WEB AUCTIONS IN EUROPE:

A DETAILED ANALYSIS OF FIVE BUSINESS-TO-CONSUMER AUCTIONS

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Abstract	This paper argues that a better understanding of the business model of web auctions can be reached if we adopt a broader view and provide empirical research from different sites. In this paper the business model of web auctions is refined into four dimensions. These are auction model, motives, exchange processes, and stakeholders. One of the objects of this research is to redefine the blurry concept of the business model by analyzing one business model, the web auction model. We show in this research the complexity and diversity of factors contributing to the success of the web auction model. By generalizing the results to the level of business model we also show how complex and diverse business models can be. Motivated by the lack of empirically grounded justification for the mixed business results of web auctions, this paper adopts a qualitative approach that includes telephone interviews with web auctions developed in different European countries.	
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Web Auctions in Europe : A detailed analysis of five business-to-consumer auctions

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Abstract:

This paper argues that a better understanding of the business model of web auctions can be reached if we adopt a broader view and provide empirical research from different sites. In this paper the business model of web auctions is refined into four dimensions. These are auction model, motives, exchange processes, and stakeholders. One of the objects of this research is to redefine the blurry concept of the business model by analyzing one business model, the web auction model. We show in this research the complexity and diversity of factors contributing to the success of the web auction model. By generalizing the results to the level of business model we also show how complex and diverse business models can be. Motivated by the lack of empirically grounded justification for the mixed business results of web auctions, this paper adopts a qualitative approach that includes telephone interviews with web auctions developed in different European countries.

It is proposed in this paper that the type of product determines the web auction model. Furthermore, the web auction as business model cannot easily be unequivocally defined. Several complex and diverse factors sum up to the web auction business model. Next to this, the web auction's business model is adjusted and objectives are redefined over time through organizational learning. Moreover, the maturity of exchange processes - enabled by the web auction - is important in attracting and keeping sellers and buyers. Besides, web auctions are communities. Therefore the relationships have to be developed like community relationships. The auctioneer plays a key role in this.

1. Introduction

Web auctions gain increasing popularity throughout Europe. This paper provides a qualitative study of business-to-consumer electronic auctions on the World Wide Web (web auctions) using empirical research from auction sites across Europe. The motivation for the research presented in this paper is twofold. First, we have noted that previous research into web auctions has tended to focus on theoretical concerns, with *limited empirical investigation* other than a descriptive reference to some examples. The few available in-depth studies of web auctions have tended to concentrate on empirical results within a particular country or product domain (e.g., the Dutch flower industry – van Heck & Ribbers, 1998). We argue that a better understanding of the business model of web auctions can be reached if we adopt a broader view and provide empirical research from different sites. Second, and of particular interest to the business community, is the perception that *web auction sites obtain mixed business results*. Yet, it is not necessarily clear what constitutes success and failure in web auctions and which factors contribute to either. In order to investigate this and to find out more about success factors for web auctions, this paper explores cases that have different web auctions for different purposes.

The aim of this paper is to provide a qualitative analysis that presents the views and expectations of different stakeholders in different web auction sites. Indeed, buyers, sellers and the auctioneer, are defining and (re)shaping the business model. We draw our empirical results from qualitative research that studies web auctions developed in different European countries. The anticipated advantages of the European focus is that it might come up with a

typical European dimension – in terms of factors and business models – and that it is distinct from US-based research that currently dominates research on electronic commerce.

The paper is structured as follows. The next section presents some of the outstanding research issues for web auctions, suggests a conceptual model for the qualitative study of business-to-consumer web auctions and presents the research approach adopted in this research. Section three presents a detailed review of five cases, which are then compared and analyzed in section four. As a result of this analysis we put forward five propositions for business-to-consumer web auctions and conclude with a review of the research contribution of the paper and suggestions for future research.

2. Research issues for business-to-consumer web auctions

2.1 Auction models

One of the first attempts to study auctions in detail is the study undertaken by Charles Smith (Smith, 1989). He distinguished three types of auctions, based on the type of uncertainty in the transaction. These three types are:

- *Art/one of a kind auction* (sales auction), where the inherent value of the product – its uniqueness in terms of "artistic-distinctive" value of the art piece – characterizes the auction.
- *Collectible auction* (dealer-dominated auction), where uncertainty is related to expert opinion and classification of the products.
- *Commodity auction* (exchange auction), where the type of uncertainty deals with the supply and demand of the products.

So, every type of auction has its specific objectives, stakeholders, rules and therefore also outcomes. New technologies like the Internet enable these traditional auctions to flourish. "An auction or exchange community requires a critical mass of buyers and sellers who wish to exchange the same good during the same period and use the same mechanism to communicate and conduct price discovery. […] the Net is a hothouse of relationship and human capital that enables these conditions to flourish almost spontaneously" (Tapscott *et al*., 2000, p. 40).

2.2 Conceptual Model

Drawing from previous research in electronic commerce and web auctions, four dimensions can be identified as important for our analysis (see Table 1).

Table 1 : Conceptual Framework

Dimensions	Roles		
	Sellers	**Auctioneer**	**Buyers**
Auction model Characteristics and ownership of the auction Location and scope			
Motives and results Expectations from participating in auctions Results achieved Insights obtained about the business			
Exchange processes Issues when carrying out transactions in the auction			
Stakeholder relationships Who are the other stakeholders and what are their interests How are relations with stakeholders sustained/ developed			

1. Auction model

The importance of the auction model has been emphasized in previous research on auctions. In particular, the revenue aspect is underlying the common perception of the auction as a market mechanism that enables transactions for profit (for a detailed discussion see Timmers, 1999).

