

The Role of Intermediaries in Electronic Marketplaces: Assessing Alternative Hypotheses for the Future

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Abstract

Early research in electronic markets seemed to suggest that ECommerce transactions would result in decreased costs for buyers and sellers alike, and would therefore ultimately lead to the elimination of intermediaries from electronic value chains. However, a careful analysis of the structure and functions of electronic marketplaces reveals a different picture. Intermediaries provide many value-adding functions that cannot be easily substituted or 'internalised' through direct supplier-buyer dealings, and hence mediating parties may continue to play a significant role even in the E-Commerce world. In this paper we provide an analysis of the potential roles of intermediaries in electronic markets and we articulate a number of hypotheses for the future of intermediation in such markets. Three main scenarios are discussed: the *disintermediation* scenario where market dynamics will favour direct buyer-seller transactions, the *reintermediation* scenario where traditional intermediaries will be forced to differentiate themselves and re-emerge in the electronic marketplace, and the *cybermediation* scenario where wholly new markets for intermediaries will be created. The analysis suggests that the likelihood of each scenario dominating a given market is primarily dependent on the exact functions that intermediaries play in each case. A detailed discussion of such functions is presented in the paper, together with an analysis of likely outcomes in each case.

1. Disintermediation in Electronic Markets: A Historical Perspective

Advances in Information Technology (IT) are widely acknowledged as causing fundamental changes in organisational and market structures (Malone et al 1987). The advent of Inter-Organisational Information Systems (Johnson and Vitale 1988) and the Internet have resulted in previously unthinkable ways and methods of conducting business, for example Electronic Commerce and the evolution of electronic marketplaces (Rockart and Scott-Morton 1991). Such advances contribute to a continuous transformation of organisational value chains and value systems (Porter 1985).

As these advances extend beyond the sphere of organisations to include individual consumers, industrial dynamics provide an unprecedented opportunity for producers of products and services to bypass traditional market intermediaries (for example, wholesalers and retailers) and interact directly with the final consumer. Early Information Systems (IS) research in electronic markets tended to suggest that this move towards direct interaction between producers and consumers will lead to the gradual elimination of intermediaries from the value system (Malone et al 1987). The term '*disintermediation*' has been offered to describe the move towards shorter value chains in electronic marketplaces.

There appear to be strong economic incentives for both producers and consumers to drive intermediaries out of the value chain. Intermediaries have been known to add significant costs to the value chain (Benjamin and Wigand 1995), thus suppressing the profit margins of producers while at the same time resulting in higher final prices for consumers. Advanced uses of IT and the evolution of electronic marketplaces have been hypothesised to reduce transaction costs for producers, thus enabling them to internalise activities that had to be 'purchased' from intermediaries in a traditional market. The resulting redistribution of profits within the value system will arguably drive intermediaries to extinction. Under such a scenario, producers can benefit from increasing their profit margins and passing a part of their savings to the consumers, who thus enjoy lower prices and greater choice. Further, where one producer can dominate on price or quality, direct sales reduces the uncertainty of consumers and a "winner takes all" market can emerge (Bailey and Bakos 1996).

The disintermediation argument, however, focuses primarily on the cost of intermediation, not considering the values which are added by intermediaries and the economics of intermediation (Heijden 1996). In order to develop a balanced argument, we consider market structures and contingencies by exploring three separate market examples: books and publishing, music, and tourism. Books represent a physical product that has to be shipped through logistics, although publishing (and potentially entire books) could be distributed electronically. Music is a digital product that can potentially be distributed electronically, and the costs associated with non-electronic distribution can be considerable. Tourism products are information intensive, the actual services taking place in the physical world. We will focus on tickets for scheduled flights, which have become a highly contested market with a variety of competing distribution channels and business models.

Here is how the disintermediation hypothesis was expected to materialise in these three different markets:

- a) *Publishing market*: Prior to the Internet, virtually all books were sold through physical retail operations that act as intermediaries in the traditional market. The move to the Internet was initially hypothesised to substitute traditional retailers by electronic retailers. Moreover wholesalers, publishers or even authors would be able to get direct electronic access to the customer, thereby changing the structure of the publishing value chain fundamentally (see Figure 1).
- b) *Music market*: In traditional markets, music is predominantly sold through intermediaries (retail outlets) that match the offerings of record companies with the preferences of consumers. In electronic markets, things were initially expected to change. Record companies were hypothesised to move towards direct sales since the costs associated with electronic distribution of a digital product are almost negligible.
- c) *Flight ticket market*: Currently, 80-90% of all tickets for scheduled flights are sold via travel agents despite the fact that computer reservation systems (CRS), introduced in the 1970's (Hopper 1990), can be used as a technical infrastructure for direct sales. It was hypothesised that direct sales by airlines would become the dominant distribution model.

