit the city in one day and are typically only marginally motivated by cultural reasons; the latter may organise their visit in more days and their primary interest is related in the city's heritage and attractions.

[2] The theoretical limits to the extension of such region depend on commuting time: one cannot visit a central location if the time needed to reach it takes more than the time-budget available. Therefore, given a "rest time" of A hours and a "minimum duration of the visit" of B hours, the tourist region has a maximum width of S, which comprehends all the destinations from where you can reach the core in less than $t = 24 - A - B$ hours.

as tourists or excursionists, visitors trade off the higher hotel prices in proximity to the resources, with the lower prices of the periphery, discounting also for the transport costs. In the end they choose central or peripheral accommodation according to their budget; moreover, because of limited capacity, they are subjected to a "first come first served" rule. In fact, the tourist capacity of the historical core is limited by physical space. The possibility to enlarge the tourist function – building skyscrapers or reconverting private houses into hotels, etc. – is scarce, so that there is a maximum number of tourists that can be accommodated in the centre. Often this maximum is regulated, in other cases it is left to the free market. This constraint on tourism outlets in the centre determines a "location monopoly", or a highly imperfect market, for hotels and other facilities in the city centre[3]. In the periphery, capacity can be expanded without limits. Therefore, accommodation prices are higher in the centre and decline with distance from the centre.

The latter purchase decision regards the tourist package itself. The package comprehends the *primary products* (heritage and other cultural attractions), and *secondary* or *accessory tourist goods* like restaurants, sightseeing, transport, souvenirs, etc. The cultural heritage is sold at cost (or below cost, as in the case of merit goods sold by subsidised institutions), and has constant quality. The tourist goods are sold in the centre in a monopolistic market[4]. The monopolist, in addition to setting the price, also decides upon the quality to be produced. The overall quality of the tourist experience, therefore, depends on the given quality of the heritage or cultural content of the visit, and on a variable component that depends on the market strategy of the suppliers. Therefore, even if the quality of the historical assets is given and it is not controlled by tourist suppliers, the quality of the package may deteriorate if tourist goods of low quality are supplied. In reality, the "given" component of quality of the heritage is affected in the long term by the amount of financial means that are channelled in the maintenance of the heritage. Increasingly, cities have to count on their own resources to produce such means: they will come from the tourist market and from the contributions of taxpayers. We will discuss in the last section how this may affect the long-term outcome of development. In the model, however, we will focus on a short-term horizon in which the quality content of primary products does not change.

All the visitors, tourists and excursionists, purchase the tourist package during their visit. It is assumed that they have perfect information about the cultural heritage, but imperfect information about tourist goods that are typical "experience goods". Excursionists are different from tourists, in that they can allocate less of their time

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[3] Sinclair and Stabler (1997: 72-73) introduce the distinction between a local market and inter-city competition. Operators in both markets may have varying degrees of market power. In the intra-city competition, competition is strong where there is no historical localised centre and leisure attractions are diffused (e.g. holiday resorts, mountain resorts, spa), while proximity to historical attractions in heritage cities guarantee a certain degree of location monopolistic power. Intra-city competition is harsher in leisure tourist market where destinations are highly substitutable one another, whereas it is lesser in cultural tourism, where destinations have a high degree of uniqueness due to the peculiar nature of historical and man-made resources.

[4] The assumed monopolistic market structure is due to the location advantages enjoyed by suppliers in a situation where the land in proximity of the main tourist attractions is limited. Even without assuming collusion on the producers' site, they obviously operate in a highly imperfect competitive environment; it can therefore be hypothesised that they act "as if" they were monopolists. Keane (1997), utilising the contestable markets framework, finds that the same results are obtained in a competitive setting.

budget to visiting the core, and because they do not make use of the facilities (like services offered by central hotels) where tourists get free information and opportunities to build up their visiting itinerary. More generally, visitors that come just for the day visit only the most central attractions (and consume a limited amount of tourist goods) because those are the only ones that fit in their tight time schedule and money budget, and because in doing just what all the others do they reduce "search costs" to a minimum[5]. Hence, they have more problems of assessing the true quality of the goods on offer, because they have fewer opportunities to learn from comparison, both in terms of number of daily purchases and in terms of variety of places. If the time-period is the daily visit to the city, they need more daily visits to learn what overnight visitors can learn in a one-day visit. This exaggeration approximates sufficiently well the fact that there is a certain asymmetry in the learning capacity between tourists and excursionists, which is confirmed by the spatial analysis of visits performed in selected tourist destinations (ICARE 1997). One central assumption of this paper, therefore, is that excursions to a city imply a limited capacity to learn basic features of the city's tourist product (of which quality is an important component) with respect to prolonged or "central" visits.

