Chapter 12

ELECTRONIC AUCTIONS IN FINLAND

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Abstract: In this paper we explore the electronic auctions in Finland. We have investigated, on the supply side, the major auctions, especially looking at their auction types, business models and popularity. On the demand side, we have conducted a survey of students to seek out the demand for auctions. Our findings show that in a geographically and linguistically isolated market place several auction sites can survive, but there is too little demand to support electronic auctions as separate businesses.

Key words: Electronic auction, auction type, business model

1. INTRODUCTION

Electronic (online) auctions have received considerable publicity during the heyday of "Internet-boom". The online auction industry was born in 1995 with the founding of eBay, now the biggest auction-site in the world, with an 85% market share of the online auction sector (Lansing & Hubbard, 2002). Albert (2002) presents several industry growth related numbers, of which the number of participants perhaps illuminates the situation best: 6.5 million participants was the projection in online auctions in 2000, which was exceeded with considerable margin (35 million participants). Also the number of online auction transactions is considerable; 1.3 million transactions per day in 2001.

Online auctions have several characteristics that make them appealing from the viewpoints of both consumers and businesses. According to Koch and Cebula (2002), electronic auctions can yield to better prices to sellers than via other electronic channels. They point out that while the Internet in general tends to lower prices, product branding, price discrimination and online auctions may raise prices. Lansing and Hubbard (2002) also point out

higher prices to sellers, and add low overhead costs. According to them, the online auctions are an example of the ideal online business, where the auctioneers act solely as intermediaries between sellers and buyers, without considerate investments in land, property and inventory (Kambil & van Heck, 2002).

In addition to the famous, big general auctions such as eBay and Amazon's and Yahoo's auctions sites, there has been a surge of more regional or niche-market focused auctions (see for example Lansing and Hubbard, 2002). However, the majority of consumer focused auctions have proved to be short-lived, some due to not reaching critical mass of users and some due to not finding a sustainable business model. In addition, one must note that there may be and probably are differences whether an auction operates in large markets (eBay: USA plus world) or in smaller, more language and location dependant markets such as Finland.

In this study our goal is twofold. On the one hand we have studied the supply side of online auctions by interviewing the management of the major Finnish online auctions. On the demand side we conducted a study of potential users of online auctions. We were especially interested in a few the particular aspects of the Finnish market: people are well wired and mobile, and there are a number of different eAuctions but eAuctions have not gained wide popularity. Our main aim was to try to find reasons for why supply and demand do not seem to be meeting in Finnish market. To explore this we used students as our sample population with the assumption that the younger people, who have grown with internet and mobile networks would be more eager to use the new electronic means of buying and selling goods.

The paper is organized as follows: first, in the next chapter we briefly describe the electronic auctions, and then we look at the auction providers in Finland. In the fourth section we analyze the (potential) user perceptions of online auctions and finally, in the fifth section we discuss the findings and provide some further research.

2. ELECTRONIC AUCTIONS

There are four basic types of auction mechanisms that are widely used and analyzed (see e.g. Klemperer 1999). The main four types are: the ascending-bid auction – also called the open, oral, or English auction; the descending-bid auction – used in the Dutch flower industry and also called the Dutch auction (for more details, see Kambil & van Heck 1998); the first-price sealed-bid auction; and the second-price, sealed-bid auction – also called the Vickrey auction (for more details, see Vickrey 1961 and Kauffman & Wang 2001).

In the ascending auction (English auction), the price is successively raised until only one bidder remains, and that bidder wins the object at the final price. This auction can be run by having the seller announce the prices, or by having the bidders call out prices themselves, or by having bids submitted electronically with the best current bid posted. This third form of the ascending auction was used in this research.

The descending auction (Dutch auction) works in exactly the opposite way: the auctioneer starts at a very high price, and then lowers the price continuously. The first bidder who calls out or submits electronically that she or he will accept the current price wins the object at that price. The auctioneer can announce the prices or a clock can be used that will indicate the price. The clock hands tick downward until a buyer stops them by raising a hand, pushing a button, or by clicking the mouse of his computer. The third form was used in this research.