The *disintermediation hypothesis* has recently started to receive considerable critique (Burton and Mooney 1998), backed up by empirical observations suggesting that intermediaries, instead of disappearing, re-emerged and gained considerable significance, at least in some electronic markets. At the same time, wholly new markets for electronic intermediaries, or *cybermediaries* (Sarkar et al 1995), have been created.

Using the same examples as above, we note:

- a) *Publishing market*: Traditional retailers (bookshops) faced pressure from on-line retailers (for example, Amazon, and the Internet Bookstore in the U.K.), but have managed to compensate by differentiating themselves and entering the electronic marketplace as well. Moreover, wholesalers who in the past have built huge databases are entering the on-line market (for example, Koch, Neff & Oetinger in Germany,) and publishers are offering their products directly. Overall, disintermediation is limited, but traditional retailers face increasing pressure from new entrants like Amazon who have successfully entered the market and developed innovative models of on-line retailing.
- b) *Music market*: Traditional music retailers did not face serious problems, since recording companies did not show considerable interest in engaging in direct sales. At the same time however, the advent of new standards, like MP3, gave rise to new ways of using and transferring musical content, and many new players were quick to capitalise on the business opportunities offered by the technological developments. Novel models for distributing music have emerged (for example, MP3.com offers a facility for uploading of CD content on the Internet from where the content can then be downloaded and re-played anywhere in the world). Not only did disintermediation not happen, but the industry is being transformed with new types of intermediaries appearing.

c) *Flight ticket market*: Tourism principals have started to bypass travel agents, using the Web as a medium for business transactions (Marcussen, 1999). Lufthansa claims to have sold 7-8% of their tickets direct in 1999 and is heading for 14 % in 2003 (Pichler 1999). CRS, who used to function like wholesalers for the travel agents, have entered the electronic retail business with extensive Web-sites services based on their capabilities of data storage, information retrieval and transaction processing. Travelocity, a member of the AMR group to which also American Airlines and the CRS Sabre belong has attracted over 2.5 million registered users. Beyond that new players like TravelBids and Priceline have entered the electronic market. While Priceline is operating a private market to collect demand from low budget travellers for airlines, TravelBids maintains a reverse auction platform on which travel agents can bid to fulfil customers travel specifications. In addition, numerous travel agents are entering the electronic market themselves, trying to leverage a hybrid model of physical presence and electronic services (see Figure 2).

Summarising, we can note that, while producers are able to sell directly to consumers in the electronic marketplace, lower barriers to entry and new market opportunities have in some cases actually increased the number of intermediaries. The purpose of this paper is to critically examine and compare the existing explanations of disintermediation, reintermediation, and cybermediation, in order to gain a better understanding of the potential role of intermediaries in future electronic marketplaces. A model of marketplace functions is used as a basis for addressing the differences between traditional and electronic marketplaces in a structured and comprehensive manner. Based on this understanding, we articulate a number of premises for evolving intermediation structures.

2. Traditional Markets: The Role of Intermediaries

According to Bakos (1998), markets (electronic or otherwise) serve three main functions, which can be further divided into a number of sub-functions, illustrated in Table 1. In a traditional (i.e. non-electronic) centralised market (Hanker 1990), the first two functions are typically performed by intermediaries, while the third usually is divided among the intermediary and regulatory bodies or governments. In the remainder of this section, we will discuss the role of intermediaries in each of the traditional market sub-functions, while in the next section we will articulate some ways in which intermediaries are influenced when performing the same functions in electronic marketplaces.

<i>Primary Market Function</i>	<i>Sub-Functions</i>
Matching Buyers and Sellers	<ul style="list-style-type: none"> ➤ Determination of Product Offerings ➤ Searching ➤ Price Discovery
Facilitation of Transactions	<ul style="list-style-type: none"> ➤ Logistics ➤ Settlement ➤ Trust

Institutional Infrastructure	➤ Legal
	➤ Regulatory

Table 1: Functions of a market (Bakos 1998).