Once visitors learn (via direct observation and consumption) the quality of the tourist package, they decide if they will repeat the purchase or not. Because the quality of the primary products is given, the real decision variable is the quality of the tourist goods. For simplicity, we assume that a mechanism of propagation of the monopolist's reputation takes place by "word-of-mouth". The introduction of repeat purchases (in this set-up not from repeat visitors, but from the ones who have been informed by friends and relatives) represents a crucial incentive for a producer to supply a fair level of quality. In fact, given the typical transient nature of consumption in the tourism industry, a moral hazard problem on the producer's side is easily detected. In this framework, repeat purchases may avoid the moral-hazard problem only if the monopolist has built a *reputation* for high quality. The classical model of Shapiro (1983), extended to a monopolistic set-up by Tirole (1997), is based on the concept that the costs associated with the future loss of sales have to exceed the current cost savings of cutting quality. In this way a mechanism is created that prevents the monopolist from supplying cheap quality in each period. However, repeat purchases induce high quality provision only if two conditions are met: 1) consumers learn the quality of the purchased object quickly enough; 2) they purchase many times (Tirole 1997: 112). The formal development of model presented next (based on Shapiro 1983, Tirole 1997, and Keane 1997) suggests that these conditions may fail to be satisfied when spatial displacement of tourist activities is considered.

3. The model

The market for tourist packages is such that the monopolist can change the supplied quality in each period, where the number of periods is infinite, t=1, 2,… . There are two levels of quality s: $s_0 = 0$ (low quality) and $s_1 = 1$ (high quality). The existence of a minimum quality is necessary for the existence of the market; it can be conceived as

[5] This point is made in Towse (1991). This author refers to the case of art cities, taking Venice as a symbolic example. Search costs are assumed to be costs incurred by visitors to gather information about the exact location, content and access of the cultural-tourist supply.

the minimum quality level under which consumers will be able to detect the fallacies of the product just by inspection, that is, before the purchase. Therefore, if a lower quality than the minimum is sold, nobody would buy it. Everybody is interested in buying one unit of the tourist goods, whose production costs is c_0 if $s = s_0$ and c_1 if $s = s_1$, with $c_1 > c_0$, and the cost function is increasing in quality. Equivalently, the price for the high quality good is p_1 and p_0 for the low quality.

Visitors are divided in two groups: CV (central visitors, or *tourists*), and EV (*excursionists*). They are all characterised by a taste parameter θ, in such a way that utility of consumption of the tourist goods, expressed in each period, is:

$$U = \begin{cases} \theta s - p & \text{if one buys at price } p \\ 0 & \text{otherwise} \end{cases}$$

Assuming that all visitors prefer high quality, for any given price, a visitor with a high θ is more willing to pay to acquire high quality. Alternatively, θ is interpreted as the inverse of the marginal rate of substitution between income and quality. Consequently, visitors with a high initial wealth have a higher θ, because they have a lower marginal utility of income (Tirole, 1997: 97). The taste parameter is distributed on the population according to a cumulative distribution function $F(\theta)$, on $[0, +\infty]$. This means that $F(\theta)$ is the percentage of tourists with a taste parameter less than θ. Hence a visitor with parameter θ buys the tourist package of quality s at price p if his taste parameter is such that $\theta s \geq p$. For a visitor to buy the high quality product we need to have $\theta \geq p_1$. The total population of visitors is normalised to 1, of which a percentage λ is made of tourists and a percentage $(1 - \lambda)$ is made of excursionists. Excursionists are different from tourists in the time, after purchase, that they need to "learn" the quality of the tourist good. Specifically: if the reputation of the monopolist at time t is defined as the expected quality at time t:

$$E(s_t) \equiv R_t$$

then we assume that tourists are such that $R_t = R_t^{CV} = s_{t-n'}$, and for excursionists $R_t = R_t^{EV} = s_{t-n''}$, with $n' < n''$. Here n' and n'' represent the time lag between the sale of an item and the adjustment of reputation on the basis of the discovered quality. This means that excursionists are defined as those who need more time to learn the true quality.