In the first-price sealed-bid auction each bidder independently submits a single bid, without seeing others' bids, and the object is sold to the bidder who makes the highest bid. The bidder pays her bid – that is the highest price or "first" price bid. This method is used in procurement, that is competing contractors submit prices and the lowest bidder wins and receives her price for fulfilling the contract. This type of auction is also called "reverse" auction, because in this case the seller is the bidder and the buyer the bid-taker.

In the second-price sealed-bid auction each bidder independently submits a single bid, without seeing other's bids, and the object is sold to the bidder who makes the highest bid. However, the price she pays is the second-highest bidder's bid or "second price".

One notable factor of these different auction mechanisms is that according to Vickrey's classical theorem, they all yield to the same final price. In other words, there is no difference from the seller's perspective which mechanism is used. However, with online auctions there have been some notions that this may not be a valid assumption. For example Lucking-Reiley (1999) conducted a field study by selling Magic: the gathering-collectible cards in several online auctions. This research is interesting in the sense, that it avoids the most eminent pitfall of such studies, namely it recreates almost identical starting position to each sale. Normally, it is very hard to make comparisons between different mechanism, since for instance Sotheby's does not run both a second-price auction and an English auction for the same piece of antique furniture. According to Lucking-Reilly's findings, the Dutch auction produced 30-percent higher revenues than the first-price auction format (Kambil & van Heck, 2002).

3. THE FINNISH ELECTRONIC AUCTIONS

In this section we report the findings of the empirical studies conducted in both the supply and demand side of the Finnish auction market. We conducted interviews with more than a half of the major auctioneers and we made several questionnaires for potential users of auctions for the demand side. We used students as our sample for the demand side, because they have the technical means and interest to participate in electronic forms of auctions.

3.1 The Supply Side

The research was focused upon Finnish electronic auctions. 21 such auctions were found, of which 11 participated to the study. The study was conducted through interviews of the management of auctions. In addition, three auctions were studied through Internet only (i.e. no interviews). The interviews were conducted as semi-structured interview, i.e. the basic structure for each interview remained the same, and however, in each interview the respondent had quite a lot of room to go into topics not mentioned in the interview-structure.

The auctions in question were either business-to-consumer or consumer-to-consumer auctions. The semi-structured interview concentrated mainly on the chosen business models of the auctions, their pricing mechanisms, used technology and marketing efforts. The interviewers asked also about the perceptions of the online auctions and their profitability from each auctioneer.

3.2 The Demand Side

Survey data was collected in four sets in Helsinki School of Economics (HSE) and Turku Schools of Economics (TuSE) with students (some also international) as subjects, and in one set in an upper secondary school in Espoo. The university students were gathered on courses, which have wide participation across subjects to avoid bias toward technically oriented students, however, 60% of the students had information systems or ebusiness as their major subject. The upper secondary school students were chosen so that they had a language concentration to avoid the possible bias by very technically oriented students.

Background Information on the Subjects

There were a total of 106 university students, divided into 68 at HSE and 38 TuSE students, and 59 upper secondary school students. All the upper secondary school students were Finns, whereas of the university students 83 were Finnish and 18 from other countries (Russian, Estonian, Ukranian, Canadian, Chinese, etc.). All together there were 79 female and 85 male subjects, with an age range from 17 to 55, with a mean age of 24 years (19 for te upper secondary school students and 28 for the university students). 75 per cent of the upper secondary school students were either employed at the time (on average little less than 7 hours a week) or had worked in past, while 25 per cent had no experience. The working experience of university students varied from ½ year to 33 years, with a mean of 5 years. The university students had studied from ½ year to 8 years, with a mean of 3 years. All the students were well connected with 80% having internet connection at home and full 100% having a mobile phone. The following table lists their internet usage patterns:

Table 1. **Internet usage patterns of the research subjects**

	N	Minimum	Maximum	Mean	Std. Deviation
Daily use of WWW (avg mins)	162	00	1200,00	95,876	119,9289
daily received email (avg)	160	00	100,00	6,0745	10,4999
daily sent email (avg)	161	00	30,00	2,6412	3,7091
online purchases / last 6 months	155	,00	40,00	0,8323	3,0471

It is noticeable however, that there were very few online purchases performed by the sample group. It is also noteworthy that 16 % of the respondents had bought items from online auctions and 2 % had sold something in them. It can be argued that despite the high degree of wired and wireless connectedness of the participants, very few of them had actually performed online buying and selling and even fewer on auctions.