2. Motives and results

Aspects gaining more attention are the motives and results of new electronic businesses. One of the lessons learned of the dot.com hype was that innovative business models were not based on a sound financial framework. So, the financial results were disappointing, while also the motives of the different stakeholders to participate in the business model were in reality different than expected.

3. Exchange processes

The importance of exchange processes for understanding auctions is demonstrated in Kambil & Van Heck (1998). They identify the following market processes and identify process innovations in these processes. These are:

- Search processes allow buyers and sellers to discover and compare trading opportunities
- Valuation processes help buyers and sellers to discover prices
- Logistics processes serve to coordinate the transfer of physical and digital goods between buyers and sellers
- Payment and settlement processes transfer funds from buyer to seller
- Authentication processes verify the quality of the goods sold, and the credibility of the buyers and sellers.

In addition there are four trade context processes that serve to enhance trust among trading parties and legitimize the trade. These include:

- Product representation processes specify the presentation of products and services to buyers and sellers.
- Legitimation processes record and recognize the transaction within a framework of legal rules.
- Influence processes ensure that commitments among trading partners are met.
- Dispute resolution processes resolve conflicts among buyers, sellers, and intermediaries.

All the above processes are bound together within a market place by communication and computing processes and infrastructures that enable trading. In the past they were often bound together in one physical location – an agora, a trade fair, a stock exchange. Today these processes have been re-invented and virtualized by technology. The empirical evidence of the impact of such processes is limited. Paarlberg (2001) studied 194 auction sites across eight European countries. The main question addressed in this research project was: which factors affect the success of European auctions on the web? Auction success was measured in terms of monthly transaction volume. Five factors were taken into account:

- Cooperation with portals. This factor recorded whether successful web auctions had established cooperation with one or more portals to attract customers.
- Product complexity. This factor recorded whether successful web auctions were generating more complex items in terms of product description.

- Ownership. This factor recorded whether successful web auctions were owned by the seller of the items or a third party.
- Primary activity. This factor recorded whether if successful web auctions were primarily involved in web auctioning or whether the auction was an add-on to the main business activity (e.g., online sales).
- Maturity of exchange processes. Using the previously described basic and context trade processes of Kambil & Van Heck, for each of the processes, 5 levels of maturity were defined. Subsequently, the maturity level for each auction site was determined and the overall maturity level for all processes was calculated. This factor recorded whether successful web auctions were having higher maturity levels of exchange processes.

In the period December 2000 to January 2001 311 European auction sites in total were located on the web. Out of the 311 sites, 194 consumer web auctions could be analyzed in eight European countries: Austria (8), Belgium (4), France (6), Germany (74), Netherlands (40), Spain (5), Switzerland (27), and United Kingdom (30). Thus, almost one third of the analyzed auctions were located in Germany. Out of the 194 sites 152 auctions could be analyzed in terms of monthly volume of transactions. It turns out that the sum of the monthly transaction volume of the 152 web auctions is Euro 64 million. It appears that 10% of the 152 auctions generated 95% of this monthly volume and that 70% of the auctions are very small with a volume less than Euro 10,000 per month. A similar distribution can be seen in analyzing the number of items sold on these auctions. The total number of offered items in the 194 auctions exceeds 3.9 million items. Almost 88% of the items are auctioned on 10% of the auction sites. The results of Paarlberg's (2001) study show that the cooperation with portals and the level of maturity of exchange processes influence the overall success of the web auction. Paarlberg's study is very useful in mapping the web auctions in Europe, but fails to provide an in-depth understanding of web auctions as it is mostly based on web site analysis. For example it measures influence, but questions such as 'why participate in an auction / how do the expected and actual business results compare' are not addressed. This paper extends the work by Paarlberg by presenting more in-depth cases studies.

4. Stakeholder relationships

The richness of stakeholder analysis for gaining an in-depth understanding of interorganizational systems has been demonstrated in empirical studies in healthcare (Pouloudi & Whitley, 1997) and policy making in electronic commerce (Papazafeiropoulou et

al, 2001). Previous research that has considered this question from the perspective of three types of participants (buyer, supplier and intermediary) in four types of auctions is the work of Klein and O'Keefe (1999).

This is one of the few explicit indications in the literature that web auctions bring different gains to different stakeholders, although the main focus of that paper is on exploring the enabling role of Internet technology. In this paper, stakeholders and stakeholder relationships are studied in terms of two aspects. The first is the views of stakeholders about their company and is concerned with their interests in terms of motivations and expectations from the web auction. The expectations are seen in juxtaposition with actual results and studying whether any differences lead to changes in business practice, proactively or reactively. The second aspect looks at the company's views about its stakeholders: who they are, what motivates them to participate in the auction and how the company maintains relations with these stakeholders.