Determination of Product Offerings

Markets provide sellers with information about existing and future buyer demand. This information allows sellers to employ economic inputs (capital, technology, and labour) to develop products and services that match anticipated demand. Thus, sellers determine their product offerings based on signals they receive from the market. Intermediaries can assist sellers in determining an optimal product mix, by remaining closer to buyers, by being able to receive and interpret market signals in a more timely fashion, and by alerting sellers regarding market dynamics and changes.

Searching

Buyers select their purchases from the available product offerings, after considering factors such as price and product characteristics. Buyers, however, face search costs when obtaining and processing this information. Similarly, sellers may face search costs in their efforts to find and approach qualified buyers for their products (for example in marketing and advertising). Intermediaries can help buyers reduce their search costs by providing a single point of contact for information gathering and market transactions. At the same time, intermediaries can indirectly assist sellers in their search for prospective buyers by providing a major marketing and buyer targeting channel.

Price Discovery

Price discovery can be described as “*the process of determining the prices at which demand and supply ‘clear’ and trade occurs*” (Bakos 1998). Price discovery is a key function of all modern markets and is usually based on an underlying mechanism, which depends primarily on the market type and their characteristics. Prevailing mechanisms for price discovery include auctions (for example, in stock markets), negotiations (for example, in ‘open’ street markets), and firm offers (for example, in department stores). As liquidity, i.e. a sufficient amount of demand and supply, is a critical success factors for markets, intermediaries have a competitive advantage over individual suppliers to generate the requisite liquidity. The role of intermediaries varies depending on the actual mechanism used. Generally, their role is more significant in auctions (where the intermediary provides all the infrastructure and logistical support) and less so in negotiations and firm offers (where price discovery can take place directly between buyer and seller). However, the presence of intermediaries is generally associated with higher final prices for buyers, which are often not justified by a higher customer utility, hence the basic economic incentive for driving intermediaries out of the value system.

Logistics

After a market transaction has been agreed between the seller and the buyer, the purchased products or services must be 'transferred', physically or otherwise, to the buyer. Logistics, in this wide definition of the term, may involve activities and mechanisms such as shipping, distribution, and warehousing (for products) or licensing, booking, subscriptions, etc. (for services). The role of intermediaries is usually of paramount importance, especially in the cases where sellers opt for 'contracting out' certain value activities such as deliveries.

Settlement

Once the actual logistics operations have been completed (and, in some markets, during or even before that), the buyer has to transfer the payment to the seller in order to 'settle' the transaction. Settlement may involve payment processing, crediting, etc. The intermediary is usually a third party facilitating or monitoring the transaction.

Trust

Some market transactions may require the establishment of a certain level of trust between buyer and seller. Trust mechanisms have been established to protect sellers and buyers from the opportunistic behaviour of other market participants. Trust mechanisms may be facilitated by third parties, such as banks, credit reporting bureaux, rating agencies, etc. These parties can be considered as intermediaries in the trust building market function.

Legal and Regulatory Infrastructure

The institutional infrastructure of markets specifies the laws, rules and regulations that govern market transactions, and provides mechanisms for their enforcement. Intermediaries may include governments, regulatory bodies, legal agencies, etc.

Table 2 summarises the role of intermediaries in each of the market functions discussed above. In the next section, we will discuss how the advent of electronic markets can influence the future of intermediation for each market function.

<i>Market Function</i>	<i>Sub-Functions</i>	<i>The Role of Intermediaries</i>
Matching Buyers and Sellers	➤ Determination of Product Offerings	➤ Monitoring, Alerting
	➤ Searching	➤ Reducing search costs
	➤ Price Discovery	➤ Facilitating (but increasing price)
Facilitation of Transactions	➤ Logistics	➤ Shipping, Distribution, Warehousing
	➤ Settlement	➤ Facilitating, Monitoring

	➤ Trust	➤ Rating, Guaranteeing
Institutional	➤ Legal	➤ Monitoring, Protecting
Infrastructure	➤ Regulatory	➤ Monitoring, Protecting

Table 2. The role of intermediaries in traditional market functions.

3. Electronic Markets: New Roles for Intermediaries?

Electronic marketplaces rely on advanced uses of IT to perform essentially the same functions as traditional markets, albeit with increased efficiency and reduced transaction costs. In this section, we will address the potential new roles of intermediaries in such markets.

