

Sustainability of E-Commerce: The Case of Penny Auctions

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[Abstract] Recently, we have witnessed the phenomenal success of e-commerce giants, such as Amazon.com and ebay.com. This paper investigates the sustainability of a new e-commerce format called the penny auctions. They have become the basis for a number of internet startup companies. In this paper we report on the penny auction industry from an entrepreneurial perspective. In particular, we analyze QuiBids.com, a fast-growing penny auction company. We are most concerned about the “infant mortality syndrome” affecting this new industry. We develop hypotheses based on our case study to enable the penny auction industry to survive in the short term and grow in the long term.

[Keywords] sustainability; e-commerce; penny auctions

Introduction

Recent internet growth has led to the creation of new business models based on the auction format. In this format, an internet based seller offers to sell a product to the highest bidder. The model employed by eBay has become popular, and the company is financially successful. Priceline.com is another successful e-commerce firm employing a variation of the auction model. The world has witnessed a phenomenal growth of the e-commerce industry (See Figure 1 for more details).

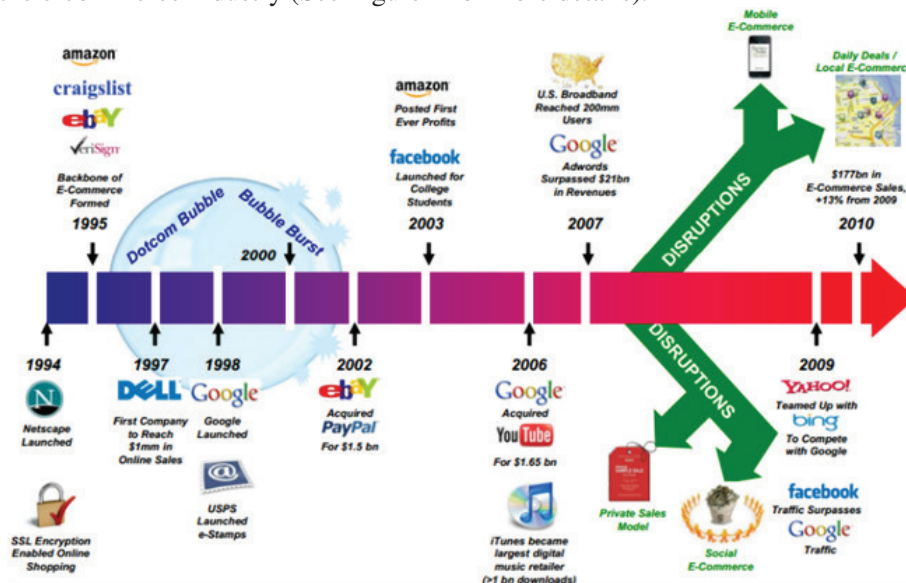


Figure 1. Evolution of the e-commerce industry

Source: <http://www.gridleyco.com>

Examples of firms that have prospered using the new e-commerce platform include Amazon.com, Ebay.com, Zappos.com, Alibaba.com, Netflix.com, Dell.com, Staples.com, Apple.com, Bestbuy.com, Buy.com, and Groupon.com. Academic scholars have shown a lot of interest in studying and reporting on

the e-commerce industry (Gao, 2010; Kim, 2009; Yani-de-Soriano, 2012; Park, 2012; Quader, 2008; June, 2005; Rigby, 2011). The growth in e-commerce is due to many factors, including: (1) on-line product/brand selections have increased; (2) product search on-line has become lot easier; (3) on-line prices are often attractive, and they are easily compared across vendors; (4) online purchases are more convenient than traditional shopping because one can do it from anywhere; (5) the delivery charges are affordable. In fact, half of the transactions have no delivery charges (Rigby, 2011); (6) merchandise returns are getting easier; (7) the customer satisfaction index is several points higher than traditional stores (Rigby, 2011).

Among e-commerce channels that have recently emerged is the penny auction industry. However, research on this emerging industry is scarce (Robinson, Giebelhausen & Cotte, 2012). We were unable to locate any article on this topic in a peer-reviewed business journal (Business Source Premier). However, we found a few research papers that are labeled "work in progress." This paper focuses only on the penny auction industry.