2.3 Research approach

As we were primarily interested in exploring the qualitative characteristics and reasons for the use of web auctions in Europe, we selected auction sites from different European countries. We identified business-to-consumer web auctions sites primarily based on previous research on web auctions in Europe (Paarlberg, 2001). We also used Internet searches and local knowledge (e.g., the eLTRUN group at the Athens University of Economics & Business pointed us to relevant sites in Greece). As we would only be able to interview stakeholders in English, Dutch, German and Greek and due to time limitations, the auction sites we investigated were hosted in the UK, the Netherlands, and Greece. Because of our qualitative perspective we have chosen sites that hosted active auctions, offered different kinds of products and, of particular interest for exploring the European dimension of auctions, had different target groups (e.g., national or global).

Table 2 : An overview of the auction sites researched

Auction site	Ownership and location	Language of site	Product(s) offered	Clients
1. Sandafayre.com	Owned by Sandafayre Ltd, company established in the UK for the last 25 years.	English	Stamps	Global (due to the nature of the product; has been so also before the web auction was available).
2. Karamitsos.gr (& karamitsos.com)	Owned by A. Karamitsos, International Philatelic Auctions, a Greek company (but the site is hosted in the US).	English	Stamps primarily but also other items of philatelic interest	Global (due to the nature of the product; has been so also before the web auction was available).
3. Vliegtarieven.nl	Vliegtarieven, a virtual company based in the Netherlands (acting as *intermediary* for a travel agent, also based in the Netherlands).	Dutch	Airline tickets	Local (due to the nature of the product, expanding to a pan-European market would substantially change the scope of the business) .
4. Budget.nl/veiling	Budget Rent a Car Netherlands – owned by the Dutch organization Holland Car Leasing. They are based in the Netherlands and own a license of Budget International.	Dutch	Car rental	Local (due to the nature of the product and purpose of the auction: selling excess capacity).
5. Snowball.gr	Ahead Relationship Mediators SA, based in Greece. They have developed and own eBargain, the 'integrated e-commerce platform' on which snowball operates. They act as *intermediary*, bringing together sellers and buyers in an e*lectronic market place*	Greek	Varied (e.g., books, furniture, travel, flowers, motorbikes, electric and electronic equipment…)	Local, Aiming to expand in the future – they expect that this will create difficulties in the logistics of distribution

Table 2 presents an overview of the sites. While it was not possible to cover all business-to-consumer European web auctions within the scope of this research, the selection of a diverse group of companies has been used as an opportunity to gain a rich understanding of different aspects underlying the function of business-to-consumer European web auctions.

From a practical perspective, our research started by exploring each company and auction web site, thus forming an initial understanding of the location and nature of the business, the business model for the auction mechanism and the products offered in the auction. Subsequently we sent e-mails, where possible targeting individuals in senior positions, requesting a telephone interview. The response was in most cases immediate and positive. Each of the semi-structured telephone interviews with senior executives of the companies listed in Table 2 lasted approximately 40 minutes.

The interview agenda reflected the four main areas of our conceptual model: the auction model used, the motives and results, the exchange processes and stakeholder relationship

issues. Three similar versions of the interview agenda were developed (in English), to account for the perspectives of the three main stakeholder groups in auctions: sellers, intermediaries and buyers. The agenda was then translated in Dutch and Greek (by the native speakers of the languages in the research team) and used for the interviews with Dutch and Greek companies respectively.

3. The Case Studies

This section presents the case studies outlined in the previous section in detail, based on the responses to the telephone interviews we conducted. Following a brief introduction to the company, we have grouped the information for each case study into the four areas that have been central to our research:

- auction model, including a discussion of the model and role of the auction for the company as well as the location and scope of the auction, whether local or global
- motives and results, referring to the reasons the company decided to participate in web auctions, their expectations and actual results and the insights these results presented for the company
- exchange processes, investigating the issues faced when carrying out transactions in the auction, with particular emphasis to trust and security – the factors identified as critical in previous research on web auctions as well as generally for electronic commerce
- stakeholders, investigating who the company considers as stakeholders of the web auction, the importance of the relations with these stakeholders and the ways in which the company develops and maintains such relations.

3.1 Sandafayre.com

Sandafayre Ltd has been established for over 25 years, originally distance selling stamps and philatelic material by post. They have since grown to be "the biggest mail auction company for stamps in the world […] probably the largest speciality auction on the Internet" (http://www.sandafayre.com/html/about.htm). While the company web site boasts about the *quantity* of products on offer ("Our web site offers more stamps than Ebay! More boxes and cartons than BoxLot.com! More collections than I-Collector.com!"), the company considers *ease of use, variety and security* to be the key success factors for their web site.