Determination of Product Offerings

According to Bakos (1998), two major emerging trends distinguish product offerings in electronic marketplaces from their traditional counterparts: (a) increased personalisation and customisation of offerings; and (b) aggregation and disaggregation of information-based product components. A third trend can also be envisaged, where the notion of aggregation is also utilised by customers (demand aggregation).

The first trend (personalisation) allows for the establishment of ‘one-to-one marketing’ strategies, where producers are able to address the needs of individual consumers and offer personalised products and services. Made-to-order production has become a feasible and attractive option for suppliers, e.g. in the clothing or computer industry, mainly because of the ease of communication between supplier and customers. This trend is especially visible in ‘digital’ products and services where, for example, personalised copies of a newspaper can be created and delivered to consumers with only a marginal increase to the production cost of a standard newspaper. The ‘personalisation’ and ‘direct marketing’ strategies are mostly expected to contribute to direct contact between sellers and buyers, thereby fitting within the disintermediation hypothesis (McEachern and O’Keefe 1997). However, new intermediaries, sometimes called infomediaries (Hagel and Singer 1999), have emerged, which act as customer agents and support the matching of customers’ requirements and sellers’ offerings from the customers’ perspective. Priceline.com is an example of such an intermediary: it asks customers to name their price for products such as flight tickets or new cars and looks for sellers who are ready to fulfil the customer’s request.

The second trend (aggregation and disaggregation) gives producers the ability to utilise the characteristics of information-rich products in order to bundle or unbundle product offerings and maintain a more flexible product mix. By modifying the cost structure of bundled product offerings, electronic marketplaces may reinforce the role of intermediaries and encourage new types of intermediaries to enter the electronic marketplace. These new intermediaries may create value by aggregating (sometimes called ‘bundling’) products and services that traditionally were offered by separate industries (Bakos 1998). Carpoint, in the car dealership industry, is an example of an ‘aggregator’, able to offer a variety of services as an ‘one-stop-shop’ for consumers that are interested in purchasing a car without having to contact a large number of dealers for different brands. Furthermore, Carpoint has aggregated the car finance and car

insurance markets in their product mix, thus offering a complete and personalised service unavailable in most traditional retail outlets. On the other hand, lower transaction, distribution, and product mix maintenance costs in electronic markets may encourage producers to disaggregate products and follow direct sales strategies, bypassing intermediaries. For example, traditional news and information providers (such as Reuters) can directly provide individual pieces of information on a subscription or fee-based basis, thus competing directly with information aggregator intermediaries, such as Yahoo.

The third trend (demand aggregation) is a traditional function of retail and wholesale intermediaries. As the cost of informing and bundling customers has been drastically reduced in electronic marketplaces, new intermediaries have emerged, which negotiate volume discounts with suppliers of selected items and advertise those items on the Web for a limited period of time (examples are Accompany.com and Letsbuyit.com). The price reduction which can be achieved for the individual buyer depends on the overall number of customers who have decided to buy a particular item within the defined period. Accompany, for example, contributes to shifting bargaining power to customers while at the same time providing safeguards against frictions in the service delivery. Their business model is not restricted to particular product features but rather to markets where suppliers are offering volume discounts and where customer preferences can be pooled.

Searching

Electronic markets can significantly lower the search costs for consumers, thus allowing them to readily obtain information about product offerings and prices. Generic search engines, hierarchical directories, specialised search engines (for example, CNET's Computers.Com), meta-search engines (such as AskJeeves), and intelligent agents (such as Excite's Jango), all serve to dramatically lower search costs for buyers that look for particular products and services in the global electronic marketplace. At the same time, producers are able to enjoy similarly decreased search costs by addressing a larger target base to communicate and advertise their offerings.

Based on the lower search costs hypothesis, early researchers predicted that electronic markets would encourage both producers and consumers to engage in direct communication, without the need for intermediaries. This argument, perhaps more than any other, provided the basis for the disintermediation hypothesis. However, although search costs to identify the offers of a single supplier have been lowered significantly, market structure and search behaviour have changed. Whereas in the early days of electronic markets the availability of product information in electronic form contributed to lower search costs for consumers (thus driving intermediaries out of the market), the ever increasing size of this information has now started to increase the costs of electronic search again. As the number and differentiation of offers on the Web has risen steeply, it has become more important not only to compare offers but to do so in an extended search space. Customers that used to compare prices regionally or nationally can now do so on an international basis.