Penny Auction Industry

Figure 2 describes the penny auction industry.

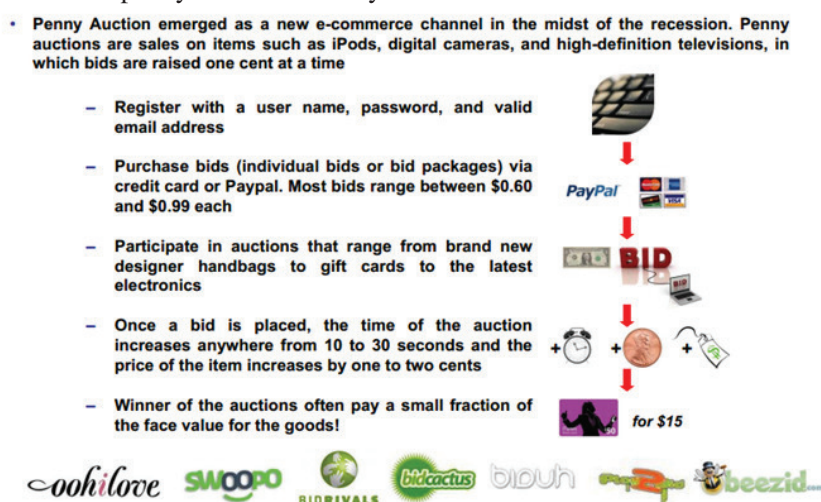


Figure 2. Penny auction Business Model

Source: <http://www.gridleyco.com>

This paper analyzes the penny auction industry in which auction participants have to buy credits before bidding on an auction. This new format of auction has been criticized for gaining substantially excessive returns on each item sold, such as an average of 150% return (Augenblick, 2009). Many studies have shown that those penny auction companies have problems with retaining their customers because the chances of winning these auctions are so small. Many leading penny auction companies, such as QuiBids and Dealdash, identifying the excessive return as a major threat in the long term, introduced a modified penny auction model to avoid the ethical dilemma. In addition, some companies like QuiBids did much more work, such as controlling the bidder/auction ratio, banning group bidding, and assigning bidders based on their experience, to improve their business model. In this work, we examine the mechanics of both the original and the improved penny auction business model and how the improved model helps those companies. We also hypothesize that in the long term, the tight relationship between entertainment and penny auction can make ethical companies, such as QuiBids, survive. Finally, our evidence suggests that only a few large penny auction companies can survive.

A penny auction, also known as a bidding fee auction, is a type of auction model in which all the bidders first pay a certain non-refundable fee for bids before entering into an auction. Every time a bidder places a bid, the auction is extended. At the end of the auction, the auctioneer collects both the end price

of auctioned item and the proceeds from selling the bids.

Penny auctions didn't become prevalent until the mass-adoption of the internet. Swoop.com was the first company to run auctions based on this model of utilizing the power of e-business. Since Swoop.com, penny auctions have become a popular business model, and many companies have emerged to serve the booming market. Unfortunately, some critical issues underlying this popular model lead to many customer complaints. As a consequence, Swoop.com discontinued its operation in March 2011 and filed for bankruptcy. Nevertheless, some penny auctions sites have successfully modified their business model and evolved as the industry leaders, such as QuiBids.com, which has a high traffic volume ranked as 129th in U.S.

Modified Auction Model

Witnessing its customers leaving, Swoop, first in the industry, introduced a creative solution to help prevent customers from substantial loss when they failed the auction. By exercising the Buy-It-Now (BIN) option, customers who lose the auction are eligible to use this option so that they can get back all the bids they placed on this item by buying this product at a pre-stated price. By applying BIN option, customers not only significantly reduced their losses, they can also enjoy such benefits as entertainment and a better chance to win an item at a cheaper price. The BIN option now has become so important that most customers only look at the websites having the BIN option.

After the introduction of the BIN option, many penny auction companies managed to survive. Although those companies sacrificed significant portions of their profit by adopting the BIN option, more customers are willing to remain as customers with those penny auction companies. As a consequence, those sacrifices are compensated by higher traffic volume, which can be turned into greater economic return; therefore, many of those penny auction companies have been saved from bankruptcy. They also successfully avoided potential government regulations by making the penny auction an ethical industry that offers entertainment value for customers. Also, most major penny auction companies adopted the feature like "Bid-O-Matic," an automatic bidding option which can help bidders place bids until they exhaust their bids. To some extent, this feature helps customers relieve themselves from the pressure of bidding and may cost more bids.

