

1 Homework Questions

1. Car rental prices are dynamic. For example, after you rent a car for your next trip at a certain price, you may find out a few days later that the rental price is dropping. To avoid this a consumer may delay his rentals until the last day before his trip.
 - a) One of the risks in delaying a rental is that the prices may increase. What is another risk of delaying the rental?
 - b) Unlike business passengers, leisure passengers buy their airline tickets well in advance of their departure. Both business and leisure customers rent their cars a few days in advance. Knowing this, airlines tend to increase ticket prices towards the departure day. Explain, if this tendency will be stronger or weaker with rental car companies.
2. [AutoSlash] Observing that there are some instances where the car rental price dropped towards the rental day, AutoSlash decided to offer a service of re-pricing. Quoting from a real-world example of re-pricing from their website:

Let's say you book a one-week rental Las Vegas via AutoSlash for \$210. Within a few hours of booking, you receive an email from AutoSlash notifying you that we were able to find a discount to lower your rate to \$180. We automatically re-booked you at the lower rate, and you've just saved \$30 without even lifting a finger.

A few days go by, and you find another email from AutoSlash. This time, we let you know that we detected a price drop for your rental. The rate has dropped from \$180 to \$165, and we've saved you another \$15.

AutoSlash rents cars and receives commissions from the car rental companies. Its business model is similar to that of Expedia.

- a) There is no service fee for re-pricing. Does this mean that consumer can confidently use AutoSlash? What should they be careful of?
 - b) Suppose that consumers are confident with AutoSlash and use it frequently, how would car rental companies respond to this change with their rental fees? In particular, will rental prices become more dynamic or less dynamic?
 - c) Suppose that the car rental companies decide to make rental prices less dynamic, how will the value AutoSlash offers to customers change? In particular, will customers value re-pricing service more or less?
3. DTU (Dallas Technology University) is a leading school in Texas. It offers a supply chain master degree and charges \$80 K for the degree. The expected lifetime earnings increase after getting this degree is \$500 K. The cost of educating a single master student at DTU over the 2 year degree is \$50 K. On the other hand, NTU (New Technology University) offers a similar master degree which leads to an expected lifetime earning increase of \$300 K. Suppose that NTU's cost is also \$50 K for educating a master student.
 - a) DTU competes with NTU for master students and wants to reconsider its \$80 K fee for the master degree. DTU knows NTU's costs and the expected lifetime earnings increase for the master students. DTU does not know how much NTU exactly charges for its master degree but estimates that the charge is about the cost of \$50K. What should the new DTU fee be in order not to lose potential

students to NTU?

To answer this question, consider the marginal benefit of getting a master from DTU as opposed to NTU.

b) DTU quickly learns that NTU charges \$70 K for its master. Given this price, what is the maximum price DTU can charge and remain competitive.

c) The prices above are driven by the expected lifetime earning increase. This information is hard to get and is substituted by annual starting salaries upon graduation. Describe how expected lifetime earning increase can be computed from starting salaries.

4. Recall cost based pricing, market based pricing and value based pricing discussion. Consider the DTU fee discussed above. Explain how should DTU set the fee if it is using

a) Cost based pricing.

b) Market based pricing.

c) Value based pricing.