Explaining the benefits of eBay's features in consumer problem solving decisions

Joshua Chang
University of Wollongong, jchang@uow.edu.au

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Explaining the Benefits of eBay’s Features in Consumer Problem Solving Decisions

Joshua Chang
University of Wollongong, Australia

Abstract

The Internet has provided significant search and evaluation benefits to shoppers over traditional alternatives. According to theory in the economics of information, preceding media technologies constrain the quality and quantity of information available to shoppers. This contributes to the problem of bounded rationality in consumer decision making. Today, Internet technologies facilitate an unprecedented richness and reach of information that enhances the shopper’s ability to search and evaluate merchants, products, and prices, mitigating the aforementioned problem of bounded rationality in decision making. Engendered by progressive Internet technologies, leading Internet auction site eBay.com provides a number of search and evaluation features such as reputation ratings, past buyer comments, and prices of completed transactions. This paper explains, with theoretical implications, the benefits of eBay’s search and evaluation features in consumer problem solving decisions.

Keywords: Internet Marketing, Internet Retail, Consumer Problem Solving, Consumer Behaviour, eBay
I. Introduction

The Internet has provided significant search and evaluation benefits to shoppers over traditional alternatives. According to theory in the economics of information (Evans and Wurster 1999), preceding media technologies constrain the quality and quantity of information available to shoppers. This contributes to the problem of bounded rationality in consumer decision making as a consequence of inferior information. Today, Internet technologies facilitate an unprecedented richness and reach of information that enhances the shopper’s ability to search and evaluate merchants, products, and prices, mitigating the aforementioned problem of bounded rationality in decision making (Samuel and Chang 2005). Bounded rationality, according to Au and Kauffman (2005), is defined as the limited cognitive capacity of humans in decision making when they face problem complexity under the constraints of time and lacking information.

II. Significance

There is a paucity of research in the area of online C2C auctions considering that this phenomenon is barely a decade old (Stern and Stafford 2005), with most research done in the area of reputation (e.g. Resnick and Zeckhauser 2002, Ba and Pavlou 2002, Dellarocas 2003) and bidding behaviour (e.g. Dholakia and Soltysinski 2001, Roth and Ockenfels 2002, Gilkeson and Reynolds 2003, Stern and Stafford 2005). The purpose of this paper is to provide a conceptual understanding of how search and evaluation features available to shoppers in eBay can improve consumer problem solving by mitigating the problem of bounded rationality, based on economic theory that assumes rational value maximisation in consumers. Zeithaml (1998) suggests that consumers are ‘value driven’.

Information on how such benefits associated with online shopping can improve consumer problem solving would be useful to buyers for better decision making, and to retailers for improved marketing strategy formulation. This paper reviews the benefits of eBay’s features according to the theory of richness and reach by Evans and Wurster (1999), and explains how these benefits can tilt consumers in favour of online purchase over offline purchase according to the theoretical model ‘the balance of considerations influencing consumer problem solving in the online purchase decision’ (Samuel and Chang 2005). While an economic approach to analysing consumer
problem solving provides a simplified explanation on a topic that is often complicated, the inevitable limitation is that emotional responses affecting consumer decisions (Holbrook and Batra 1987) are not examined and C2C auction bidding can be an emotional process (Smith, 1989) where bidders are likely to ignore principles of value maximization to win a coveted item at any cost (Riley and Samuelson, 1981).

III. EBay’s Features
EBay was incorporated in 1995 and has grown to become the most successful business on the Internet (Cohen 2002). EBay has grown rapidly from 42.3 million registered members at the end of 2001 to 104 million at the end of 2003, with more than US$23 billion in goods and services changing hands through eBay in 2003 alone (eBay 2005). 430,000 small businesses in the U.S. have opened storefronts on eBay (IBM 2004). EBay’s net profit has progressively grown more than tenfold from US$90,448,000 at end 2001 to US$1,082,043,000 at end 2005 (eBay 2005).

