

## MANAGEMENT

### Pay as you go: a new proposal for museum pricing

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Museums have many different goals beyond economic efficiency, such as creating educational value, financial revenue, attracting donors, and gaining international or local prestige. Various pricing schemes with the aim of reaching these goals have been discussed. The classical pricing schemes are entry prices and free entry with exit donations, allowing for various additional goals. Each scheme has advantages and disadvantages. We propose an innovative pricing instrument: exit prices that reflect the time spent in a museum. This scheme has a number of advantages, in particular to increase the satisfaction and number of visitors.

**Keywords:** museums; admission prices; visitor satisfaction; cultural economics; museum management

#### Pricing and goals

The instrument of ‘price’ can be applied in many different ways to museums. The price may be zero (no charge), or it may be imposed or voluntary (in which case it is a donation). The price is usually paid at the point of entry, but we argue that a price also may be imposed when exiting. The price may be uniform or differentiated according to the length of the visit, the type of visitor, and the type of exhibition. Museum pricing may be used to attain a variety of different goals, which can be grouped into three categories:

- (1) Basic museum responsibilities: in his ‘Museum Manifesto,’ Noble (1970) describes the five basic responsibilities of every museum: collection, conservation, study, exhibition, and communication.<sup>1</sup> These basic goals are interrelated with each other, as well as with the pricing applied by the museums (Merryman 1989). In the decades following the publication of the ‘Museum Manifesto,’ Noble’s five-part analysis has proven to be useful as an evaluation tool for the systematic assessment of a museum’s performance. Pricing is a major factor in determining the number of visitors which, in turn, influences the conservation of the objects, for example.
- (2) Economic aspects: pricing is one of the main determinants influencing the economic outcome of museums. Because most museums receive public support, their economic performance is of high interest to policy-makers (for an introduction to the economic perspective of museums, see the seminal paper of Peacock and Godfrey 1974). Economic efficiency implies that the

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scarce resources of a museum should be allocated to produce as much satisfaction as possible. Maximizing social welfare or public value is the dominant and, in most cases, the only goal considered in standard neo-classical cultural economics.

However, there are other economic goals such as increasing sufficient financial revenue to cover the costs of the museum. Revenue depends not only on the price charged, but also on the income derived from the museum's shops and restaurants and the renting of museum facilities. Other possible goals concern lowering administrative costs, maximizing profit (in the case of private museums), attracting donors, or allowing for price differentiation – for example, different treatment for locals as opposed to foreign tourists.

- (3) Social or political aspects: a main rationale for the public support of museums is the existence of positive external effects. Politicians or museum managers often argue that free admission should be granted to attract the less educated social groups (Anderson 1998); however, museums should not end up as 'elitist' institutions. Theoretical and empirical considerations suggest that cultural activities produce more extensive and important positive externalities than elsewhere (Peacock and Rizzo 1994). Pricing can induce people, who rarely or never visit museums, to visit more frequently and, therefore, extend the benefits of the external effects. One of the most important effects is the educational value. Museums can foster creativity in general, or they can be designed to generate ideas for commercial activities (e.g., Victoria & Albert Museum, London). However, many of the educational benefits of a national museum materialize only when the level of participation is high and evenly spread across socioeconomic groups (O'Hagan and Duffy 1995).

Because public funding supports most museums, they are also subject to political concerns. Maximizing the number of visitors in order to increase reputation, gather publicity, or attract donors can be achieved through pricing or staging popular exhibitions. Prestige is generated by the museum for the nation, the region, or the local community. Many of the best-known museums in the world such as the Prado (Spain), the Uffizi (Italy), or the Louvre (France) are national icons representing the splendor of their respective cultures and countries.

None of these goals can be pursued without affecting other goals. Some of these goals cannot be achieved by the market even if price differentiation is applied. This constitutes one of the rationales for the public support of museums (for an extensive discussion of the economic policy aspects of museums and the cultural sector in general see Peacock, Victor, and Throsby 2006). The goals also differ from one museum to the other, depending on ownership and funding: public, private, donations, or something in between (Frey and Meier 2006). The analysis and impact of pricing also depend on the degree of congestion, i.e., the popularity of a museum. Successful museums have more possibilities to vary or increase the prices.

