

Policy

Carl Shapiro
Hal R. Varian*

University of California, Berkeley

September 1998 (revised: September 19, 1998)

1 How differential pricing can benefit consumers

By and large, the government does not stand in the way of differential pricing, the Robinson-Patman Act notwithstanding. Still, you may want to demonstrate that your pricing policies benefit consumers, either to fend off a legal challenge from a group of disfavored customers, or to prevail in the court of public opinion. You can always argue that differential pricing is important in allowing you to recoup the investments necessary to create your product or information; this may even be true. Beyond that, however, you can use the same methods that we discussed earlier in identifying the optimal pricing strategy to explore the impact of that strategy on consumers, be it favorable or not. We illustrate these methods here with a hypothetical example.

Suppose that you are selling a newsletter of Silicon Valley gossip called “Valley of the Dulls” that describes the exciting lives of Cupertino software developers. Initially, let us suppose that there are 100 people who would each pay \$20 to read the newsletter, and 1000 people who would each pay \$6 to read the newsletter. Suppose that you distribute the newsletter by email every Wednesday, and there are no per-unit production costs.

*Notes to accompany *Information Rules: A Strategic Guide to the Network Economy*, Harvard Business School Press, 1998. © 1998, Carl Shapiro and Hal R. Varian. All rights reserved.

	Impatient	Patient
Wednesday version	20	6
Friday version	5	5

Table 1: Willingness-to-pay of impatient and patient readers for Wednesday or Friday newsletter.

The most profitable single price for the newsletter is \$6. At this price you will sell to all 1100 people and generate revenues of \$6,600.

But now you read Chapter 3 and decide to version your information. You decide to differentiate your product via delay, issuing a “pre-release” newsletter on Wednesday, and saving the “general release” till Friday. The impatient people are still willing to pay \$20 for the Wednesday version, while the more patient readers find the old gossip worth just \$5 per issue rather than \$6. Finally, suppose the impatient readers also value the delayed news at \$5. These numbers are summarized in Table 1.

How are your profits affected by the versioning strategy? Issuing two versions you will sell 1000 copies at \$5 and 100 copies at \$20, making \$7,000 of profit. So versioning definitely increases profit. But what about consumers? Are they better off? The answer is “no.” The same number of consumers are served with and without versioning. And the delay introduced by versioning has a social cost of \$1 per person for each of the 1000 patient readers. This extra cost imposed on the patient consumers outweighs the extra profit you captured. Overall, versioning is inefficient in this case.

But it doesn’t have to work like this; if we change the numbers in the example we get the opposite result. Suppose now that there are 1000 people willing to pay \$20 to read “Valley of the Dulls” on Wednesday and only 100 people cheap enough to pay \$6 for Wednesday delivery or \$5 for Friday delivery. In this case, if a single price were charged, it would be \$20 since the revenue from this choice, \$20,000, exceeds the revenue from either the \$6 or \$5 price.

In this second hypothetical case, versioning allows you profitably to sell to the Friday cheapskates without cutting into your Wednesday marketing, raising your revenues to \$20,500. This is a clear win from the social point of view: you, as publisher, make more revenue, the impatient read-

ers pay the same price as without versioning, and patient readers are only served if versioning is possible. *Everybody* is at least as well off under versioning in this case, and some groups are strictly better off.

The example can be made even more compelling by looking at the fixed cost necessary to create the newsletter in the first place. Recall that our second example, the best you could do without versioning was to earn revenues of \$20,000. With versioning, you can capture revenues of \$20,500. If it costs, say \$20,100 to produce the newsletter, you wouldn't be able to cover your costs without the differential pricing. So the product wouldn't even be *available* unless differential pricing is feasible.

In this particular example, there is little difference between the revenues with and without versioning. But the larger the number of people with the low willingness to pay, the larger the revenue difference will be. Conclusion: the key issue in evaluating the social merit of price differentiation and versioning is to see whether it allows new markets to be served. If the answer is "yes," then versioning is likely to be socially desirable. The clearest instance of this result arises if versioning is necessary to recoup the expense of creating the product in the first place.