Let us assume, for simplicity, that the tourists learn the quality in one period, i.e. $R_t^{CV} = s_{t-1}$ while it takes n period to the excursionists, i.e. $R_t^{EV} = s_{t-n}$, with $n>1$. Moreover $R_1^{CV} = 1$ and $R_1^{EV} = 1$, implying that the economy starts with high quality and high expectations. The interest rate per unit of time is i, so that the one-period interest rate is $r = e^{i} - 1$ and therefore the discount rate for time period is

$$e^{-i} = \frac{1}{1+r} \equiv \delta$$

In general, we look for an equilibrium price such that the following strategies are optimal:

1) Visitors base their expectations of quality on the monopolist's reputation, and

2) The monopolist begins selling high quality (s=1) at price p_1 and continues to do this in the following periods. If he should deviate, starting to sell low quality (s=0), the consumers would not buy anymore.

Given the monopolist's strategy (i.e. in every period he chooses the quality of the previous period), the consumers' strategy is optimal. Given the consumers' strategy, the following hold for the monopolist:

- in case he follows the above defined strategy, his profit is:

$$\lambda(p_1 - c_1)\cdot[1+\delta+\delta^2+...]+(1-\lambda)(p_1-c_1)\cdot[1+\sigma+\sigma^2+...]=$$
$$=\frac{\lambda}{1-\delta}(p_1-c_1)+\frac{1-\lambda}{1-\sigma}(p_1-c_1)$$

where $\delta=\frac{1}{1+r}$ and $\sigma=\frac{1}{(1+r)^n}$ is the discount rate to be considered for EV

- in case he deviates from this strategy, his profit is:

$$\lambda(p_1-c_0)+(1-\lambda)(p_1-c_0)=p_1-c_0$$

Then, a necessary condition for a equilibrium (that is, a necessary condition for the optimality of the strategy pursued by the monopolist) is that

$$\frac{\lambda}{1-\delta}(p_1-c_1)+\frac{1-\lambda}{1-\sigma}(p_1-c_1)\geq p_1-c_0$$

which implies:

$$p_1-c_1\geq\frac{(1-\delta)(1-\sigma)}{1-\delta+\lambda(\delta-\sigma)}\cdot(p_1-c_0)$$

The above inequality suggests that the monopolist has an incentive to supply high quality products only if he can earn a "quality premium".

4. Analysis of the quality premium

Let us define

$$k=\frac{(1-\delta)(1-\sigma)}{1-\delta+\lambda(\delta-\sigma)}$$

Then the variable

$$m\equiv\frac{k}{1-k}=\frac{(1-\delta)(1-\sigma)}{1-\delta+\lambda(\delta-\sigma)-(1-\delta)(1-\sigma)}$$

corresponds to a mark-up variable and it can be used as a measure for the difference between price and cost for high quality tourist goods. The equilibrium equation becomes:

$$p_1 \geq c_1 + m\,(c_1 - c_0)$$

As an immediate consequence we can deduce that, keeping the percentage of central tourists and excursionists constant, qualities higher than the minimum one have a higher price than their production costs and that the quality-premium is greater for higher qualities. Moreover, an increase of the minimum quality level produces a reduction of the quality-premium. In the extreme case in which $\lambda = 1$, that is if all visitors were tourists, the condition reduces to:

$$p_1 - c_1 \geq r(c_1 - c_0)$$

and if $\lambda = 0$, that is if all visitors were excursionists, it becomes:

$$p_1 - c_1 \geq [(1+r)^n] - 1](c_1 - c_0)$$

These expressions[6] show that the premium required to sustain an equilibrium with high quality is larger in the case in which there is only a population of excursionists compared to that needed in the case of only tourists, and it is larger the longer their "learning time". It is so, because a longer learning time implies a longer time to detect the diminished quality, giving the monopolist greater incentive for cutting quality. Moreover, the case in which there are only central tourists represents a lower bound for the level of the mark-up.