Table 3. General attitudes towards selling and buying goods in auctions

Web auctions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes, for buying	17	10,3	10,8	10,8
	yes, for selling	2	1,2	1,3	12,0
	no	133	80,6	84,2	96,2
	no, but used for searching	4	2,4	2,5	98,7
	yes, for both buying & selling	2	1,2	1,3	100,0
	Total	158	95,8	100,0	
Missing	System	7	4,2		
Total		165	100,0		

The table below summarizes the general attitudes towards selling and buying goods in auctions:

Analysis of the results/findings

In the following preliminary results we briefly summarize the findings about the survey. We first look at the supply side by characterizing the auction site by their technical platform, auction type and business model according to the classification in the second section. In all the questions for the supply side we used a Likert scale from 1 (fully agree) to 7 (fully disagree).

3.3 Technical platform

The Internet was the dominant "platform" for auctions, only few auctions offered for example mobile solutions. This is interesting because Finland is one of the foremost countries in mobile-phone usage. The supply side was quite unanimous in their belief that mobile-only auction has at the moment no possibilities, mainly because of the limited screen and user interface of current mobile phones. However, certain companies voiced their belief in Digital Television coupled with mobile phones as a terminal device for making the actual bid, thus serving as the return channel. In the demand side there was little need for this, even among our sample, which is quite advanced in mobile phone use. The following two tables show that most of the sample population were either indifferent or outright rejecting the possibility of SMS bidding and auction updates. This cannot be explained by the unfamiliarity of the medium, because most of the respondents used heavily SMS for communication.

I could bid on known items with SMS-messages (e.g. bidding process started on the Internet).

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	fully agree	7	4,2	4,4	4,4
	2	14	8,5	8,8	13,1
	3	24	14,5	15,0	28,1
	4	42	25,5	26,3	54,4
	5	30	18,2	18,8	73,1
	6	28	17,0	17,5	90,6
	fully disagree	15	9,1	9,4	100,0
	Total	160	97,0	100,0	
Missing	System	5	3,0		
Total		165	100,0		

I would like to receive online updates on auctions Items to my mobile phone or pda.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	fully agree	2	1,2	1,2	1,2
	2	6	3,6	3,7	5,0
	3	12	7,3	7,5	12,4
	4	19	11,5	11,8	24,2
	5	20	12,1	12,4	36,6
	6	44	26,7	27,3	64,0
	fully disagree	58	35,2	36,0	100,0
	Total	161	97,6	100,0	
Missing	System	4	2,4		
Total		165	100,0		

(Mean 5,57; Standard deviation 1,536)
(Mean 4,36; Standard deviation 1,584)

3.4 Types of auctions

English auction was the dominant form of auction, a few auctions used Dutch auction mechanism, one stamp and collectibles auction used sealed mechanism. This is understandable, as the English auction is the best known mechanism in Finland. In the stamp and collectible auctions there is a long tradition of auctions from the offline world and thus the more advanced auction mechanisms can be employed.

3.5 Business model

The studied auctions were classified under four categories:

1. general auction, where the auction is either the main business or has high role for the main business
2. marketing magnets, where the role of auction is to draw customers to the main business
3. additional service, where the role of the auction is to support main business
4. "window" to traditional auction, where the eAuction offers an interface to the traditional (physical) auction.

While analyzing the viability of the business models, we encountered several interesting issues. First, the general auctions such as Huuto.net, Keltainen Pörssi and QXL were generally dissatisfied with their results revenue wise. None of the major players was able to include any form of commissions, thus they were dependant upon banner-advertising, strategic partnerships and other means of indirect revenue. It is also noteworthy that none of these companies announced that they were making profits.

