Journal of Financial Services Research 22:1/2 91–93, 2002

Comments on Clemons, Hitt, Gu, Thatcher, and Weber

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1. Introduction

The paper by Clemons et al. addresses the impact of the Internet in three different areas: price transparency, differential pricing (price discrimination), and bypass or disintermediation. In my discussion, I will focus on the same topics and in the same order. However, instead of directly addressing the points made in the previous presentation, I will present some complementary information to help assess the likely impact of the Internet. This will include facts, factoids and a few conjectures, and, like Clemons et al., I present data from nonfinancial industries, in the hope that they are of some relevance to financial industries as well.

2. Price transparency

Contrary to popular belief, price dispersion seems remarkably robust to the transition from bricks to clicks. Brynjolfsson and Smith (2000), for example, present evidence from CDs and books. They show that, while average prices online are slightly lower than offline, both show similar degrees of dispersion (see also Clay et al., 2001). The evidence is even more striking when we consider behavior in shopbots.[1] Shopbots are the ultimate stage of price transparency, where all price information (including taxes and shipping charges) is available at once. Still, we observe significant price dispersion at shopbots, with a large number of shoppers buying at a price greater than the minimum price. This is by no means the only documented violation of the law of one price. For an equally puzzling case, see Asplund and Friberg (2000), which analyzes currency choice in Scandinavian duty-free stores.

What is going on here? How can we explain persistence online price dispersion despite apparent product homogeneity and price transparency? My explanation is that, greater transparency notwithstanding, we are still a long way from the ideal model of a homogeneous product. True, a Harry Potter is a Harry Potter, no matter which bookstore delivers it to me. But there are a number of non-contractible aspects of online transactions that imply significant differentiation across sellers. For example, how confidant am I that

1 Shop bots are aggregators of price information. For a given item chosen by the visitor, these sites show the various online vendors such item can be bought from. Vendors can be listed by price or by some other criterion. Finally, with a simple click, the visitor is directed to the desired vendor.

the book will be delivered on time—in fact, delivered at all? These non-contractibles imply that *reputation* is a very important element of online transactions, probably more so than offline (see Resnick and Zeckhauser (2000)). For this reason, I am willing to pay more for the same book sold by Amazon.com, as in fact many buyers do (even in shopbots).

Although I have been talking about books and CDs, I believe much of this extends to financial services as well. Reputation and name recognition are quite important, perhaps more so than in the traditional offline context. As an example, consider e-Trade's heavy and hardly informative advertising.

3. Price discrimination

Is price discrimination enhanced by the Internet? I think the answer depends a great deal on what kind of product we are talking about. For books, for example, the answer is probably Yes, for several reasons. First, the Internet provides sellers with information about their visitors' web habits and past actions, in a way that facilitates differentiating between potential buyers. For example, different prices can be offered to buyers depending on whether they reached the site directly or through a shopbot (in which case the buyer's price elasticity is presumably higher). Second, and perhaps more importantly, ''relationship marketing'' is easier on the Internet. Each time a customer buys from Amazon, a new piece of information is gathered regarding the buyer's preferences. This allows Amazon to gradually tailor its offerings (both in terms of selection and in terms of price) to the repeat customer.

Does this apply to financial services as well? Not entirely. As Eric Clemons et al. rightly point out, face-to-face contact is a very important part of the process of price discrimination in financial services. Much of this—in fact, all of it—is lost in an online transaction. To summarize, there are pluses and minuses when considering the impact of the Internet on price discrimination. If we factor in noneconomic elements such as privacy considerations and the public's resistance to differential pricing, I think it is safe to conclude that the Internet will not greatly enhance the scope for price discrimination in financial services. Regarding the public's resistance to differential pricing, witness the recent uproar following the news that Amazon was selling the same videos at different prices to different customers.

A related question is, even if firms are able to better price discriminate, are they better off by being able to do so? Corts (1998) has recently argued that the ''metagame'' whereby firms decide whether or not to price discriminate may have the nature of a prisoner's dilemma: it is a dominant strategy for each firm to price discriminate, but firms are together worse off as they all decide to price discriminate. A general framework where this type of prisoner dilemma appears is presented in Cabral and Villas-Boas (2001). Much of the excitement about the profit opportunities from dynamic pricing and customer recognition may be exaggerated once we take the effects of competition into account.

4. Bypass and disintermediation

Clemons et al. suggest that the Internet is creating a serious threat of disintermediation. I think this is an area where generalizations are difficult. The broader question that we should ask ourselves is whether the Internet is a substitute or a complement to traditional channels. Take for example grocery shopping. Households have a fairly fixed demand for groceries. Shopping online or offline are two alternative ways of achieving the same end. In this case, the Internet is a substitute for offline shopping. The same is probably also true in the case of personal computers. In fact, a recent study by Goldsbee (2000) estimates a cross price elasticity of -1.5 between offline and online purchases.

Consider now the example of cars. Despite much talk about online dealers crowding out more traditional channels, the fact is that very few car purchases are made online. However, a significant number of buyers use the Internet to search information. Morton et al. (2000) present some interesting evidence to this effect. In this case, I would say that more than bypassing traditional retailers, online sellers are complementing them in important ways.

What about financial markets? In cases like banking, I think we are closer to the ''cars'' example, where the Internet is a complement, not a substitute. In cases like exchanges, I think disintermediation is more likely the situation.

In summary, it is difficult to generalize: the impact of the Internet is likely to differ a great deal from case to case. In fact, I would expect each case to have both elements of substitutability and complementarity. Online banking, for example, enables new services that consumers could not have access to offline, thus allowing a given brick-and-mortar bank to provide a better service. On the other hand, newly created online banks are likely to steal some market share from existing ones. In this sense, the Internet is creating substitutes to traditional channels.

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