It can now be analysed how m changes when the share λ of tourists changes and when the learning time n of the excursionists changes. In the first case we have that the derivative of $m = m(\lambda, n)$ with respect to λ is

$$m_\lambda = \frac{\partial m}{\partial \lambda} = -\frac{(1-\delta)(1-\sigma)(\delta-\sigma)}{\left[1-\delta+\lambda(\delta-\sigma)-(1-\delta)(1-\sigma)\right]^2} < 0$$

This expression implies that when λ decreases the mark-up will become higher. In fact, a greater percentage of excursionists increases the profit that a firm can make by milking its reputation, hence it increases the quality premium.

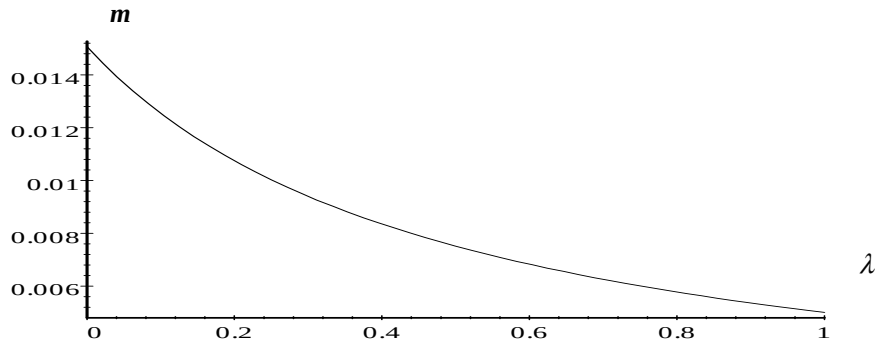

Fig. 2 – The quality premium m as a function of the share of central visitors

[6] These correspond to the two cases analysed in Shapiro (1983: 667; 672) .

For example, if we fix $n = 3$ and $r = 0.005$ the diagram of m as a function of λ is described in Fig. 2. It can be also shown that the first derivative of m is increasing with respect to n, implying that a longer "learning" time on the excursionists side, produces a higher mark-up, the explanation being as before. Again, fixing $r = 0.005$ and $\lambda = ½$, the relation between the two variables is described in Fig. 3.

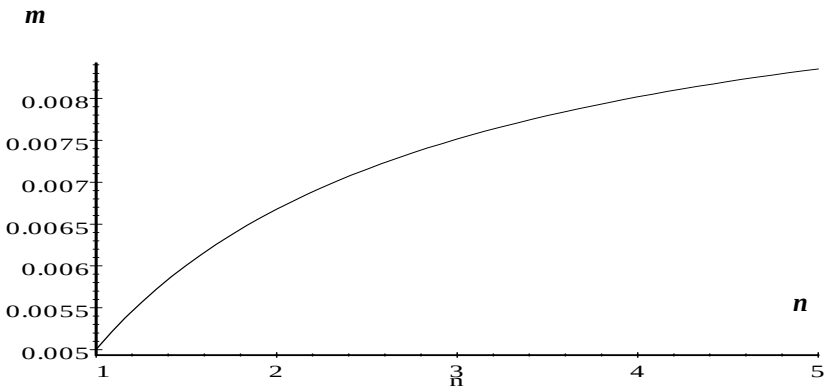

Fig. 3 – The quality premium m as a function of the excursionists' learning time

Different price-quality schedule produces different welfare effects[7]. As m rises, for instance, as a result of the gradual increase in the share of excursionists $[1 - \lambda]$, consumers would substitute towards lower quality goods as the price for high quality goods increases. Moreover, some consumers would stop buying the good altogether. On the contrary, as m falls there are welfare gains for consumers, since this corresponds to a reduction in information costs associated with establishing a reputation as high quality producer. This can be achieved if information asymmetries between producer and consumers were recouped, or, as in the context of this paper, if the learning problem associated to visiting cities as excursionists were mitigated by an information provision program. For instance, providing information on tourist routes, labelling high quality producers, or promoting E-commerce for some tourist commodity would improve the capacity of any visitor – whatever their mode of visiting the city – to detect low quality and avoid purchasing it. It is the case to note that even reducing the share of excursionists may achieve the same objectives, but in fact this has revealed an impracticable policy option for most European heritage cities (Van der Borg and Gotti 1995. It must also be added that the per capita welfare gains from reductions in m through information policies would be greater for those to whom quality is more important. This is particularly important for heritage cities as it is hoped that "high quality tourists" are also more willing to reward the true value of the heritage assets. Further welfare gains can be achieved by setting minimum quality standards through certification, patents, etc. Shapiro argues that for a convenient s_0 this strategy may achieve non-ambiguous outcomes. However, he also highlights that increasing minimum quality standards produces a net capital loss for producers who have already established a reputation as high quality produces, hence the likely resistance from the industry. Anyway, the focus of our study stands not so much in the welfare of visitors, as in the capacity of heritage cities to sustain unbalanced