A typical penny auction company doesn't carry inventory. Most companies place the order only after their customers have won some products, and those products will be shipped to the customer from manufacturers at the customer's expense. Penny auction companies can receive volume discounts from producers because of the large volume, which further improves those companies' profitability.

So, the investment requirement and the entry difficulty are low, making this industry very competitive. Such a competitive environment drives many creative penny auction websites to focus on different types of product that serve separate market niches. For example, PennyWizard specializes in gift card auctions, and Happy bid day focuses on electronics. Some other companies invest heavily in promotion. For example, Bidcactus.com offers its customer big discounts on Monday and Wednesday.

In addition, companies like QuiBids.com keep good relationships with product providers. In doing this, companies can better serve customers once they need to refund or replace products. Facing the threats of customers who do not return and government regulations, as well as the BIN option, many penny auction companies proactively hired third-party auditing firms to increase their credibility. For example, QuiBids.com is accredited by Grand Thornton, and PennyGrab.com is rated A+ by BBB (the Better Business Bureau).

In this work, we examine how the penny auction model works, why most penny auction sites are on the brink of bankruptcy, and how to further improve their business model and avoid potential regulation, and we provide some suggestion for those how penny auction companies can survive in the long run. Because all the current leading companies are using the same strategy to keep customers, we mainly look at QuiBids.com to reveal how it found a creative way to improve its business model and become one of the most successful penny auction sites.

QUIBIDS Story

QuiBids' strategy for customer satisfaction is to try to group people based on levels of experience so as to help new customers have more fun in the game. All users on QuiBids are offered the same items to bid on; however, auctions for the same items are offered at varying times for each individual bidder. This is mainly because of the high quantity of auctions and users that participate daily on QuiBids. By limiting these auctions, the company can increase the chances of users winning items. QuiBids is attempting to watch participants' comparable skill, as determined by QuiBids, to enhance user experience and maintain a viable business model. By doing so, QuiBids may limit which auctions are available to particular users based on the factors that may be relevant to QuiBids; those factors include the experience of the user, the historical success of the user, demographic factors, prior bidding and spending activity, and some other factors. In particular, QuiBids may limit certain auctions to less-experienced or successful users to increase their chance of winning even more so as to please the customers in the hope of retaining those customers.

In QuiBids' strategy, a volunteer's dilemma occurs when two or more competing players are bidding for an auctioned item but another person steps in. Let us consider a simple case first: players A and B are competing for the prized Macbook. Both their strategies are simple: bid at the last moment before the timer runs out. Each one follows this strategy so that when the timer is about to run out, they hit the bid button, so they are the current winners. This is an obvious strategy since the last person standing wins, thus removing any "chance" element associated with gambling (Robinson, Giebelhausen & Cotte 2012). Now, suppose a third person, C, comes in and bids. What should A and B do? Either A or B must bid or C will win the Macbook.

Sometimes, companies such as QuiBids are often related to gambling because it is operating a zero-sum game in which a winner can get some benefits at the expense of the another's loss. However, we believe that firms such as QuiBids offer a "gaming" opportunity, and they are not a gambling establishment in "gaming attire." QuiBids has the Buy-It-Now feature, which guarantees there is no money lost for the customer. The feature ensures that the items can be purchased for the advertised retail price listed on QuiBids.com. We, in fact, verified that items priced favorably compared to its retail price.

QuiBids provides entertainment value, but one has to learn it before enjoying the site. Those penny auction websites which have the BIN option prevent their customers from incurring huge losses. The basic idea behind those penny auction websites is to offer customers a good chance to win products cheaply and with limited risk. In addition, after careful examination and practice, customers can increase their skills and experiences in penny auction websites, thus increasing their odds of winning. Thus, a penny auction website is nothing but an entertainment--a shopping site that offers its customer a fair chance to win products for a cheap price and with limited risk. Those who don't use the BIN option (about 25% out of the total number of users) contribute to a company's profit.