Table 3 : Analysis of Sandafayre.com

	Stakeholder Roles
Auction model characteristics and ownership of the auction location and scope	The company specializes in distance selling and auctioning stamps and philatelic material and is based in Cheshire, United Kingdom. The auction system is an English auction. Over 70% of the company's business is with overseas clients.
Motives and results expectations from participating in auctions results achieved insights obtained about the business	Establishing a web site for the company has been considered a necessity: "moving with the times". A significant part of the business is now taking place over the Internet. Moreover, the web auction presents a greater growth rate than the traditional business.
Exchange processes issues when carrying out transactions in the auction	Transactions are based on credit card payment. For most customers who have credit cards, this does present a problem as the company places a lot of importance on security: "people are quite happy to give us their credit cards, we find, because we are a reputable company". First, they argue that being 'a reputable company' makes them trustworthy. They also use encryption software for all data made available by the customers (registration information, bids, credit card details) and provide a guarantee for unauthorized use of credit cards. It is worth noting the rhetoric used on the company's web site regarding security. Except for explaining the security mechanisms in use, the company presents itself as trustworthy because it also has a physical presence: "When buying over the internet it is important to know that you are dealing with a bonfide [*sic*] business that exists in reality as well as on the web". They also provide office hours and postal address details for interested parties. (www.sandafayre.com/html/security.htm) Physical security of the products is also seen as important. The company is based on high security premises with huge vaults where the stamps are kept. One issue raised by customers relates to the use of *language*. Specifically, a number of customers from other European countries request translations for the description of the auction lots on the web site. This is a facility that the company does not provide.
Stakeholders relationships who are the other stakeholders and what are their interests how are relations with stakeholders sustained/ developed	The site was developed by *a software house*, but the company provided the specifications, the idea and the desired layout. *Additional content and links on the web-site* The company's web sites includes articles by the "renowned philatelic author and journalist" *James MacKay* and provides links to the web sites of *relevant clubs and societies* (e.g., the British Aerophilatelic Association, The Ethiopian Collectors Club, France and Colonies Philatelic Society, and others) (www.sandafayre.com/html/articles.htm)

3.2 Karamitsos.com

The company A. Karamitsos International Philatelic Auctions was established in 1988 although the owner has been involved in this commercial activity since 1970. The web site was developed as an additional channel for auctioning stamps, the companies' main commercial activity. The company has an international clientele. Only twenty per cent of its clients only are resident in Greece. This percentage has been comparable to that observed before the company set up their site – our interviewee argued that this is determined by the nature of the product. The company considers the following to be success factors for an auction site:

- The quality of the product (good product means reputation, more sales through word of mouth)
- Customer service (critical to respond quickly to all queries, even to those customers who won't buy). Maintaining a personal relationship with customers is considered very important for establishing trust.
- Technological: speed is the key factor; presentation quality and style, ease of navigation, aesthetics and functionality are also important.

Table 4 : Analysis of Karamitsos.com

	Stakeholder Roles
Auction model Characteristics and ownership of the auction location and scope	The auction is the main business activity of the company (although they also sell stamps and philatelic literature) They offer two types of auction: public – this is physical and takes place once a month, usually in Athens. It is possible to place bids through the Internet as well weekly – only available on-line on a weekly basis Their main income is from the public auction; probably because the quality of the products on offer is typically superior than in the weekly auction. The site uses an English auction system. The company has a single site, in English, that is hosted by the site developer in the US. Auction prices are in Euros (however, some parts of the site that were developed first list prices in US dollars – these will be changed in the near future). Their on-line clients are from all over the world, as was the case also before use of the Internet. *Advertising*: very important, but search engines are not really helpful; it is better for the company to advertise in specialized magazines and maintain personal relations with customers (e.g., the owner travels the world and meets with regular clients or tries to find new clients in the countries he visits – this personal acquaintance is very important for customer trust)
Motives and results expectations from participating in auctions results achieved insights obtained about the business	Initial motivation: when the owner was told by colleagues in the US of the potential of the Internet for reaching new customers. The results from their web auction are mixed. They were 'pleasantly surprised' by electronic participation to their public auction but disappointed with the participation to the weekly auctions. They monitor hits and try to interpret changes. In one case they had a drop in numbers, probably because they offered releases from previous auctions in a series of weekly auctions; they responded to the drop in numbers by sending an electronic newsletter presenting updates to the site; this triggered an immediate response from some customers. The number of hits keeps increasing. While the majority of hits come from abroad there is an increasing trend for Greeks to bid on-line (presumably because they now have access to the Internet). Some are new customers, and they usually start buying in small quantities or for small amounts, which then increase gradually.
Exchange processes issues when carrying out transactions in the auction	The lack of a legal framework in Greece is a problem, especially for taxation purposes (it is not clear which law/location applies for goods sold through the web auctions). *Trust and opportunistic behavior* are not really a problem. The company only had 2 incidents in 2 years where the customers bid and then cancelled (possibly genuine mistakes). The use of credit cards makes transactions more trustworthy for the company (previously they had to wait for payment from international customers; they would send products to regular customers before receiving payment – not to give the impression they didn't trust them). On the web site only the payment frame is made secure to maintain possibility to load the web pages fast; hence many customers think the page isn't secure because there isn't an 's' after http for the whole page. All customers are given the opportunity to return the goods (e.g., if not described accurately), which is important for establishing trust. Personal contact also very important for trust; they estimate they have met with about 70% of their customers (despite the geographical spread).
Stakeholders relationships	Their site was developed by an American company, who owns and maintains the server

who are the other stakeholders and what are their interests how are relations with stakeholders sustained/ developed	where the site is hosted. They are very happy with their *technology provider.* (They did a market research of Greek suppliers at the start but were very disappointed as providers unable to quote prices or guarantee functionality). The Karamitsos company does most of the content updates using dedicated software. *Customers* participate in the web auctions in his view 'either because they are addicted to technology and will use it for everything that makes their life easier or are new to technology, try it out and typically return to the traditional ways of buying'. Relationship with customers is maintained through personal contact (unlikely that this will be replaced), but also by mailing newsletters with updates, maintaining a high quality of products and fast response to all queries. Information on customers is a key asset of the company and is not shared (their database contains about 1000 customers). *Competition*: no serious competition in Greece; one company is about to set up a web site but hasn't yet; e-Bay offers a different caliber of products. There is competition with major players in the US, who offer stamps from all over the world; they are different because they specialize in stamps from the 'Greek regions' (Greece, Cyprus, plus areas that were Greek or where there were Greek post offices)

3.3 Vliegtarieven.nl

Vliegtarieven is the largest independent web site for selling airline tickets in the Netherlands. The interest of the owners in auctions started with a course project they did at Erasmus University. The auction is used on their site as an additional promotional tool for the main business (ticket sales). Vliegtarieven work in collaboration with a travel agency that provides call center services and issues the tickets.