[7] The analysis of the welfare effects is derived from Shapiro (1983).

patterns of tourist growth in an increasingly competitive market. The consequences of inertial growth and policy intervention are analysed in the next section.

5. Conditions for sustainable tourism development in heritage cities and policy options

Our version of Keane's (and Shapiro's) approach to the issue of quality in tourism destinations has highlighted that in a "zero intervention scenario", with tourism pressure growing unbounded in guise of day trips, it becomes increasingly profitable for a producer to supply low-quality goods. As a consequence, either the market disappears, or a premium price must be paid so that the costs of building a reputation as high quality producer are covered. Therefore, enduring tourism development implies that the price of high-quality tourist goods is rather high. To the extent to which tourism development is compatible with the development of a diverse and wealthy local economy, this outcome is sustainable. We can assume that it is unlikely that tourists decide to substitute expensive heritage destinations with cheaper competitors, as it happens in the Caribbean resorts' example of Keane[8]. However, such an outcome is not sustainable in the long term if the meaning of "sustainability" is broader than the mere viability of tourism as an option to development (Hunter, 1997. In fact, the inflationary tendency associated to tourism growth via the quality-premium mechanism clearly has consequences on the entire urban economy.

It is reasonable to assume that tourists' budgets have some kind of upper limit: tourist prices cannot grow indefinitely. Whereas a few "superstar" destinations would be able to attract aficionados millionaires however costly they are, in the majority of cases, above a certain price threshold, competing destinations would contend a city's market share offering similar experiences at cheaper prices. Then producers would anticipate a possible contraction of the market lowering quality. At this point, the city must "reinvent" itself as a low-quality tourist destination, hoping to attract tourists with a lower preference parameter and achieving in this way lower market prices that sustain the expansion path. From this point of view, the dynamics of the life cycle can be seen as occurring for each market segment at a time. The decline of a destination as a tourist destination for a specific segment coincides with the take off for a lower-quality segment, with a lower willingness to pay. As quality declines, the destination loses appeal for high-quality visitors (as Shapiro finds in his model) and the city spirals down towards cheaper quality standards. The destination continues to be heavily visited, but its market profile downgrades. In some way, this conclusion is consistent both with Plog's "psychographics" approach[9] to destinations development.

However, even though markets can substitute one another, cities are not indifferent among them. First, quality declines are reflected in worsening conditions for residents, whose demand basin overlaps with that of tourists for many elements of the tourist package (e.g. food). If the tourist / resident ratio is high, residents will bear a widespread decline in quality. This is commonly observed in tourist cities where the

[8] More in general, the point that standard demand theory is inadequate in explaining the destination choices of visitors is made by Papatheodorou (2001).

[9] Plog (1994) utilises the toolbox from psychographic analysis, describing the evolution in the performance of tourist cities as the result of the changing composition of the visitors' motivations, from *psychocentric* to *allocentric* attitudes.

residents have to turn to suburban shopping malls and non-tourist areas for daily purchases. Secondly, if a tourist city wishes to diversify its economy and become less dependent from a highly unstable industry as tourism, it should project an image of an attractive and qualitative place where to invest (Van den Berg and Braun, 1999). However, this is not an option at hand due to the dynamics analysed in the model. The reputation of heritage cities is more often than not that of places with very high opportunity costs that do not sell value for the money they ask.