This article analyzes museum pricing, taking into account the different objectives. In contrast, standard economics focuses on efficiency. The bulk of the literature on museum pricing analyzes the *charging practice* and considers only one or a limited

number of museums (Anderson 1998; Bailey and Falconer 1998). Our approach studies the *charging principles* of museums. Museums have many different policy options. Economists can contribute relatively little to the discussion of what the proper objectives of a museum should be; therefore, we do not weigh the goals. In this article, we focus on pricing considerations but acknowledge that other policies, such as establishing a stronger brand, may also be of great importance. Furthermore, it is impossible to deal with all the varieties of pricing and the different goals in a limited space. Thus, we restrict our attention to free entry, which has been extensively discussed in the literature and which can be supplemented by donations. We review the entry price approach to museum pricing from the point of view of the different goals. In the following section, we propose a new variant of pricing – exit prices, which partly overcomes the disadvantages of other pricing schemes.

### **Free entry reconsidered**

There is an extensive literature debating the pros and cons of granting free entry to museums (Anderson 1998; Bailey and Falconer 1998; O'Hagan 1995). Some countries, such as the UK with its national museums (e.g., the National Gallery or the British Museum in London), follow this policy. If the term 'museum' is understood in a broader sense to include World Heritage sights (Frey and Steiner 2011), this policy is even more common. Free entry is granted to World Heritage cities such as Florence, Bern, Bruges, or Venice. Venice could quite easily impose an entry fee but, in fact, it does not, even though on an average day no less than 39,000 people visit and overcrowd this island and its severely restricted space. Other World Heritage sites like Machu Picchu have an entry fee, but the fee is so low that the site is badly overcrowded and the ruins are quickly deteriorating (The Economist 2010).

Generally, free access has become quite popular recently, and people are experiencing open access in important areas of their life. Take, for example, the Internet, where people are downloading songs and films or using open source software (Osterloh, Kuster, and Rota 2002). They also have experienced how goods, which in the past had to be bought, are now offered free of charge. Some examples are freely distributed newspapers or buses in city centers.

There are some important advantages of free access to museums. One is that it is considered to be 'social,' because poor people do not have to pay a price. Neither do the rich, however, but this is, surprisingly, not considered to be unfair. It may also help draw new groups into the cultural experience of museum visits, although this is doubtful (O'Hagan 1995; O'Hagan and Duffy 1995). Empirical evidence suggests that people who visit museums come predominantly from the higher social classes (Lampi and Orth 2009; Maddison and Foster 2003). Consequently, free entry favors the rich and hardly transfers welfare to the poor. It seems difficult to argue in favor of free entry and to subsidize museums for distributional reasons.

Another advantage is that free entry increases the number of visitors, which may be seen as a sign of increased cultural prestige for the museum (O'Hagan 1998). The cost of administration also may be somewhat lower. Finally, an important aspect is that donors prefer nonprofit firms, where the possibility that the managers of the firms can exploit donors and consumers are limited. The higher the admission charge, the less the donors may be willing to give money or objects. In contrast, with

zero admission, they have a higher incentive to make donations (Frey and Meier 2006).

Free entry is sometimes justified with the economic efficiency argument that the additional cost of admitting one more visitor is zero. In this case, the admission charge should be zero to satisfy efficiency (Peacock and Godfrey 1974). Admitting an additional visitor may increase the cost to the museum in a different way over the short run, as opposed to the long run. Only in the short run is the marginal cost of an additional visitor to institutions operating below full capacity zero. The long-run marginal cost is positive due to the cost of allowing visitors into a museum (security, heating, lighting, and physical space). However, even in the short run, there could be positive marginal costs – for example, the space that could be used for other purposes such as conservation. In highly visited museums, congestion costs might be significant.

However, there is a general consensus within the cultural economics literature that the costs of museum services are inadequately reported (Bailey and Falconer 1998). Museums and galleries usually do not consider the possibilities offered if they sold part of their collection, mostly because government museums are not allowed to sell. Museums also do not try to estimate the monetary value of their collection and include it among the assets in their book-keeping accounts. It is widely agreed that fees are insufficient to cover the full costs, for example, and visitors may receive a subsidy even when a charge is levied.