Table 5 : Analysis of Vliegtarieven.nl

	Stakeholder Roles
Auction model characteristics and ownership of the auction location and scope	The company operates as a joint venture with a travel agency. They offer the agency another channel for dealing with airlines and they have a key role in providing lower fares. They are essentially a virtual company, operating from Rotterdam whereas the call center (which belongs to the travel agency) is located in Haarlem Web auctions cannot work as the single business model for flight tickets, because (unlike eBay) it is a complex product: there are too many options once a winner has been decided (e.g., departure and arrival time, how many passengers, etc.) Target customer base: the Netherlands and Belgium (in principle, anybody can bid but the site is in Dutch and all flights they provide depart from Amsterdam). Thus, they don't get many bids from Belgium – in the future they think about providing flights from Brussels as well, but currently don't intend to expand further or provide an English version to their site ('not worth the investment'). The auction is an English auction system.
Motives and results expectations from participating in auctions results achieved insights obtained about the business	The auction works as a promotion device for their site (the customers tell others) and customers are informed by email about new offers. The auction has worked very well for the company; the site traffic and traffic for the auction is still growing. The product is very important for an auction; they discovered the auctions worked only with popular destinations and economy class tickets.
Exchange processes issues when carrying out transactions in the auction	A ticket is searched for on best price (not specific airline) only once there is a winner so that they can be more flexible with dates.

	In order to bid one has only to give address, telephone number and e-mail. Why: makes it easy to start bidding, it is difficult to expand their customer base if they ask for credit card details (many of their customers don't have a credit card or don't want to give out their credit card details). They feel that the price (cost, risk?) of trusting their customers is lower than the cost to the business of asking for credit card details. They follow up winning bids with phone calls (the customer can then pay by credit card or other means). Bidders receive alerts when someone places a higher bid. In the future they may allow full payment on-line by credit card (this will be offered as an extra feature offering 24hour access; but alternative means of payment will still be available). They monitor the auctions regularly in case there is a problem (e.g., somebody bid 50000 Dfl at one point, because he accidentally pressed too many zeros, so they had to correct the auction entry to the previous bid)
Stakeholders relationships who are the other stakeholders and what are their interests how are relations with stakeholders sustained/ developed	*Buyers*: - They have a database of 27000 email addresses – these are people who visited the web site and left their address (not necessarily participating in an auction) - word of mouth is very important for bringing customers to their site - when an interesting auction is going on customers let their friends know Why buyers visit their site: they like the game aspect, the low start for the price, the product (tickets is an interesting product for bidding). *Sellers* get rid of their extra stock, can offer last minute tickets, works as a promotion for certain destinations (e.g., something Transavia seems to be interested in), provides an alternative channel for sales (something KLM seems to be interested in). Relations with the travel agency and airlines: - With the travel agency (and airlines): communicating information about new destinations and 'normal price' of the ticket and information about the winners only. They are not giving their database away. They send any emails to the customers themselves; it's not good for customers if they don't keep their information safe (and it's not legal either). - Establishing partnerships with airlines: the contacts start on their initiative; they phone them and send letters (but in the future this might change, with airlines contacting them) - Recently, they have been contacted by a Dutch airline that has asked them to make 400 tickets available (per month) through their site. This, they expect, will be a great boost in publicity

3.4 Budget.nl

Budget Rent a Car is one of the three largest car rental companies in the world with approximately 3000 locations in 120 countries. Holland Car Leasing is the franchisee of Budget Rent a Car in the Netherlands. In the Netherlands Budget Rent a Car has 105 locations. The Budget Rent a Car web auction is the only car rental auction in the Netherlands, probably the only car rental auction in Europe. It started in September 1999 and was revised in October 2000. Bidding information is provided via the web and SMS and bidding is possible via WAP. The cars in the auction are always located at a point of sale in the Netherlands. Winning bidders have to collect their car at the point of sale. Originally the auction intended as an instrument to deal with excess capacity but is now used primarily as a promotional tool.