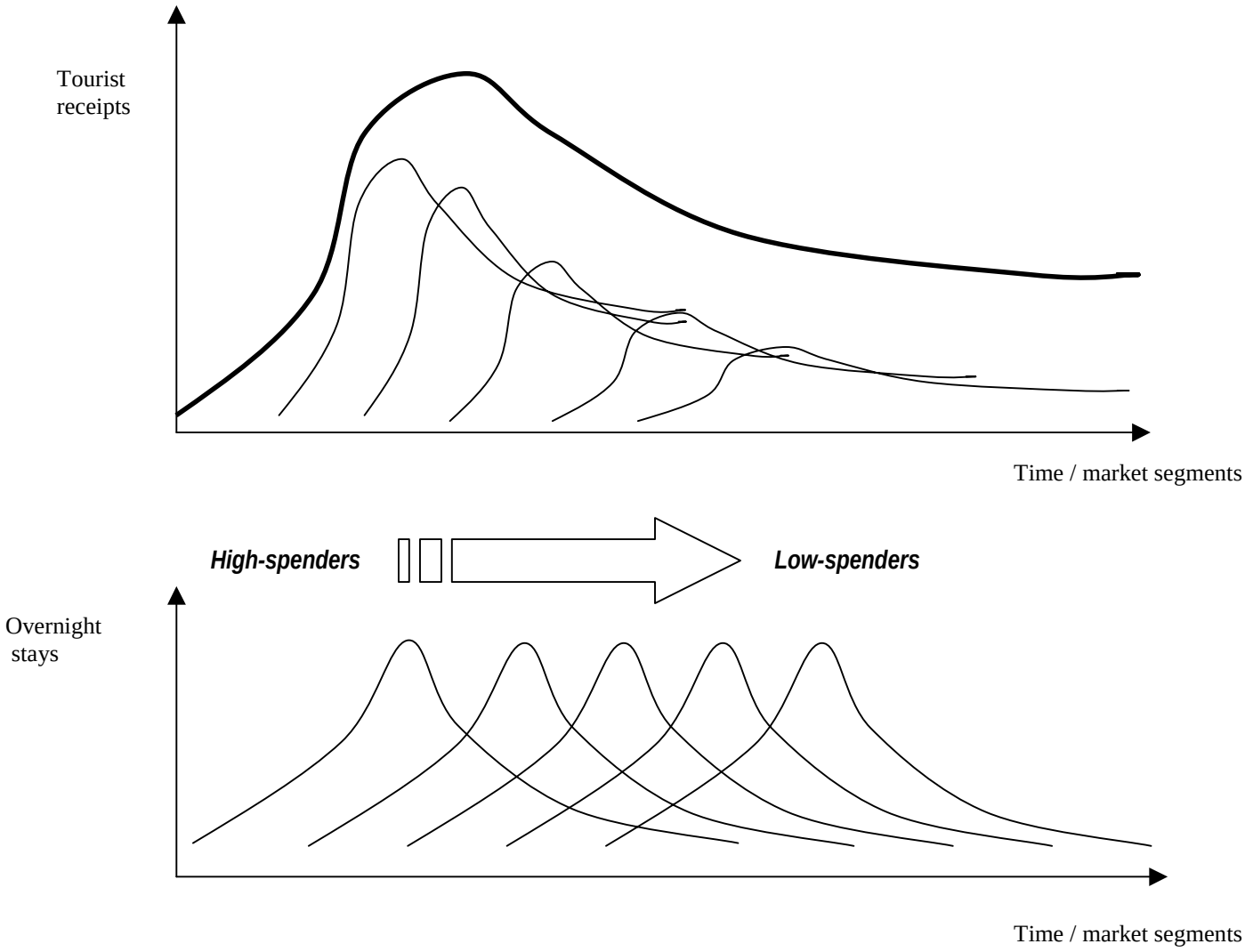

Fig. 4 – The life-cycle as a succession of market segments with decreasing purchasing power

An alternative explanation of heritage tourism unsustainability refers to the consideration that low-quality demand segments have a lower capacity to pay for the primary products, the heritage attractions. Therefore, it is the total receipts of the heritage industry to perform a life-cycle path [10] (Fig. 4), rather than the total number

[10] The idea of "profit cycles" as a macroeconomic approach to tourism development is also supported by researchers such as Haywood (1986), Debbage (1990) and Ioannides (1992). In our setting, though, general and sector macroeconomic trends are neglected, and local factors assume a greater importance.

of visitors. The heritage is then restored, preserved and made accessible to visitors as long as 1) a complementary industry earns good money; 2) visitors are willing to allocate a part of their budget on "cultural visits". Its capacity to generate revenues is high as long as the destination is popular among high spending and high demanding tourists, and progressively declines as these give way to less sophisticated visitors. And since tourism demand is originally generated by a high quality cultural environment, this progressive loss of value generation capacity from the heritage – with less and less money reinvested in conservation and increasing dependency from external funding and transfer – feeds a generalised loss of attraction capacity for the tourist destination as a whole.