Providing free entry has several major disadvantages. Efficiency is not attained if the respective museums are sometimes overcrowded and the quality of a visit diminishes. Consequently, some museums resort to administrative entry restrictions, which benefit people belonging to an organized group. The Galleria Borghese in Rome, for instance, offers free entry to certain visitor groups but only allows visitors who made reservations a considerable time in advance. Thus, it is not possible for an individual tourist visiting Rome to see this major gallery except if that visitor has taken the necessary steps ahead of the visit. Another example, where *all* visitors enjoy free access, is the Santa Sindone (Holy Shroud) which is displayed this year in the Duomo di San Giovanni in Torino. There is always the danger that entry tickets could be reserved and then sold on the black market. In that case, the entry is costly for the visitor, but at the same time the museum does not get any revenue.

Free entry does not necessarily increase the involvement of people distant from cultural activities, and does not allow any differentiation between local visitors and tourists. Empirical evidence suggests that the entry price level does not affect visits by this group very much (Bailey and Falconer 1998). Even if there were no charge, the opportunity cost of visiting a museum can be too high, depending on individual preferences. Visitors also may think ‘something which has no price has no value.’ The total revenue of a museum decreases by giving free access, and Steiner (1997) estimated the impact of an additional free day on a museum’s total revenue. Including the cross-price elasticities of shops and restaurant sales, she showed that an additional free day is not profitable for the museum. The number of additional visitors that a museum attracts with free entry is not enough to offset the loss of admission receipts. Finally, the overcrowding caused by free entry contributes to the deterioration of the objects collected.

Museum directors are usually in favor of free access (Anderson 1998), and they follow rational considerations to maximize their benefits. Setting up a theoretical

principal-agent model for museum administration, Prieto-Rodríguez and Fernández-Blanco (2006) define two income sources for a museum: public grants and tickets revenues. The model defines the optimal contract for museum managers considering public grants, ticket prices, budget, and managerial efforts. In addition to theoretically confirming the insensitivity of consumers to price changes, they show that museum managers should not have control over the price of tickets in order to induce optimal managerial efforts. This is supported by an empirical study by Maddison (2004) who found that increasing nongrant income produced an equivalent reduction in government grants. A reduction in government grants and increased revenue through admissions result in a much higher effort for the museum managers.

Almost all museums, even those with free entry, ask for a voluntary contribution at the end of the visit (Bailey 1994b). In order to increase revenue, it is important to confront the visitors with this option. There are different possibilities for suggesting a donation: the museum could leave it up to a visitor as to how much to donate, or it could suggest a range or level of donation, or even insist on some payment, but leave the level of payment to the visitor. A main advantage of donations is that they attempt to capture payments according to willingness and ability to pay (O'Hagan 1995).

A voluntary exit donation may be instituted with the hope that visitors, having enjoyed their visit, are willing to make a generous donation to the museum. A classical *homo economicus* (the economic human – thought to be rational and narrowly self-interested by economists), however, would give nothing, having already profited from the museum and having no particular reason to give a donation at the end. Extensive empirical research in both laboratory and field experiments suggests that most people do not behave this way (Frey and Meier 2004; Meier and Stutzer 2008), and they are prepared to donate what they consider to be fair. The more satisfied they were with the museum, the more they are prepared to spend. Visitors have more choices available and this increases their satisfaction, inducing them to spend more in the museum shops and restaurant.

Therefore, it can be predicted that an exit donation will not undermine museum revenue. The arrangement can be considered social and may effectively increase the involvement of people who otherwise do not visit museums (compared to fixed entry prices). The administration is simple, but it is of special importance to have a friendly staff. As the donation is voluntary, it does not act as a rationing device and, therefore, may lead to inefficiently high numbers of visitors, thus overusing the museum. However, it is more efficient than free entry and produces more financial resources for the museum.

### **Entry charge**

Cultural economics, based on neo-classical economics, looks at museums as if they were businesses. Following standard welfare analysis, the goal is to allocate resources as efficiently as possible, that is, to maximize the net utility produced for society. The potential visitors have to be charged a price such that the marginal utility equals the marginal cost, or such that the demand for visiting the museum equals supply, normally given by a fixed capacity of persons able to visit the museum.