Firms using eAuctions as marketing **magnets** were satisfied with results. Online auction seems to be, under the light of this research, a good way to market a site, at least at this moment.

Companies using eAuctions as **windows** to traditional auctions were generally very satisfied with the results. The reason for their satisfaction stems from location dependant reasons. Traditional auction is somewhat hindered by its place-dependency. Internet in general was seen as a vehicle to broaden markets, by making information distribution about sold items both economical and quick.

Generally, eAuctions were seen as good additional services, but as a main business found problematic. After the research, the number one general auction in Finland, Huuto.net, was purchases by local telecom company, Sonera, and added as a additional service to their popular portal. In light of this research is thus seems that independent general auctions in small markets do not have viable business model available. However, it seems that auctions per se are popular, and generate lots of traffic to sites whose main service is something else.

3.6 Products or services for auctions

Suitable products or services for auctions have certain properties. They must be easily describable, and their related information (what, in what condition etc.) must be easy to digitize. Examples of such were multiple, including computer equipment, electronics, collectibles and antiques.

On the demand side the subjects think that they can (or could) buy goods from auctions that they cannot find anywhere else (mean 3,9*), rather than use auctions to purchase things that are bought regularly (e.g. clothes or groceries) (mean 5,0*). They also largely agreed that Web-auctions are best used for making impulse or one-time purchases (e.g. a DVD-player or airline tickets) (mean 3, 39*). Selling goods on eAuctions is seen as a fairly feasible option (mean 3,83*).

It is noteworthy that despite the long relationship with digital medium, most respondents saw product presentation, even to the degree of seeing the physical product, as very important. This poses challenges for mobile auctions, as there are very limited possibilities for transmitting images of the auction items into cellular phones in the near future. However, this will change with the advent of GPRS and 3G phones.

Main criteria for shopping

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	price	54	32,7	33,1	33,1
	quality	102	61,8	62,6	95,7
	both	7	4,2	4,3	100,0
	Total	163	98,8	100,0	
Missing	System	2	1,2		
Total		165	100,0		

3.7 Price setting value/role of eAuctions

Electronic auctions define theoretically both the correct price from the markets as well as adjust the level of needed information to correct level (example of the latter: a product is put to the eAuction, interactive features of the system allow for feed-back upon more information (more detailed descriptions, digitized pictures etc.). However, it is notable that only the major auctions can achieve the liquidity and popularity needed for the price setting to work. In the table below the main reasons for using eAuctions are listed. It should be noted that the quality is perceived as far more important than price alone.

3.8 Entertainment value of eAuctions

Perceived entertainment value of eAuctions for the subjects is rather modest on average. So it should not be expected to become a major pastime for people.

3.9 Trust issues

Trust in one of the key components in electronic commerce in general and even more so on online auctions. Online auction fraud is an issue, which has grown hand in hand with the growth of the online auction industry. Albert (2002) for example reports that consumer complaints to US National Consumer Leagues Internet Fraud Watch increased by 600% from 1997 to 1998, with online auction related complaints numbering almost 5500 or 68% of all 1998 complaints. The Federal Trade Commission in the US has seen online auction related complaints to grow from 106 in 1997 to a remarkable 10872 in 2000.One must also note that these figures indicate only the reported incidents, the true number of frauds in higher.

I (could) allow my buying habits to be analyzed by the auctioneer.

SCHOOL			Frequency	Percent	Valid Percent	Cumulative Percent
university	Valid	fully agree	4	3,8	3,9	3,9
		2	13	12,3	12,7	16,7
		3	22	20,8	21,6	38,2
		4	22	20,8	21,6	59,8
		5	18	17,0	17,6	77,5
		6	16	15,1	15,7	93,1
		fully disagree	7	6,6	6,9	100,0
		Total	102	96,2	100,0	
	Missing	System	4	3,8		
	Total		106	100,0		
upper secondary school	Valid	fully agree	3	5,1	5,2	5,2
		2	3	5,1	5,2	10,3
		3	7	11,9	12,1	22,4
		4	9	15,3	15,5	37,9
		5	10	16,9	17,2	55,2
		6	15	25,4	25,9	81,0
		fully disagree	11	18,6	19,0	100,0
		Total	58	98,3	100,0	
	Missing	System	1	1,7		
	Total		59	100,0		