Best Times to Game on Quibids

Days: Typically, Tuesday, Wednesday, and Thursday are the best days on which one has a good chance to win. Many uncommon auctions that ended up with fairly low prices happen on Wednesday. One of the explanations is that people are generally occupied with more important things during the weekdays.

Times: The best time to bid on QuiBids is around 2pm-5pm, EST. If one lives in a different time zone, she or he needs to convert it properly. At this time, fewer people bid on QuiBids and there are many available auctions. The ratio of users/live auctions is usually lowest during this period, which is what determines the best time for QuiBids' strategy.

Days: Weekends are the worst time if one wants to try QuiBids because, generally, people have more free time on the weekends. Sunday evenings are the worst times for QuiBids auctions from the bidder's perspective.

Times: For QuiBids' customers, perhaps the worst time to bid on QuiBids is somewhere in the night because there are too many player but only a few auctions.

Factors Affecting Penny Auction Industry

Factor 1: Customer Retention Problems in the Penny Auction Industry

A five-percent increase in customer retention increases profitability by twenty-five percent, and getting a new customer to replace a lost customer can cost as much as five times more than retaining a current customer. Customer retention is important because (1) loyal customers buy more; (2) repeat customers will pay higher prices; (3) satisfied customers spread the word by positive word of mouth, which is the best form of advertising; and (4) past relationships make loyal customers easier to please (Reichheld & Sasser, 1990).

In penny auctions, the slow customer learning curve makes it difficult to win at the beginning, thus making customer retention more difficult. After all, customers all expect to win the auction and only winning can satisfy them, and satisfaction is the key to loyalty. In general, before the existence of Buy-It-Now option, most penny auction players found it difficult to win the auctions. The reason for those players' bad experience was rooted in how the penny auction works. In a typical penny auction, the auction ends when time runs out. However, because each bid extends the length of the auction by 10–20 seconds, the auction could, theoretically, continue forever. Therefore, in many cases, the auction cannot easily end until most of participants exhaust their bids. In other words, the bidder with the most bids available has the better chance to win.

Moreover, since the auctioneers collect both the profits from selling bids and from the item, in most cases they are able to get much more revenue than the face value of the item. Many penny auction participants are discouraged when they realize that the auctioneers are making huge profits while most customers are suffering considerable losses; many of those customers may leave and never return. According to Augenblick (2009), “75% of bidders leave the website forever before placing 50 bids, and 86% stop before placing 100 bids.” Some other factors causing the customer retention problem include narrow product lines, gambling-like business models, utilization of BOT (using a computer program to bid against a real customer) and abuse of voucher bids. Those factors pose great threats to a penny auction company, which cannot survive without a fundamental change in its business model.

Factor 2: Threat of Competitors

Economies of product differences: In the penny auction industry, the services offered by most companies are pretty consistent.

Brand equity: As of 2011, some leading penny auction companies had already accumulated strong brand names, like QuiBids (ranked 317th in U.S. and 1,073th globally, according to Alexa.com).

Switching costs or sunk costs (exit cost): In general, penny auction companies don't have to commit many resources because of their business model, which requires fewer resources than usual.

Capital requirements: The capital requirement is very low in penny auctions. They don't require heavy capital investment. In the penny auction business model, those companies only need a reliable online auction system, which is fairly inexpensive because of the development of technology, a well-established online advertising network. Typically, penny auction companies don't take inventory, which is usually a great cost for most companies.

Factor 3: Threat of Substitute Products or Services

Buyer propensity to substitute is strong: Most penny auction players find the chance of winning an auction is too small. After taking some losses, those discouraged customers are more likely to switch to other penny auction sites or to leave permanently.

Buyer switching costs are low: Sunk cost is the only cost that would prevent customers from switching to other penny auction sites.

Perceived level of product differentiation is low: All the services provided by most penny auction companies are relatively consistent.

Number of substitute products available in the market: Ease of substitution. Information-based products are more prone to substitution, as online products can easily replace material products.