The extended search space and the increasing complexity of offers and terms of trade and delivery has in many cases offset most of the initial information search cost reductions. Consumers find it increasingly difficult to locate and process this information, and to distinguish between useful and not useful material for a specific market transaction. This has created the opportunity for new intermediaries to enter the marketplace by assisting consumers in their search, effectively supporting the market function of matching sellers and buyers. Such intermediaries include product information providers (for example, trade magazines), rating and recommendation service providers, purchase-oriented intelligent agents, and so on. The emergence of Portals is the latest evidence for a continuing role of intermediaries that have adapted to the structure of the Web (Dewan et al. 1999). The role of these intermediaries is expected to gain significance in the future, fuelled by increasing needs of buyers for advanced searching facilities. This trend will be further supported if sellers move, as we predict, towards more sophisticated and complicated product offerings in an attempt to raise buyers' search costs and make it more difficult for buyers to directly compare their products against the competition.

Price Discovery

Electronic markets can be based on the same price discovery mechanisms as their traditional counterparts (i.e. auctions, negotiation or firm offers). However, electronic markets have also witnessed a re-distribution of price discovery mechanisms amongst different markets, while even wholly new paradigms for price discovery have begun to emerge. As a re-distribution example, electronic auctions have emerged for products that traditionally were sold through negotiation or firm offer policies (e.g. QXL and eBay). Priceline has invented and patented a demand collection system in which the customer states (flexible) product/ price preferences (for example, an airline return ticket from New York to Los Angeles at a given day, or any major airline for US\$200), which are forwarded to the suppliers who might accept or decline those offers. Furthermore, intelligent agents can negotiate purchases on behalf of both producers and consumers, thus offering a completely new price discovery mechanism for electronic markets. Such opportunities for restructuring the price discovery function have led to new *cybermediaries* appearing to fill the gap in a newly formed market.

Logistics

Electronic markets allow for a dramatic reduction of distribution and logistics costs, especially in the case of digital products and services. By allowing for small-size, quick, just-in-time deliveries, electronic markets can squeeze much of the huge traditional cost of logistics and thus encourage direct sales between producers and consumers. While this trend will undoubtedly put traditional intermediaries, like wholesalers and retailers, under pressure, at the same time it provides the opportunity for differentiated intermediaries to re-enter the market. The way in which electronic auctions changed the nature of logistics in the Dutch Flower Auctions is an example (van Heck and Ribbers 1997). Further, third party logistics companies like Federal Express, TNT and UPS have emerged as major Internet intermediaries that utilise

their logistics expertise and economies of scale in distribution to contract with producers in facilitating the logistics of direct sales, while also providing tracking and delivery information to customers.

Settlement

Advances in electronic payment mechanisms have the potential of altering the cost structure of transaction settlements in electronic markets. Intermediation will continue to play a major role while the need continues for trusted third parties that 'clear' the electronic transactions. Credit card payments are today the major means of clearing business-to-consumer transactions in electronic markets, but as technology matures it is expected that new players will enter and dominate this market. Electronic cash and secure third party payment service providers (for example, Hewlett Packard's Verifone) are just two types of cybermediaries that have emerged and are expected to acquire a position in a world of full-scale electronic payment transactions. At the same time, traditional payment intermediaries, most notably banks, are entering the electronic marketplace, either by moving their traditional banking services on the Internet, or by entering differentiated modes of service, for example smart card pilot programs (Clemons et al 1996).

Trust

Protection against opportunistic behaviour of players is more important in the embryonic arena of electronic markets than well-established traditional markets. We argue that the trust building function of these markets will become more important as Internet-based commerce applications flourish, due to the increased needs for monitoring the behaviour of market participants and alerting buyers in cases of, for example, seller malpractice. Traditional trust intermediaries (for example, credit reporting agencies) will only have a limited role to play in direct producer-to-consumer electronic transactions. Providers of electronic commerce platforms such as electronic function as guarantors with their brand name or reputation.

New forms of specialised intermediaries are expected to emerge, including public key infrastructure and certificate authorities (for example, Verisign) and privacy guarantee services (for example, TRUSTe: see Benassi 1999). At the same time, some of the traditional intermediaries, most notably credit card companies, will have to assume new roles and responsibilities in monitoring and tracking electronic transactions between consumers and producers. New payment mechanisms (secure payment providers, see above) will provide the necessary infrastructure for trust building in electronic markets and, in the process, will create new markets for intermediaries that will add value by building trust in electronic commercial transactions.