When asked, the subjects on average, felt that it is important to see the items in real as they are before making a bid (mean 2,78*), rather than trusting textual descriptions of goods being sold in the eAuction (mean 4,88*). This alleviates again the previously mentioned ease of digitization as a key to success of the auctions. It is also important to be able to view the reputation of the seller/buyer (as graded by others at the auction site) (mean 2,78*). Furthermore, most subjects would rather buy from a company than another consumer in an auction (mean 3,11*). Thus it is not surprising that many of the bigger auction companies have taken several incentives in building consumer trust over online auctions.

Most subjects were concerned about security of online payments (mean 3,26*). Also, they do not like the idea of allowing their buying habits to be analyzed by the auctioneer (mean 4,39*). This is in contrast with the ideas of eAuctioneers, who use these as magnets and would like to understand the patterns of behavior of the bidders.

It is especially noteworthy that the younger subjects are noticeably stricter in privacy issues. We could speculate this to be seen as a mark of the people becoming more aware and educated of the need for privacy and the value of their click streams.

I (would) have no problem in trusting textual descriptions of goods being sold in the auction.

SCHOOL			Frequency	Percent	Valid Percent	Cumulative Percent
university	Valid	fully agree	3	2,8	2,9	2,9
		2	4	3,8	3,8	6,7
		3	15	14,2	14,4	21,2
		4	22	20,8	21,2	42,3
		5	34	32,1	32,7	75,0
		6	18	17,0	17,3	92,3
		fully disagree	8	7,5	7,7	100,0
		Total	104	98,1	100,0	
	Missing	System	2	1,9		
	Total		106	100,0		
upper secondary school	Valid	3	5	8,5	8,8	8,8
		4	9	15,3	15,8	24,6
		5	13	22,0	22,8	47,4
		6	18	30,5	31,6	78,9
		fully disagree	12	20,3	21,1	100,0
		Total	57	96,6	100,0	
	Missing	System	2	3,4		
	Total		59	100,0		

4. DISCUSSION AND CONCLUSIONS

In order for an eAuction to work, a critical mass of users is needed, which is hard to attain is small markets with strong language barrier and remote location, such as Finland. First mover advantage was the dominant explainer of success for general auctions; however, first mover advantage did not lead into revenue. The existence of close substitutes (competing general auctions) prevented any auctions to charge for their services. Thus, in Finland, even successful general auctions were not able get any revenue from the main business. Revenue had to be found from marketing and affiliated activities. The companies, who used the auctions as marketing magnets were generally quite pleased with their results.

On the auction user side the perceived problems seem to be largely the same as with Internet-based buying and selling in general, that is, related to insufficient quality of on-screen presentation of goods and security issues. Also, the goods seen to be suitable for online auctions (i.e. computer related goods, software, tickets) are the same as those found to be suitable for eCommerce in general. However, there are further issues with the security and trust, because the peer-to-peer nature of auctions forces the buyers to think carefully of not only the price, but also the risks involved. This alleviates the need for repudiation mechanisms, which need a critical mass of users to work.

Our findings with young user that have considerable online experience indicate that there is a slow trend towards online buying and that this way of trading could include auctions as a price setting mechanism. The move, however, is very slow and most people will continue to use fixed price shopping also online. In conclusion, eAuctions are not really trusted as the most efficient mechanism for setting price, and their entertainment value is perceived as rather low, online auctions at the moment are not able to attract a critical mass of users.

The results of this study indicate that the actual user base of Internet auctions is very small and difficult to find in more random sample of respondents. For that reason, in the next phase of the research we will contact the actual eAuction users, that is, those users that are active in one or more auctions operated in Internet. One purpose of this study will be to compare the perceptions on electronic auctions between these groups. In the future it would also be interesting to compare these results with other countries to see, if this is just a cultural phenomenon here or is this a more general trend.

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