

A scientific research study analyzes when to buy airline and theater tickets

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This picture shows a small composition of airline and a theater tickets. Credit: UC3M

Do you fancy watching a musical in London? Then, according to a research study at the Universidad Carlos III de Madrid, if you want to save money you should buy your airlines long in advance, but postpone the purchase of your theater ticket until the last minute.

Why do airline tickets become more expensive as the travel date approaches whereas theater tickets are sold at half price in Leicester Square on the day of the performance? In their recent article published in the *Economic Journal*, ("Advance Purchase Discounts versus Clearance Sales"), Professors Marc Möller and Makoto Watanabe from the UC3M Department of Economics have considered the pricing of products that can be purchased in advance, i.e., long before their actual date of consumption. Further examples include seasonal products like the newest skiing equipment or entry slots for marathons.

According to the study, there are two determining factors for optimal planning for prices. On the one hand, when purchasing early, consumers face uncertainty with respect to their own future demands. "When we reserve our flight to London weeks ahead we have to take into account the possibility that unforeseen circumstances could keep us from traveling to London", the study's authors explained. "In order to make consumers take their chances, airlines have to offer advance purchase discounts. As a consequence ticket prices increase as the travel date approaches," they added.

On the other hand, when purchasing late, consumers face the risk of becoming rationed. When we purchase our theater ticket last minute, there exists the possibility that the event has sold out. In order to make consumers bear this risk, theaters implement a clearance sale by offering last minute discounts. As a consequence ticket prices decrease on the day of the performance

The optimal dynamic pricing strategy depends on the interplay between individual demand uncertainty and rationing risks. In turn, rationing risks depend on a comparison of demand and supply and hence on the seller's capacity. Differences in dynamic pricing can therefore be explained by differences in capacities. Marc Möller and Makoto Watanabe show that advance purchase discounts will be employed by sellers whose capacity is relatively small in comparison to demand whereas Clearance Sales are optimal when capacities are large. Hence differences in the pricing of airline and theater tickets can be explained by the fact that air travel to London is a relatively tight market while the long running musicals of London's West End are very unlikely to become sold out.

The article shows further that clearance sales are more likely and advance purchase discounts are less likely to be observed in markets where prices can be committed to in advance, temporal capacity limits are difficult to implement, and resale is feasible. These results provide

further reason for the observed differences in pricing.

In addition, in his ongoing research Makoto Watanabe has found evidence which shows that air fares are lowest around eight weeks before the travel date. Moreover, it seems as if tickets are cheaper when purchased in the afternoons, rather than the mornings. Do airlines price discriminate between business travelers who book their [tickets](#) at work and leisure travelers who book from home? This claim still has to be confirmed in future research.

Provided by Carlos III University of Madrid

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