Table 6 : Analysis of Buget.nl

	Stakeholder Roles
Auction model characteristics and ownership of the auction location and scope	Primary business activity is Renting cars. Budget Rent a Car Netherlands owns a license of Budget international. The Dutch organization behind Rent a Car is Holland Car Leasing who owns licenses for Budget Rent a Car in the Netherlands, Belgium, Luxembourg, Finland, Denmark, and Norway. The company sets the prices and the amount of cars for each point of sale, estimate the surplus for the coming weekend and schedule the web auction with this information. The auction is an English auction system. What makes this auction site national? International car rental almost always takes place at airports. Other circumstances apply there: usually there is a shortage of cars at airports, not a surplus. The cars that are auctioned have to be collected by the winning bidder at the concerning point of sale. These points of sale are always located in the Netherlands. So the items in this auction are all nationally based. There have never been bidders outside the Netherlands. Advertising: Offline – in brochures at our points of sale. Online – at the start we used banners and buttons. They don't use the latter anymore, because the target of the auction has changed.
Motives and results expectations from participating in auctions results achieved insights obtained about the business	The web auction was intended as an instrument to sell the excess capacity in the weekends. This has changed over time. The auction started in September 1999. We expected to auction 400 cars per weekend. We used a very low starting price. This target is never reached. Nowadays we auction an average of 60 / 70 cars per weekend. We also raised the starting price because we saw a cannibalization of our normal car renting. With the auction we also try to generate more consumer attention to point of sales where normally less consumers rent cars. We do this by lowering the starting prices at these points of sales. We targeted on additional revenues and finally we use the auction as a promotion tool. We don't focus anymore on making profits with this auction.
Exchange processes issues when carrying out transactions in the auction	At first we faced problems at the closing of the auction. Sometimes we had 50 bidders in the last minute of the auction, which disrupted the auction system. This confused many bidders. We increased the bandwidth of the auction. And now we display a clock in our auction so bidders don't face uncertainty any more at what moment the auction ends. The winning bidder can settle the transaction at the point of sale. 'Our auction does not use online transactions and is therefore a safe auction environment; this as an advantage over other web auctions'.
Stakeholders relationships who are the other stakeholders and what are their interests how are relations with stakeholders sustained/ developed	They used to have much more bidders (150 for one car) in the period when they used lower starting prices. Nowadays they have only approximately 4 bids for one car. 'I think other auctions used to be very optimistic about the future of web auctions. These auctions introduced the auction mechanism into the consumer world. I think this is a positive influence on consumers for our auction. Currently these expectations are tempered. I think the only web auction that makes a profit is eBay.' Budget is asked several times to merge with other auctions. The organization that built the auction (Advance) and Budget are considered as important stakeholders. They also have a relation with a number of other companies. These are the SMS service provider and the Wap server provider (ATOBE, formerly WapMagic). As the client for these companies they don't really share information with them.

3.5 Snowball.gr

Ahead Relationship Mediators SA (Ahead RM) is a company that focuses on the use of the Internet for e-commerce and the development of service and relationship networks. Ahead RM is the first company in Greece and one of the few worldwide to engage in dynamic pricing and demand aggregation. The company developed e-Bargain, an integrated e-commerce platform that introduces innovative ways in business transactions between suppliers and consumers and is valuable to on-line content providers as a marketing tool, to increase the number of visitors on their site. Ahead RM used E-Bargain to develop Snowball, a consumer community developed around the first group-buying site in Greece (http://www.snowball.gr). Snowball is operating primarily as a business-to-consumer marketplace in Greece. The company would like to expand this activity abroad, probably starting with other Balkan countries before moving to the broader European market. They anticipate that the major problem they will face is distribution logistics. They do not anticipate problems with suppliers as expanding to new markets would offer their suppliers the possibility to have access to new target groups.

Table 7 : Analysis of Snowball.gr

	Stakeholder Roles
Auction model characteristics and ownership of the auction location and scope	The idea for snowball dates back to 1997 but was implemented when the company (Ahead RM) was formally established in 2000, at a time when the market was more 'mature' for the snowball idea: Snowball is unique because it combines different models. These are *group buying*, *dynamic pricing* and *demand aggregation* (people can go to the site, recommend products that the site then administers and makes available at better prices). Bringing these models together is only possible using the Internet; the company believes that things that work on the Internet are those that cannot function off-line and the model they use cannot function off-line. Sellers pay a monthly fee to cover administrative costs and as a premium for the benefit of company promotion through the site. Ahead also gets a commission for each completed transaction. Snowball is not a pure auction model because 'the prices of the products change, but do not get devalued': if more people buy, the price drops because there is group buying. There is an auction service available on the site, which is secondary to the model and intended for companies who have some special products they wish to make available using this model (e.g., an athletic union auctioning athletics products signed by famous football players for charity purposes). The site will always be business-to-consumer, as this guarantees the quality of products and makes the site trustworthy. Advertising Ahead actively advertises snowball through the Internet, 'because it is Internet users that are targeted', but also through press releases and interviews in the media (newspapers, TV, radio).
Motives and results expectations from participating in auctions results achieved	Snowball.gr is the company's 'demo' – an opportunity to demonstrate the technological capabilities of the company. However, the company also uses it commercially and tries to ensure it is a profitable endeavor.

insights obtained about the business	Commercial results are very encouraging; the site has 2000 registered users and 35000 unique users per month.
Exchange processes issues when carrying out transactions in the auction	No problems of opportunistic behavior have been faced so far. The company takes security very seriously (e.g., they are certified by VeriSign) and is a pioneer in Greece for the implementation of the latest trends in e-commerce security. For example, they do not record credit card details – this information is sent directly to the bank for processing. The company was the first to implement this system and actually helped in debugging the code when it was first implemented so that it works reliably.
Stakeholders relationships who are the other stakeholders and what are their interests how are relations with stakeholders sustained/ developed	The company is the 'mediator' between suppliers and customers, providing a service that benefits all parties. Customers The site is attractive because of the different model on which it is based, which is also what makes it unique. Customers only provide their name and email address to participate; their address only if they proceed to buying. The company tries to obtain feedback from customers for completed transactions. The intention of the company is to provide a personalized newsletter that provides each customer with data about their shopping behavior in comparison with the mean in the community of users, suggest products, provide news of the user community and develop the sense of community among buyers in the site, 'because this is the added value the company offers: we build networking communities; it is the company's motto'. Suppliers Once the site went 'live' approaching suppliers became much easier (the company was perceived as more trustworthy) and some suppliers approached Ahead themselves. Third parties involved in business transactions: The bank which confirms credit card transactions The courier service used by the company for the delivery of goods (where the suppliers don't have their own distribution mechanisms)