Shoppers in eBay have the option to purchase items in an auction-style format or at a fixed price through a feature called ‘Buy It Now’. On an average day, there are over ten million items listed for sale on eBay. People visit eBay to buy and sell items in thousands of categories from collectibles like trading cards, antiques, dolls, and housewares to practical items like used cars, clothing, books and CDs, and electronics (eBay 2005). EBay provides many advantages for buyers and sellers including information on product availability/competition, comparison price points, access to products otherwise unavailable, market-determined price points and entertainment (Bosnjak et al 2006).

Technology driven applications in eBay’s website (ebay.com) provides shoppers with a range of search and evaluation features in areas such as product, price, delivery, and merchant reputation. These applications can improve the efficacy and efficiency of customer problem solving and decision making.

IV. Product
Product listings on eBay support literary, pictorial, video, and audio information for evaluation purposes. Shoppers are able to search the product listings using keywords. The system lists all the products on sale according to the keywords, and allows the
shopper to refine the listings according to relevant or matching categories. Shoppers are also able to search for product by clicking on relevant categories which can be highly defined. This allows them to instantly find a specific item from over ten million product listings (eBay 2005). Buyer's product guides are available in eBay for a wide variety of product types. A link to the buyer's guide for a particular product type is located in the column on the left of the item listings. These guides can help shoppers make a more informed purchase by providing detailed information on a particular product type and how to evaluate them. For example, if a shopper is looking to buy a diamond, eBay provides a detailed guide on how to evaluate diamonds including information on certification etc. A 'watch' function in eBay allows shoppers to place products they are interested in while browsing on a 'watch list' for quick referencing when they next log on. This enables shoppers to organise their alternatives for further comparison and evaluation.

V. Price
Ebay shoppers are able to search for product listings based on a price range, and sort them from the lowest or highest price. This enables them to immediately and comprehensively compare all prices among sellers. However, it should be noted that most prices in eBay are dynamic in the form of a current bid in an auction, as opposed to 'buy it now' fixed price listings. Each auction starts and ends at pre-determined times known to bidders, and bidders can submit bids throughout the length of the auction. Therefore, some bidders wait until the very last minutes to submit their bids in an attempt to win the item. This phenomenon is called 'sniping' (Roth and Ockenfels 2002), and can be more effectively carried out with third-party applications available for free download on the Internet. Shoppers are able to sort listings according to the time left before an auction closes. This is useful in estimating the final price and deciding whether or not to bid or 'snipe', as bids toward the predetermined auction close provide a better indication of its final closing price. Sorting listings according to the time left is also useful for shoppers in urgent need for the product.

An important feature for evaluation is that shoppers are able to obtain the prices of completed transactions (in both auctions and 'buy it now'). This gives shoppers an idea of the current market price for an item, enabling them to rationalise a
subjectively fair price to pay or bid for the item. Prices of completed auctions are determined by bidders who comprise a reference group that conveys informational social signals about price/value (Moschis 1976, Brown and Reingen 1987).

VI. Delivery
EBay shoppers are able to search for products sold by merchants located within a specific geographical area. Shoppers can locate merchants physically located from 10 to 2000 kilometres of a postcode in a country where eBay operates. This information can be useful if a face-to-face meeting or physical product viewing needs to be arranged, especially for more high-involvement products such as motor vehicles or real estate. Location information is also useful for determining delivery cost and time. For shoppers who are in urgent need of a certain product, they are able to search listings using a ‘get it fast’ feature, which refines the search only to product listings that have the option of shipping the item via express post.