The model can be conveniently enriched to describe how visitors substitute "cultural" with "non-cultural" goods within their tourist package when the prices of non cultural goods increase. In fact these two goods are very imperfect substitutes; when the price of the first increases, the quantity purchased can decrease only to a limited extent, e.g. economising on foods and beverages. Visitors may then decide just to stroll around the city rather than visiting museums or attending performances for which a price is paid. Conversely, if the production of high quality goods requires too high a price in order to be sustainable (for instance, due to the numerical pressure from excursionists), producers will cut on quality. Thus, only those with a low taste parameter (and a lower willingness to pay) consume the good, while those with high taste parameter may exit the market.

These long-term extensions clearly require a higher level of sophistication in the modelling of demand, and we leave it to further research. The important thing to note is that when the quality mechanism operates, the financing of the heritage industry becomes less and less dependent on locally generated revenue and increasingly dependent on external sources and transfers. The framework in which cultural policies operate becomes increasingly rigid and – in an age of progressive decentralisation and responsibilisation of local autonomies – it is more and more difficult to raise the money to preserve monuments and sites. In other words, and turning the argument upside down, it is suggested that "special transfers" accorded by national states to heritage preservation, like the one on which Venice can count (50 billions of Euro each year), in the long term may represent a "safety net" that induce irresponsible behaviour from tourism operators and the boundless expansion of tourism regions. Were the same amount of money utilised to subsidise a high-quality tourist production, the results in terms of sustainability could improve significantly.

6. Final remarks

This article focuses on the consequences of increasing tourist pressure on heritage destinations. The very nature of heritage destinations – where the supply of central accommodation is limited – guarantees that the expansion of demand has marked spatial features, as it may happen in the "periphery" of central, historic areas. To sustain a high-quality tourist market, prices have to increase accordingly. This is due to a central assumption of this paper, the lesser capacity of non-central visitors, or excursionists, to learn the true quality of the tourist goods. The sustainability of this process is dubious, if the reaction of the market is taken into account: visitors can substitute expensive tourist goods with inexpensive experiences, or change destination

altogether. This clearly affects the viability of heritage preservation, and the attraction capacity of the area with it.

This reinterpretation of the "destination life-cycle", based on strategic behaviour of agents in the tourist market, is consistent with the peculiar characteristics of heritage cities. It also yields clear indications for policy. In his enlightening discussion of the relation between the sustainability of tourism and sustainable development, Hunter (1997) suggests that the relation between the endurance of tourism development is too often and too simplistically equated to the general notion of sustainability of development for a tourist destination. Instead, he proposes that that sustainable tourism is a paradigm that depends on (adapts to) the contexts in which it is applied. He concludes that in «old and developed tourism areas», where tourism has become dominant in the local economy, sustainability can be achieved by a product-led tourism development strategy. However, our discussion highlights that in principle, if the pressure from the global expansion of demand for cultural tourism continues to increase, endurance of tourism can be achieved only at the expenses of quality. This is certainly incompatible with the preservation of the cultural assets on which tourism development is based. Therefore, a priority in tourism development policies should be the maintenance of quality through effective destination management.

Quality labelling and tourism signalling may achieve desirable outcomes in this sense; further opportunities are given by technological developments as e-commerce and tele-booking, which erode proximity and information advantages by monopolists. The availability of digital technologies to interpret and make accessible the cultural supply at "no cost" for the cities is a promising alternative to *hard* and *uninformed* visits. Such applications and their widespread integration might bring about an enormous increase in the value generated by the heritage. At the same time, the market power of obtrusive tourism commerce in historical centres is reduced, as well as the dependency of heritage preservation on unstable external revenue sources, is mitigated. More generally, a re-distributive mechanism between central and peripheral locations in tourism regions is certainly a more efficient way to fund heritage preservation and cultural development strategies than dependence on lump sum transfers from the national budget.

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