Legal and Regulatory Infrastructure

Providers of (electronic) market platforms set rules for the market participants, such as authentication mechanisms, deposits to ensure payments, quality certificates in order to guarantee product

characteristics. Because of legal uncertainty and the relatively high costs for bilateral contracting among the trading partners, the regulatory function is mainly covered by intermediaries.

Inasmuch as the government is the ‘intermediary’ in this market function, it is not expected that electronic markets will significantly alter the structure of intermediation in this case. However, it should be expected that governments will be forced to support the emerging market dynamics by providing the legal and regulatory frameworks that will simplify and even encourage electronic commerce transactions. In this endeavour, governments may find it necessary to co-operate with public or private public key infrastructure providers that will monitor electronic transactions with a view of ensuring their transparency and tractability.

4. The Future of Intermediaries

Early research in electronic markets suggested that decreased transaction costs in electronic markets would lead to the reduction, or even extinction, of traditional intermediaries from electronic value chains. While certain types of intermediaries in certain markets may indeed face difficulties for survival, the discussion in the preceding sections reveals that it is very difficult to generalise on this statement. Increasing search costs that accompany the proliferation of information infrastructures can provide new opportunities for intermediaries. Similarly, some intermediary functions cannot be absorbed by sellers at low cost, thus leaving opportunities for intermediation in electronic markets. The future of intermediaries in such markets will depend not only on the type of the market, but also on the function that an intermediary serves. Table 3 summarises the opportunities and threats that intermediaries are expected to face in the era of mature electronic commerce.

<i>Market Function</i>	<i>Electronic Market Influence</i>	<i>Likely Effects on Intermediation</i>
Determination of Product Offerings	➤ Personalisation of Products	➤ Disintermediation (especially in digital products)
	➤ Aggregation	➤ Cybermediation (aggregators)
	➤ Disaggregation	➤ Disintermediation (pay-per-use)
Searching	➤ Lower Search Costs	➤ Disintermediation
	➤ More Complex Search Requirements	➤ Cybermediation
	➤ Lower Barriers to Entry	➤ Cybermediation/Re-intermediation
Price Discovery	➤ Redistribution of Mechanisms	➤ Cybermediation/ Re-intermediation
	➤ New Markets	➤ Cybermediation
Logistics	➤ Lower Logistical Costs	➤ Disintermediation
	➤ Economies of Scale	➤ Re-intermediation
Settlement	➤ New Cost Structures	➤ Re-intermediation
	➤ New Payment Mechanisms	➤ Cybermediation/ Re-intermediation
Trust	➤ Increased Protection Requirements	➤ Cybermediation/ Re-intermediation
Legal and Regulatory	➤ Institutional Support for Electronic Markets	➤ Re-intermediation

Table 3: Opportunities and threats to intermediaries in electronic markets.

Summarising on the above findings, three major scenarios for electronic intermediaries can be envisaged:

- a) *Disintermediation Scenario*: As electronic markets decrease the transaction costs for both buyers and sellers, markets will tend to 'clear' without the need for intermediation facilities. Traditional intermediaries will continue to face increasing pressure for survival and large numbers of them will be eliminated.
- b) *Reintermediation Scenario*: Traditional intermediaries may find opportunities to leverage their expertise and economies of scale, and continue to play an important role in facilitating commercial transactions, mainly as contractors to sellers. Furthermore, traditional intermediaries may also find opportunities to differentiate themselves (through price, service, augmented products, etc.) and/or concentrate on specific market function 'niches'.
- c) *Cybermediation Scenario*: The advent of electronic markets will create unprecedented opportunities for wholly new types of intermediaries that will provide the necessary infrastructure support for those market functions that will be restructured in the electronic commerce world (for example, navigation and selection assistance, rating services, etc.). These cybermediaries may be sponsored or even owned by sellers attempting to get 'next to' customers. Some of these cybermediaries may even assume public roles, assisting legal and regulatory bodies in providing institutional support for electronic markets.

Our major conclusion is that it is extremely difficult to generalise on the type of intermediation that will dominate in any given market. In line with Bailey and Bakos (1996) we note that different strategies for disintermediation and reintermediation in different markets will be successful or otherwise dependent on multiple factors, not the least being the present structure of the physical market.