VII. Merchant Reputation
EBay shoppers are able to view items for sale by a certain store or merchant in the ‘advanced search’ section by entering the store name or merchant username. This allows shoppers to view the product offerings of stores and merchants based on their reputation or other users’ recommendations. eBay has a reputation rating system that allows registered members (both buyers and sellers) to be rated ‘positive’, ‘neutral’, or ‘negative’. This voluntary rating can be provided after a transaction has taken place. Comments of up to 80 characters can be inserted with the feedback rating, and all users of eBay are able to read these comments with the infrequent exception of ‘private’ transactions where the identities of buyers are kept secret for security reasons such as a high product value sale. A member’s reputation is rated according to the feedback score and percentage. The feedback score is the number of ratings received, and the percentage is that of positive ratings in relation to total ratings received. For instance, a buyer who received nine positive ratings and one negative rating will display a feedback percentage of 90 percent. Neutral ratings are not included in the percentage value. According to Melnik and Alm (2005), a seller’s overall reputation has a positive and statistically significant impact on a buyer’s willingness to pay, and negative comments about a seller often have a negative impact on price.
EBay's reputation rating system is highly important as it generates sufficient trust among buyers to persuade them to assume the risk of transacting with complete strangers (Ba and Pavlou 2002). This importance of eBays's reputation system is evidenced by its popularity in C2C research (e.g. Resnick and Zeckhauser 2002, Ba and Pavlou 2002, Dellarocas 2003, Melnik and Alm 2005). While eBays's reputation system is largely effective, there are ways in which it can be circumvented. Users are able to rot the system by registering multiple usernames to make false bids or purchases on his/her own product listings. This allows a particular seller to give himself/herself a positive rating to fraudulently improve his/her overall feedback rating. This also allows the seller to make a 'shill' bid for the purpose of driving the auction closing price higher or blocking a sale at a price that is deemed to be too low.

VIII. Economics of Information
Shoppers traditionally and mainly go to retail stores to do their shopping. Going to the shop involves the concept of 'reach'. Because there are practical limits to the number of shops that a consumer could visit in order to look at the alternative products available for selection, there are limitations to 'reach' (Evans and Wurster 1999). 'Richness' refers to the quality of the information available to shoppers (as defined by accuracy, relevance, adequacy etc.), while 'reach' refers to the number of shops that they visit to compare product quality and prices. Within a certain period of time allocated for shopping, the larger the number of shops a shopper visits, the smaller the amount of information the shopper can elicit from any individual store and vice-versa. Evans and Wurster (1999 p.23) state: "To the extent that information is embedded in physical modes of delivery, a basic law governs its economics; there is a universal trade-off between richness and reach."

EBay allows shoppers to obtain both richness and reach of information without the tyranny of trade-off. This weakening or elimination of the 'richness/reach' trade-off enables shoppers to browse through a large number of items and stores (a high level of 'reach') to gain a high level of visual, literary, and interactive information (a high level of 'richness'). Consequently, shoppers are able to reap benefits such as the ability to access a wide selection of products without bearing the pecuniary and time costs of travel, and the ability to obtain rich product information for the purpose of
more effective decision making. A number of studies report lower buyer search costs on the Internet (e.g. Alba et al. 1997, Bakos 1997, Brynjolfsson and Smith 1999). Shoppers have better price information, leading to tremendous price-competitive pressures on business. That such pressures exist is amply reported (e.g. Evans and Wurster 1999; Sharma and Krishnan 2002). These competitive pressures can be attributed to market contestability implied in Porter’s classic model of industry structure analysis (Porter 1980).

IX. Towards a Perfect Market
Traditional markets have asymmetrically distributed information that may experience market failure (Akerlof 1970). The influence of eBay’s search and evaluation applications as described in the foregoing improves the quality and quantity of information available to shoppers. Consequently, this improved distribution of information diminishes the problem of asymmetrical distribution of information. This is significant to the extent of a transition from a monopolistic market to a near-perfect market. According to Robert Kuttner as reviewed in Brynjolfsson and Smith (2000), ‘The Internet is a nearly perfect market because information is instantaneous and buyers can compare the offerings of sellers worldwide. The result is fierce price competition, dwindling product differentiation, and vanishing brand loyalty.’