4. Lessons learned

Following the detailed review of these five cases, some patterns seem to emerge concerning what these companies describe as success factors for business-to-consumer web auctions. The lessons that can be learned from these patterns are the following:

1. The type and quality of the product plays an important role in the way in which the auction model becomes operational

A consistent message from all the respondents is that the nature and quality of the product made available in the web auction is considered as an important competitive differentiator. In this respect, web auctions do not seem to be different than other forms of commerce. The interesting lesson for the use of web auctions is that the *type* of product seems to determine which auction model is suitable. In particular, certain products are considered better suited for selling to a local market, whereas others appeal to an international clientele. An example of

the former is Budget, as explained in section 3.4. Examples of the latter are the two companies auctioning stamps. Stamps are valuable, collectible items that can be sold to an international, specialized for the most part, audience. This applies for Karamitsos.com who specialize in Greek stamps (i.e., the original products are locally based, although they may subsequently have changed hands) as it does for Sandafayre.com who provide stamps from multiple locations (international supply).

It is interesting to note that although there are airline ticket auctions available to an international audience (e.g., Lufthansa allows customers from various locations to bid for tickets), Vliegtarieven.nl have argued that the nature of their product makes it difficult to address an international clientele. This seems to suggest that similar products can lead to a different scope for a web auction, depending on the way in which the *seller defines the product scope*.

Proposition 1: *The type of product determines the web auction model.*

2. **There is a mixed perception about the extent to which the Internet makes web auctions qualitatively different from traditional auctions.**

An implicit lesson in reviewing how the companies employ web auctions concerns the extent to which the Internet provides a radically different or a complementary model of business activity. For example, Snowball.gr is confident that since demand aggregation is only possible on the web, their company has a substantial and sustainable advantage. For other companies, such as Karamitsos.com, the Internet is a complementary medium for auctioning the products that offers advantages in terms of broader and more convenient access for current and potential clients. A similar diversity of views can be noted in the means used to market the auction: Snowball.gr feels that one of the most suitable ways of advertising their company is electronically, whereas Karamitsos.com argue that in their case marketing using electronic means was not effective. In the cases of Vliegtarieven.nl and Budget, it is the web auction that serves as a marketing mechanism for the company's main activity (as well as helping to reduce product surplus). Increasingly companies also explore the use of mobile telephony capabilities, adding to the ways in which customers can participate in a web auction. A well cited example of this model is 12snap.de (Wallace, 2000). Of the companies we investigated Budget rent a car used this additional communication channel with their customers.

Proposition 2: *The web auction as business model cannot easily be unequivocally defined. Several complex and diverse factors sum up to the web auction business model.*

3. **The design of the auction needs to be revised over time as the maturity of a company in the exchange processes increases and stakeholder needs change.**

Our cases show that the motivation for hosting a web auction varies in different companies. Timmers (1999) provides a useful summary of the reasons why companies participate in web auctions:

> *"The sources of income for the auction provider are in selling the technology platform, in transaction fees and in advertising. Benefits for suppliers and buyers are increased efficiency and time savings, no need for physical transport until the deal has been established, and global sourcing. […] Sources of income for suppliers are in reduced surplus stock, better utilization of production capacity, and lower sales overheads. Sources of income for buyers are in reduced purchasing overhead cost and reduced cost of goods or services purchased."* (pp. 37-38).

This summary applies to most of the cases we investigated, where the web auction was introduced to explore a business opportunity and provide an additional sales channel. The companies we looked at may have been the first to offer this model in the particular industrial or national context. Yet, they were using a well established business model. Snowball.gr additionally offered a new model for business-to-consumer electronic commerce.

An interesting finding of our empirical investigation is that on the basis of the first business results, businesses may redefine the scope and business model of their web auctions. An implication of the use of web auctions therefore is organizational learning. In some cases, the learning moves beyond handling the auction and leads to a better understanding of customer behavior. For example, Karamitsos.com noted the lack of interest of buyers in weekly auctions, interpreted it as a function of the quality of the products on offer and adapted its allocation of lots. Similarly, on the basis of the first business results, Budget changed their expectations from the auction and adopted the scope of the auction accordingly.

