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# The Invisible Borders in Internet Transactions: An Empirical Study of eBay's Auction System

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## Abstract

The popularity of auctions handled through eBay's website demonstrates the marketing power of the Internet. This study examines the influences of price, quality, reputation, and country-of-origin effects on buyers' repeat purchase decisions of jade products listed on eBay. Lower price, although promotes higher volume of bidding, tends to have negative impacts on quality perception. Repeat purchases and reputation differs significantly depending on the country of origin.

## 1. Introduction

One of the most researched Internet transactions in recent years is eBay's reputation system. These studies tend to focus on the sellers' perspective such as how to maximize the final auction prices and what factors lead to sales and premium prices. The results are, however, somewhat conflicting due to the nature of product categories examined in their data sets. Many believe that the seller's reputation, not buyer's, matters in high-priced goods. Studies also find that higher starting bid prices reduce the bid volumes, but lead to a high final sales price; given a successful sale. Others argue that reputable sellers enjoy no boost in price, though their auctions are more likely to be sold; or that the seller's reputation is no longer significant in the case of specific low-priced commodity goods. Additional elements investigated include whether seller is made better or worse off by setting a reserve price. There are also studies that investigate bidding behavior.

## 2. Variables

The purpose of this study is to address issues and information which might be useful to buyer's decision making in Internet transactions. Data are collected from feedback information of sellers who have been listing items under the "jade" category of eBay from the beginning until April 2002. The variables analyzed in this research range from price (not auction price realized, but the starting bid price), relative quality, feedback information, rate of repeated purchase, eBay history, percentage of jade items in the seller's listing,

and origin (country/location) of the seller. In addition to the statistical tests based on quantitative data extracted from eBay, qualitative analysis of item descriptions is performed to understand potential national differences. This is a judgment sample by nature. For instance, sellers who are relatively new, or list under this category occasionally because they happen to have a jade piece or two, are excluded from our sample. As a result, there are 75 valid sample subjects included in this research. Since the researchers of this study have had years of experience with this particular gemstone and have also purchased from most of these sellers in the sample, we have the advantage in evaluating the quality and business practices of these sellers in Internet transactions.

TABLE 1 Variables

Variables	Description
Quality	4-point scale, highest to lowest
Feedback	Number of feedbacks (positive, neutral, and negative)
History	Number of months listed on eBay
COO	Country of origin (US, HK/Singapore, China, and other)
Price	4-point scale, highest to lowest
Repeat Rate	Number of repeat purchase from the same seller
Reputation	Number of net positive or negative feedbacks

## 3. Analysis

The statistical analysis of our data indicates that there is a negative correlation between price and quality. But neither one factor plays a key role in repeated purchase, nor do they have anything to do with the seller's reputation. For this exotic product, lower starting bids also indicate poorer quality. Although low price promotes bid volume and generates more positive feedbacks, it does not enhance the seller's reputation. Generally speaking, sellers experienced with this category tend to offer quality items.

**TABLE 2 Influences of Country of Origin**

	Rep. Pur	Quality	Price	Reputat.
US	1.81	2.80	2.47	0.9969
HK/S	1.99	2.59	2.88	0.9954
China	2.60	3.25	2.00	0.9867
Other	3.12	2.75	4.00	0.9954

Table 2 indicates a significant relationship among the country-of-origin effect, repeat purchase rate, quality, starting bid price, and reputation. Internet transactions are supposed to be borderless, but invisible borders such as national and cultural differences remain significant. Seller's location matters very much in sources and quality of the items, communication and shipping methods, and consequently buyer satisfaction. Both of the two key variables in this study, reputation and repeat purchase, are significantly influenced by only the seller's location. Another intriguing result is that although US sellers enjoy the highest mean score

in reputation, they generate the lowest repeat purchase rate.

This paper also examines the cultural differences in a seller's item description, including the accuracy of period dating and authentication of so-called "archaic jades". The researchers find US sellers to be the most conservative in this regard. The shipping fees may be high, but shipping methods and auctions terms tend to be described more explicitly. Sellers from China, on the other hand, appear to be quite the opposite. Their descriptions are fuzzy and at times exaggerated. However, their seemingly endless supply of many newly manufactured replicas gives them an unmatched advantage. In a way, these also explain why US sellers score high on reputation, but fail to attract repeat customers.