Achieving this goal is not easy because the utility of a visit (or the willingness to pay) depends on the number of visitors. The quality of a visit deteriorates when too many people want to see the objects.<sup>2</sup> Overcrowding results in queuing, noise, and even an inability to see the objects on display, and empirical evidence suggests that congestion costs can be significant. Using valuation techniques, Maddison and Foster (2003) estimated the congestion cost posed by the marginal visitors to the British Museum to be as high as £8.05. As the demand for visiting a museum varies, price differentiation is efficient when:

- Demand is low and far from full capacity. Then, the price should be close to zero as additional visitors produce very little additional resource costs. In contrast, when more people than capacity allow want to visit the museum, the price must be increased to ration demand. This guarantees that those individuals with the highest willingness to pay are able to enjoy the museum.
- People with a low price elasticity of demand (low price elasticity means that consumers do not react much to price changes – they do not decrease their demand much after a price increase) should be charged higher prices than those with a high elasticity of demand. Having two separate entry points into the museum can approximate this differentiation: one with a higher price and a shorter waiting queue and another with a lower price and a longer queue.
- Price can be differentiated according to whether people want to visit a special exhibition where demand is likely to be higher and, therefore, the price should be higher. The permanent collection should be priced lower. For example, in the UK, most national museums do not charge for admission, but half of them impose charges for special or temporary exhibitions (Bailey 1994b).

Another goal may be to charge local visitors lower prices and foreign visitors higher prices because they do not contribute to the funding of the museum through local taxes. This is often done for ski lifts, public swimming pools, and cultural venues, such as the national museum in Cairo. It is usually compatible with efficiency pricing because tourists have a lower price elasticity of demand and, therefore, should be charged more. When tourists are in a city which has a famous museum, such as the J. Paul Getty Museum in Los Angeles, California, USA, visiting the museum is a 'must.' It is then efficient to charge tourists a higher price as they will visit the museum even if the price is much higher than what the locals are prepared to pay. In this case, there is no conflict between the goals of efficiency and cultural involvement of the local population.

Although price differentiations according to elasticities, or as a rationing device, do contribute to efficiency, they are still surprisingly little used. The most important reason is that visitors reject many forms of pricing, an aspect disregarded by standard neo-classical economics (Kahneman, Knetsch, and Thaler 1986). For instance, visitors do not see why a person with a low income should not be able to visit a museum, whereas richer individuals are easily able to pay a high entry price. However, the rejection of pricing is not only related to income considerations. There are various reasons why a majority rejects the price system as rationing device. These include: (1) lack of information – non-economists are often not sufficiently aware of the forceful properties of pricing for resource allocation; (2) conflict over income distribution – interest groups, who expect to lose in the distributional struggle, block

the use of price. In the case of museums, free entry is usually proposed by higher socioeconomic classes that benefit the most from it; and (3) pricing is considered unfair – empirical evidence shows that the use of prices is not welcomed by a large share of the population in circumstances where most economists would recommend its use (e.g., in an excess demand situation. See Frey and Pommerehne 1993).

Museum directorates have accounted for this perception and have refrained from using extensive price variations. These reasons often seem to reflect the feelings of the museum community and public administration, rather than any deeper reason. However, almost every museum has some type of price differentiation. Often, only a minority of the visitors pays the full admission fee. There are discounts (in diminishing order of frequency) for children, the elderly, family groups, students, the unemployed, the disabled, groups of adults, members or ‘friends’ of the museum, and local residents (Bailey 1994a). These discounts often do not correspond to the best use of the resources available. For example, senior people respond less to a change in price; they could be charged a higher price without significantly affecting the number of museum visits. This may conflict with equity considerations, however, especially if the group affected has a lower income than other groups.

Admission charges can be considered reasonable because those who visit a museum are those who derive the most benefit from it, given that a benefit-related tax cannot be implemented. Their contribution through general taxation should be complemented by an admission charge. Visitors derive an extra benefit from going to a museum, in addition to the existence value, and should pay for these extra benefits.