X. Theoretic Model of the Balance of Considerations
The underlying premise of the model ‘the balance of considerations influencing consumer problem solving in the online purchase decision’ (Samuel and Chang 2005) is that the consumer choice in favour of the online option will depend on the efficacy and efficiency of consumer problem solving for needs-fulfilment through that purchasing option (see, for instance, Kotler et. al. 2004). Such consumer needs-fulfilment will be realised through the elimination of the subjective gap between the existing state (in which consumer needs are unsatisfied) and desired state (in which such needs are fulfilled through a satisfactory purchase), in the given situation of Internet access. Therefore, the theoretical model based on the neoclassical framework will identify key a priori variables relevant to reducing or eliminating that subjective gap, and so facilitate a rational consumer decision on whether or not to engage in a specific online transaction. These variables would operate to guide consumers in the process of gathering and evaluating information for development of a rational
consumer perception on the balance of considerations that determine whether or not a particular online purchase is worthwhile. A particular online purchase would be worthwhile when the net subjective benefits of that online purchase outweigh the net subjective benefits of the relevant offline alternative. This model is supported by rational choice theory, which rests on the supposition that individuals are rational agents who optimise through considerations of benefits and costs (O'Shaughnessy and O'Shaughnessy 2005). Accordingly, Figure 1 (see appendix) depicts the balance of benefits and costs that are integral to the consumer calculus.

The theoretical model of the balance of considerations was designed to propose a basis for deciding whether a particular shopper will or will not make an online purchase, depending on whether or not the net subjective benefits of the online purchasing option outweigh the offline alternative. The case of eBay supports this model as its shopper search and evaluation benefits weigh on the 'benefits' side of the scale, driving shoppers to make an online purchase in favour of offline purchase. This is corroborated by eBay's success as the most successful business on the Internet (Cohen 2002).

XI. Conclusions and Implications
The search and evaluation features of eBay increase the quantity and quality of information for consumer problem solving according to Evans and Wurster's (1999) theory of richness and reach in the economics of information, and tilts consumers in favour of online purchasing in the balance of considerations. This information can be of importance to shoppers and merchants on eBay. For shoppers, understanding the search and evaluation features of eBay provides advantages for problem solving and decision making. For merchants, marketing strategy formulation can be improved based on an understanding of how eBay creates 'near perfect' market conditions with challenges in the form of market driven prices and wide consumer choice. This would have implications mainly in the areas of product differentiation and positioning strategy. Further research is needed to empirically verify the importance of eBay's features in consumer problem solving imperatives, for example, acquiring consumer insights on the importance of information on merchant reputation as compared to price information. This would provide an improved evaluative dimension for
marketing strategy formulation in relation to segmenting and targeting consumers based on their problem solving behaviour.

List of References


Appendix

Figure 1.
The balance of Considerations Influencing Consumer Problem Solving in the Online Purchase Decision (Samuel and Chang 2005)

Benefits
- Rich information
  - literary/pictorial/audio
- Low search costs
  - time saving
  - transportation cost saving
- Price benefit
  - business economies
  - competitive pressures

Costs
- Risk of post-transaction dissonance due to:
  - experience risks (lack of experiential learning)
  - non-involvement risks (lack of sensory perception)
  - financial risks (monetary loss)
- Delivery time* and shipping costs

In favour of online purchase
In favour of offline purchase

* Assumes the delivery time lags are known in advance, are adhered to, and are not therefore a source of uncertainty.

- Information benefit: the availability of sufficiently rich information about the product and price.
- Low search costs in terms of:
  - time benefits ie the much lower search costs in terms of time expended for acquiring a given amount of information;
  - transport benefit ie the savings in transportation costs from not having to travel to physical shops to gain product-price information, and for making the purchase;
- Price benefit: the monetary savings from being able to make a cheaper purchase.