Customer Guide for Developing Quibids Strategy

Based on our experience with QuiBids.com, we developed the following recommendations for consumers:

1. Late entry often increases the odds of winning as long as it is active; *Justification:* Because, normally, everybody has the same number of bids, a late entry makes you save a lot of bids to stand until the last (except voucher bidders).
2. Voucher bids (which have less value) have advantages in the penny auction if used strategically; *Justification:* Because voucher bids don't contribute to the BIN discount, they enable you to stay longer in the auction before being kicked out (people will be kicked out of an auction if they have spent more than the list price of that item).
3. When you combine voucher and normal bids, use vouchers first; *Justification:* Vouchers are not real money and will not be credited to the BIN discount. Thus, it doesn't have cash value at the end of the game. Also, a voucher is an important technique one can use to stay in the auction long enough to kill the game off.
4. Keeping track of the number of "active" bidders will increase your chances of winning; *Justification:* Active bidders are those who are willing to spend all their bids on the auction until they lose, so it is reasonable to assume that each new active bidder will increase the ending price by the maximum bids each person can place.
5. Staggering the bids enables you stay to the end of the game, thus increasing your odds of winning; *Justification:* When some people jump in later than you, it is wise to save some bids – that is, take a chance at the last second because if you bid at the very last second when there are some late comers, you will lose anyway (those late comers have more bids than you because you have already spent some bids).
6. Being patient is a virtue in penny auctions, since opportunities to win come up sporadically. *Justification:* Even though sometimes luck plays an important role, being patient (e. g. practicing the late entry rule) will increase the odds of winning for customers.
7. Penny auctions should be avoided by people who are rushed for time; *Justification:* A penny auction is nothing but a waiting game; it requires a lot of time and patience. It is evident that people who rush are more likely to lose.
8. To participate in penny auctions and be successful, you need proper facilities, a decent PC, and fast internet access; *Justification:* Technical glitches sometimes are the killer of your winning auction!
9. BIN is a best way to break even. *Justification:* With the BIN option, the maximum loss is the guaranteed cost of shipping. However, the return is huge if you win anything cheaply. Given that QuiBids.com made a lot of effort to make everybody have equal chance to win, everyone can break even after carefully learning about the mechanism and strategy.
10. To enjoy penny auctions, you should have enough financial strength to prepare to "buy it now"; *Justification:* You need to have more money for BIN than the bids money.
11. Those who have tight budgets should rotate their bidding items, such as gas, restaurant, drugs, and others; *Justification:* This strategy works like diversification in portfolio management. By spreading the bids over different auctions, one can lower his or her risk while increasing the chance of winning.
12. In penny auctions with the BIN option (such as QuiBids.com), strategy plays a more important role than luck; it is more like a poker game; however, a good poker player can beat you most of the time. *Justification:* It is clear that strategy increases the odds of winning. Also, that is why QuiBids groups the users based on whether they are experienced players or not to make sure new customers can learn how to win in a penny auction easily.
13. Group bidding can increase the chance of winning (through manipulating). *Justification:* It is clear that multiple people working as a group can easily win auctions by manipulating the course of the game so that one of the group members will be the last man standing because a group has more chance to win. Suppose five people are bidding and two of them are within one group. Those two people choose to fight fiercely even though they are not enemies. By doing this, the other three bidders may feel relaxed and choose to take a chance and not to bid to save some bids. At this time, if

one of those two people quit, another group member could easily win because the other three people assume those two guy will fight for a while. Since multiple people can increase their odds of winning easily by forming a group, the company banned group bidding.

14. The FAQ section of penny auction sites offers vital information for beginners; they must not be ignored. *Justification:* For beginners, the information listed in the FAQ section at each penny auction website could be the most important thing they need to check out before they proceed to bidding. The important information includes the cost of each bid, the availability of the BIN option, refund policies, and so on.
15. Chat room (with company and customer when available). *Justification:* For some reason, the important information a beginner may need is not always available in the FAQ section; at this time, the chat room is good choice. Communicating with either company employees or other players could help beginners have a better understanding of the penny auction industry. Good penny auction websites, such as QuiBids, have user-oriented customer support.
16. Count the number of active bidders, multiply them the maximum bids each one can make, and then just wait for that price and time before you enter. *Justification:* When determining the entry point, the best way is to count the number of active bidders (“active to be defined”). By doing this, beginners can avoid early entry and the possible competitive biddings. Although sometimes the auctions may end before the expected price, this is still the safest way to determine the entry point.
17. Create a list of late-comers who win; next time, we could go after them unless they are voucher bidders. *Justification:* There are a few top bidders who have a large amount of resources, like vouchers and time; even though they are few, once they appear in the auction in which you want to participate, you can hardly outcompete them, so keep a track of their names and avoid them.
18. If late comers are active, we have to pull out and save some bids; otherwise we will lose anyway. *Justification:* Because you don’t take a chance, you will lose anyway since the late comer has the biggest chance to win.