The price elasticity for cultural demand is normally estimated to be rather low. Felton (1992) showed that, for opera attendees, the ticket prices had a negative influence on demand for the opera tickets only if the prices of these tickets reached a very high level. Thus, Felton assumed that ticket prices were not the best explanation for demand. Throsby (1982) found that quality characteristics had a much higher influence on demand than price. Luksetich and Partridge (1997) also focused on the trade-off between the revenue-enhancing nature of charging, or increasing admission fees, versus likely decreases in attendance resulting from higher prices. Their major finding was that museum price elasticity is very inelastic ( $-0.25$ ). A museum facing financial difficulties, therefore, can generate significant increases in revenue by increasing its admission fee. Moreover, although introducing a charge may reduce the number of visits, it might well be that this may be compensated for by the duration of the visits.<sup>3</sup>

Two frequent suggestions made in the literature are to levy an admission charge only for extra services, or to use the revenue created to make the museum more attractive. Where the additional revenue increased by a charge is used to improve the standard of service, the number of visitors tends to increase. O’Hagan (1995) found no negative effect of introducing an admission charge on attendance – rather the contrary. By introducing an admission charge, the Long Room of Trinity College Dublin, Ireland, made several service improvements for visitors. However, there have also been more overseas visitors in Dublin in general with low price elasticity. Furthermore, if there is no close substitute for a museum, consumers have a relatively low price elasticity of demand for attendance.

Quality is an important determinant of cultural demand. People show a willingness to pay a price above the actual admission fee if the quality of the exhibition is high (Institut für Museumskunde und ifo Institut für Wirtschaftsforschung 1996).

Admission charges also can be used to promote access. In this case, the revenue from charges is an additional income for the museum provided that other funds are not reduced. This may finance increased access in cases where museums no longer have to cut costs by reducing the hours of operation, or where those revenues finance 'outreach' programs. These suggestions are supported by the findings of Kolb (1997). The general assumption that young people do not attend cultural events (in this case the performing arts) because ticket prices are too high is contradicted. The major barrier for students is not the cost but the idea that art events are boring.

The great advantage of pricing according to neo-classical principles is that it produces an efficient allocation of the scarce resources of museums – at least up to a point, as efficiency is only local. Due to falling average costs, which result from high fixed costs being distributed over a larger number of visitors, marginal cost and price are below average, resulting in a deficit. If the dead weight loss of financing this deficit is large, the situation may no longer be efficient overall. The deficits produced by museums are generally only a minute part of the overall public budget, so that the additional deadweight loss can be assumed to be minor. An additional advantage of the traditional approach to pricing is that the cost includes the deterioration in the quality of the objects due to large numbers of visitors.

The efficiency approach has various problems because it does not consider the distributional aspects. Moreover, it does not consider the goal of attracting new groups to the cultural experience of visiting museums or the benefits of the spillover effects outside the museum, including the national, regional, or local prestige effects. However, because consumers show a low price elasticity for cultural demand, the negative effect of increasing the admission price tends to be small. If the revenue created by admission charges is used to improve the quality or to provide extra services, it is even possible to attract a larger audience.

### **Exit prices**

Considering the significant negative aspects of free entry and efficiency pricing, we propose a new pricing mechanism for museums: the application of exit prices. Instead of charging visitors when they enter the museum, charge them when they leave it. The longer they spend in the museum, the higher the exit price. Surprisingly, this pricing mechanism has not been considered in the debate about museum admission fees so far. This 'art per minute' is similar to the costs of putting a car into a parking garage and then paying at the exit according to the length of time the facility has been used. There are also similar pricing schemes for swimming halls or saunas, which provide joy and satisfaction to their visitors as museums do. Some overcrowded museums with entry prices have a maximum visiting time – for example, Leonardo Da Vinci's painting of the Last Supper in Milan, Italy is 15 minutes. This can be seen as anecdotal evidence that paying for a cultural experience based on the amount of time it is enjoyed is acceptable to visitors.