Proposition 3: *The web auction's business model is adjusted and objectives are redefined over time through organizational learning.*

4. Successful auctions rely on trust in stakeholder relations.

Web auctions, as most commercial transactions, rely on the *trust* between the parties involved. Trust in this context entails the extent to which the company is perceived as trustworthy by the customers but also the extent to which the company trusts its customers. As discussed in the first lesson from our analysis, the *quality* of the product, and in some cases (e.g., in Sandafayre.com) the *breadth* of product offer is significant. Customers have more confidence in the product and consequently trust the company more; in this respect, the quality of the product is a key success factor for maintaining good relationship with customers. One perhaps surprising finding is the extent to which personal contact continues to matter in the electronic market. Snowball.gr, Vliegtarieven.nl and Karamitsos.com all indicated the value of face-to-face contact with suppliers but also with customers in the case of Karamitsos.com. In general our respondents did not see opportunistic behavior as a problem, and had only faced problems with customers in only one or two cases – these problems were easily rectified. Maybe the reason for relatively few cases of inappropriate customer behavior is due to the business-to-consumer model of the auction, which discourages opportunistic behavior. It will be interesting to investigate the validity of this assumption in future research that compares the instances of opportunistic behavior across business-to-consumer and consumer-to-consumer auction sites.

In view of the attention to trust and security in the electronic commerce literature, it is interesting to note that companies were aware of security as a problem and acknowledged it as an important issue for the company's trustworthiness. Indeed, security measures were explained at length in the web sites and the companies offered guarantees in case of problems. The use of credit cards is of particular interest: it always came up as an issue during the interviews, although companies had not faced any security problems in practice. It is also noteworthy that the companies dealt differently with credit cards: Vliegtarieven.nl do not require credit card information when a customer registers and consider this a differentiator for their company; Karamitsos.com and Budget.nl provide alternative means of payment; and Snowball.gr do not record credit card information on the company's databases: the information is passed on directly to the creditor.

Proposition 4: *The maturity of exchange processes - enabled by the web auction - is important in attracting and keeping sellers and buyers.*

5. Successful auctions develop communities.

Another aspect of stakeholder relations in web auctions is the development of communities. Smith (1989) argued that "the fact that auctions are so prevalent and expanding their sphere of activity would seem to indicate that their role in modern society is much more complex [than fulfilling some strictly economic function]. […] auctions are social processes capable of defining and resolving inherently ambiguous situations, especially questions of value and price" (p. 3). In web auctions this may be qualitatively different as the communities are formed in a virtual space. Indeed it varies greatly across the cases we investigated. For Snowball.gr, the creation of a virtual community amongst buyers is a primary goal of the company. This community of buyers may interact directly (e.g., on the company's web site), or indirectly, by aggregating demand for specific products. Vliegtarieven.nl also encourage the creation of a virtual community, which they support with a company newsletter. Karamitsos.gr provides an interesting case where the community of philatelic interest actually meets off-line and in Sandafayre.com the sense of community is indirectly supported through links to clubs and societies.

Proposition 5: *Web auctions are communities and therefore the relationships with or amongst consumers have to be developed like community relationships. The auctioneer plays a key role in this.*

5. Conclusions

This paper argues that a better understanding of the business model of web auctions can be reached if we adopt a broader view and provide empirical research from different sites. The paper proposed a conceptual framework for the study of web auctions and used this as the basis for qualitative telephone interviews in five European companies. This led to a number of lessons and propositions about business-to-consumer web auctions, thus making the following two key contributions to the literature of new business models for electronic commerce.

Firstly, we identified four major dimensions that are important for the success of e-commerce. These dimensions are auction model, motives and results, exchange processes, and stakeholder relationships and formed the basis for a conceptual framework for comparing different types of auction business models. The paper illustrated its use in the study of

different web auctions. In contrast to the traditional way of analyzing electronic commerce these four dimensions of the conceptual framework led to empirical evidence for the importance of stakeholder relationship management and organizational learning for successful electronic commerce.

Secondly, the study of five detailed case studies of web auctions in Europe resulted in a series of testable propositions. These propositions address the importance of the type of auctioned products and its relationship with the auction model, the complexity and diverse factors that sum up to the web auction's business model, organizational learning by business model adjustment and redefinition of objectives over time, the maturity of the exchange processes, and the community relationships of auctions.

These key contributions are a useful guide for managers of new business models for electronic commerce as well as those studying web auctions aiming to evaluate or explain the successes or failures of different sites.

However, our research has the following limitations. Firstly, the number of cases that we analyzed is limited. Secondly, the analyzed cases are not completely diversified over the dimensions of the research framework. Thirdly, this research lacks a detailed investigation of consumers in web auctions. Our results are clearly limited by the focus on business-to-consumer web auctions, although some of the findings suggest areas where there may be differences between these and business-to-business or consumer-to-consumer web auctions. In particular, it will be interesting to investigate how the development of *trust* and the development of *virtual communities* change across different models of web auctions. For example, is a business-to-consumer site more trustworthy than a consumer-to-consumer site? Are virtual communities more easily formed in consumer-to-consumer sites? What is the role of the auctioneer in this respect and how does it differ from the role of the auctioneer in business-to-consumer sites?

Our selection of sites, despite the limited number of cases, provided useful insights about the motivations, business models and process and stakeholder relations in European web auctions. It was interesting to observe the differences between those sites with a local clientele versus those with a global clientele. Future research in this area should also include companies that have web auctions across Europe, offering different interfaces to different

audiences. Our research indicated that several auctions are working on their European strategy and intended to expand their scope towards other European countries. A more comprehensive qualitative study of such cases, including examples from other European regions such as Scandinavia and Eastern Europe, would provide a better understanding of the diversity of the business model of auctions in Europe. We hope that this paper will generate research interest in this area so that a broader research agenda about web auctions can be set.

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