Managerial Implications

In this section, we make recommendations for the penny auction industry in general (QuiBids in particular) for its survival and possible growth. While the BIN feature of penny auctions is a must to keep “games” fair, it could be a double-edged sword. Extensive use of the BIN option by consumers could cut into company profits. Customers are more likely to exercise a BIN option for small-value items, and, so, such items should serve as “loss leaders.” They help to increase the traffic into web-stores such as QuiBids.com. So the company should promote customer bidding on higher value items where the BIN option is less likely to be invoked. Along with the higher value items (such as iPads), we recommend the promotion of voucher bids, which is highly profitable. Communication between consumers and company employees and among customers should be encouraged by providing online chat rooms. This will increase customer trust and loyalty. The companies should have independent auditing firms and publicize the information to the market. For example, QuiBids.com uses Grant Thornton, a Big Eight auditing firm, to help improve its transparency; this increases consumers’ trust even more and alleviates the fear of internet bots.

Penny auction firms should take responsibility to limit gaming hours and expenditures by individual players because games like penny auctions can lead to addiction. Companies should practice CSR, which requires companies to take some responsibility for educating customers. Penny auction companies should evaluate the late entry strategy, since late entry is unfair for the early bidders. For example, the current QuiBids format allows a late entry so that a late-comer can place a single bid and win the auction.

Conclusion

We recommend that penny auction companies keep their FAQ section and chat room, make sure they offer the BIN option, and discourage compulsive behavior by limiting the number of plays per session. Doing these should help to (1) ensure their survival; (2) deter new competition; and (3) keep the

government off their backs.

References

- Augenblick, N (2014). Consumer and Producer Behavior in the Market for Penny Auctions: A Theoretical and Empirical Analysis. Retrieved from http://faculty.haas.berkeley.edu/ned/penny_auction.pdf
- Frederick, R., & Sasser, W. (1990). Zero defections: Quality comes to services. *Harvard Business Review*, September–October, 105-111
- Gao, Y. (2010). A cognitive model of trust in e-commerce: Evidence from a field study in China. *Journal of Applied Business Research*, 26(1), 37-44.
- June, W. (2005). Internet penetration analysis: The impact on global e-commerce. *Journal of Global Competitiveness*, 13(1/2), 9-24.
- Kim, D. (2009). Trust-assuring arguments in b2c e-commerce: Impact of content, source, and price on trust. *Journal of Management Information Systems*, 26(3), 175-206.
- Kim, D. (2009). Trust and satisfaction, two stepping stones for successful e-commerce relationships: a longitudinal exploration. *Information Systems Research*, 20(2), 237-257.
- King, D., Delfabbro, P., & Griffiths, M. (2010). The convergence of gambling and digital media: implications for gambling in young people. *Journal of Gambling Studies*, 26(2), 175-187.
- Park, H. (2012). Social network online communities: Information sources for apparel shopping. *Journal of Consumer Marketing*, 29(6), 400-411.
- Quader, M. (2008). The utilization of e-commerce by traditional supermarkets in the UK through strategic alliances with internet based companies. *Journal of Services Research*, 8(1), 177-211.
- Rigby, D. (2011). The future of shopping. *Harvard Business Review*, 89(12), 64-75.
- Robinson, S.G., Giebelhausen, M.D., & Cotte, J. (2012). Shopping, gambling or shambling? penny auctions. *Journal of Business Research*, 66(9), 1612-1616.
- Wangren, Z. (2012). How to compete in China's e-commerce market. MIT Sloan.
- Yani-de-Soriano, M. (2012). Can an industry be socially responsible if its products harm consumers? The case of online gambling. *Journal of Business Ethics*, 110(4), 481-497.