Museums would have to make sure that visitors knew that there was an exit price before they entered, so that the visitors could make a well-considered decision on the length of time to stay. For instance, it may indicate that an hourly visit costs 10 Euros and a two hour visit costs 15 Euros. The price does not have to be calculated discretely as it also can be calculated continuously – for example, per minute. Marginal admission rates (the price a visitor has to pay for an additional minute) can



be constant or decrease with time. Decreasing rates would encourage a longer visit since the average-cost-per-minute is decreasing. Price discrimination is also possible. One goal could be to lower charges for the local population or younger people who respond strongly to price changes. One also can consider fairness arguments, such as charging a lower rate for unemployed visitors, but this may lead to a small increase in administrative costs.

Exit prices have the major advantage that they take into account how satisfied the visitors were with the museum. One critical, but usually disregarded characteristic of a museum, is that the visit is an 'experience good.' An experience good is a product or service where the product characteristics, such as quality, are difficult to observe in advance, as these characteristics can only be ascertained upon consumption (Nelson 1970). Experience goods pose difficulties for consumers in accurately making consumption choices, and this characteristic can justify charging the visitors of a museum when they leave. Efficiency is increased because the visitors pay according to their use of the facility. Compared to an entry price, they have an additional margin to adjust according to their preferences, which is due to raise their satisfaction.

One of the basic tenets of welfare theory is that individuals gain when their opportunity set is larger (Frey 1999). Those whose utility increases when they choose a bundle of goods in the enlarged set (museum visitors who can adjust the time and money they spend) are better off, while all the others do not lose anything (the ones who do not visit museums). Methodological individualism, a basic assumption in economics, claims that people are reasonable (though not perfectly rational or selfish). In this case, the time spent is directly connected to an individual's willingness to pay. Therefore, we assume that the satisfaction (or in economic terms the utility) of the individual visitor is higher the longer the visit. In this respect, the length of the visit is an individual decision or one might say a quality judgment, not a representative or objective quality signal.

As a side effect of being more satisfied, visitors may be willing to spend more money at the museum's shop and restaurant. Moreover, an exit price is considered to be less unfair than an entry price. Those staying longer have profited more and may find it fair to pay more than somebody staying only for a short period. Exit charges lead to a greater involvement of people otherwise distant from culture, if a certain amount of time at the beginning of the visit is free of charge. When, for example, the first 20 minutes are free, they can leave the museum without paying if they are not enjoying it. With entry prices, the cost must be paid at the very beginning and it may not motivate them (Kirchberg 1998). The scheme is not difficult from the administrative point of view as pricing can easily be done by machines. However, in order to allow for price discrimination, the admission booth would have to be moved to the exit.

A second rationale behind our proposal is the congestion costs imposed on other visitors. The more time that a visitor spends in the museum, the more cost the visitor imposes on other visitors in terms of physical stress. As mentioned above, congestion cost can be significant. In order to account for the negative effects, there is justification for paying more the longer one stays. Furthermore, the introduction of an exit price may be a good advertisement for the museum due to the media coverage of the innovative pricing scheme. Compared to free entry, exit prices increase revenue and help to preserve the objects on display by increasing funds and helping to restrict access. The additional revenue also can be used to increase the quality or to extend

the hours of operation and therefore attract more visitors. The effect of exit prices on revenues is not clear in advance because some visitors would pay less and some would pay more compared to nonadjustable entry prices. As the entry barrier is lowered, more visitors would tend to be attracted. The distributional aspects would be mitigated because the wealthier visitors of art museums have to pay to enjoy publicly supported museums. The performance of exit prices with regard to these goals, compared to entry prices, depends on how they are fixed and cannot be evaluated in general.

The standard *homo economicus* of neo-classical theory would optimize the intake of culture per minute to balance the pro rata price of exit, and this may be considered a disadvantage. The length of the museum visit becomes even more a part of an economic calculus than it already is. In the case of entry prices, individuals only have to calculate the opportunity cost of their visit because the price does not depend on the length of the visit. One negative aspect of exit prices is the incentive to maximize the cultural intake per minute and to rush through the museum. This conflicts with the idea of a cultural experience being independent from economic necessities. However, by applying decreasing marginal rates per minute, the total price that a visitor would have to pay has a maximum boundary (especially if the marginal rate is zero after a certain amount of time). Even if the visitors lose track of time, they never pay a punitively high price because there is a maximum price. By explicitly indicating this maximum price at the entry, the perceived time pressure and incentive to rush can be mitigated considerably. Another possible extension of the exit price mechanism is a refund at the end of the visit. In this case, the visitors would buy their ticket at the entrance, but if they stay less than a certain amount of time they would get their money back according to how much less time they spent in the museum. This variation is analogous to ski resorts where visitors get a refund if they use their daily pass for only a few hours. Basically, the positive aspects are the same for exit prices; visitors pay according to their satisfaction. However, because visitors have already paid at the entrance, the incentive to rush is weakened. When discussing potential pressure induced by exit prices, one has to compare this system with entry prices. It is possible that there is also emotional stress induced by high entry prices. If visitor have already paid the high entry price, they might feel committed to stay longer than they planned or wanted to.

Overall, exit prices have the same advantage as entry prices when compared with free entry. In addition, exit prices have three main advantages: first, they take into account the good characteristics of a museum visit. Visitors can make accurate consumption choices and adjust their time and money according to their derived satisfaction. Second, the opportunity set of visitors is increased. Both aspects raise visitor satisfaction. Third, the entry barrier is lower than with a fixed entry price. People who do not necessarily identify with cultural activities, or people who only want to spend a short time, would have a higher incentive to visit a museum than if it had a (high) fixed price.

## **Conclusion**

Museums have many different goals to fulfill, other than efficiency, as assumed in neo-classical economics. Important additional goals include social equity, the involvement of groups otherwise far from culture, financial revenue, spillover effects

on other institutions, conservation of the objects collected, administrative simplicity, and the international, regional, and local prestige of the museum.

Various pricing schemes have been discussed. The classical ones are free entry and efficiency entry prices. Both have significant advantages and disadvantages. Free entry has the potential to attract more visitors but, because museum visitors come mainly from higher socioeconomic classes, waiving the fee results in an undesired redistribution from lower to higher income classes. The existence of positive external effects of museum visits supports free entry. However, the benefit for visitors is higher than for nonvisitors. Short-run marginal cost above zero and a low price elasticity of cultural demand also speak for some kind of admission charge. Standard pricing fulfills efficiency criteria, but it has been argued that people are opposed to the use of the price system to ration demand. The price system is considered unfair because it does not take into account the distributional aspects and the actual 'needs' of consumers. Free entry offers more flexibility when accounting for various goals – in particular, involving people who otherwise rarely or never visit museums.

This article proposes a novel approach, which the museum pricing debate has thus far ignored: the use of exit prices. Exit prices have some disadvantages, such as people might be induced to rush through the exhibition, but this type of behavior can be mitigated by charging a marginally decreasing exit price per unit of time and indicating a maximum price. Exit prices also have a number of notable advantages. The most important is the increased choice available to visitors, which increases their satisfaction. Because a museum is an experience good, it is difficult for consumers to make accurate consumption choices in advance. Efficiency is increased because the visitors pay depending on their use of the facility. Exit prices also may be considered fairer when compared to efficiency pricing because people can adjust their payment according to their needs. Furthermore, due to the lower entry barrier, more visitors might be attracted to the museum.

When evaluating the impact of different pricing schemes, it should be noted that there are also other barriers to access, such as inflexible opening hours, unimaginative presentation, and traveling costs. In the end, the impact of exit prices on the different museum goals, especially visitor satisfaction, is an empirical question which can be investigated with a field experiment. Exit prices are only one example of an innovation in museum prices, and it would be interesting to see other alternatives to classical entry pricing or to free access.

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### **Notes**

1. Noble's five goals were later condensed to preservation (as combination of collection and conservation), research, and communication (which includes exhibition and communication); see Weil (1990)
2. The relationship between quantity and quality does not have to be uniformly negative. Many people do not enjoy being in an empty museum, so that in that range more visitors increase the utility of the other visitors.

3. There are also studies that find a stronger impact of charging on attendance. The AEA management consultants calculated that by introducing an admission charge (depending on the pricing scheme) the British National Museum's attendance would drop between one-quarter and one-third. Museums, which initially charged but then removed the fees, were able to increase the numbers of visitors significantly. For example, in the Art Gallery of Victoria in Melbourne, the number of visitors increased from 600,000 to more than one million (see Anderson 1998).

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