Furthermore, opportunities for disintermediation, reintermediation or cybermediation are contingent on the respective market structures, products and services, as well as relationships between the various market participants. On balance, electronic markets will be characterised by an increasing differentiation of market channels. The resulting outcome is a dynamic mixed-mode structure that represents a continuum of combinations of traditional channels, dis-, re- and cybermediation. Technology has at the same time increased the opportunities for bypassing and arbitrage. It has created unique opportunities for direct relations between buyers and sellers and at the same time specific requirements for intermediaries to compensate for shortcomings or negative effects of the electronic marketplace such as the loss of privacy.

The above are evident on the transformations that occur at present in the three industry sectors we have used as examples in this paper:

- a) *Publishing market*: Internet-based book searches can contribute to lower search costs for buyers. E-retailers (like Amazon) were quick to realise the market opportunities created by Internet book shopping and took advantage of the lower barriers to entry in the market. Such players did not transform the publishing value chain but rather replicated its structure in an electronic market, hence contributing to increasing market pressure for traditional intermediaries (wholesalers and

- retailers alike, see Figure 1). Further disintermediation can potentially occur if publishers themselves show interest in engaging in direct sales, something that does not look very probable at the moment.
- b) *Music market*: The ability to configure and re-arrange product offerings by the consumers themselves (personalisation) has allowed new market players, like MP3.com, to enter the industry to provide new types of value-adding services. However, the uncertainty surrounding the legal environment of such offerings has to date, as in many other E-Commerce examples, prevented the commercial exploitation of the new services, and has also resulted in legal proceedings initiated by the 'traditional' sellers (i.e. the recording industry). Once the legal issues have been resolved, the combination of lower logistical costs and lower barriers to entry are expected to transform the market, putting extreme pressure to traditional music retail outlets.
 - c) *Flight ticket market*: Traditional sellers (i.e. airlines) and new market entrants have been very active in discovering innovative business models based on new price discovery mechanisms (e.g. auctions) and/or value-adding functionality (e.g. demand aggregation, personalisation of services). Inasmuch as the airlines take advantage of their size and economies of scale, they can be expected to drive the market towards a disintermediation scenario. However, it must be emphasised that the flight tickets market is rarely isolated from related tourism/leisure markets, for example hotel reservations, car rentals, or complete holiday packages. The complexity of product offerings in the holistic tourism market is expected to leave enough space for traditional travel agents to exploit their advisory role and remain 'alive'. At the same time however, the industry provides substantial scope for aggregation of product offerings and is also characterised by significant search costs for buyers. New market entrants will undoubtedly take advantage of these characteristics to enter the market with innovative business models that would ultimately transform the industry itself.

5. Premises

Based on the above discussion, a number of premises can be developed. These premises can then become the starting point for formulating empirically testable hypotheses that will serve as future research directions in electronic market research.

Premise 1: When the supplier market is monopolistic or oligopolistic (i.e. a small number of suppliers dominate on product or price) and the intermediaries are fragmented and have limited control over consumer behaviour, direct sales win and disintermediation is the most likely outcome.

This is in line with the thinking of Clemons and Row (1998). An example can be seen in the software and hardware markets, where the dominance of big players (for example, Microsoft, Cisco, Dell, etc.) means that intermediaries have to differentiate themselves through specialisation, offering services such as reviews, consultancy, etc. New cybermediaries have struggled to attract customers.

Premise 2: When market or product knowledge or augmentation is vital, intermediaries can dominate, especially through differentiation and better positioning in the market.

Book retailing is dependent upon browsing and search, and thus augmented search facilities as provided by the new on-line book retailers have helped generate a sizeable customer base. Further, publishers tend to be fragmented and reliant on distribution channels, with no or little experience of direct sales.

Premise 3: When traditional intermediaries use value-based pricing and position the electronic channel to augment their traditional service offerings, they have a good chance to defend their position.

Existing news intermediaries, for example Reuters, have market knowledge and pricing strategies that is allowing them to compete with new cyber-mediaries.

Premise 4: When intermediaries have been protected against intense competition from outside the industry and the supplier market is fragmented or consumers have a preference for unbiased choice, cybermediaries will seize the opportunities that the Web provides and offer innovative services.

As discussed above, Amazon has reinvented bookselling (where prices are still regulated in some markets) and Priceline have redefined the role of travel agents (despite existing intense competition for customers).

Premise 5: When purchase decisions are complex and varied, and the market is highly fragmented, cybermediaries can add value by simplifying information search.

Examples can be found in the auctions market, where, despite intense competition, cybermediaries like BidFind.com have quickly established themselves by providing value-adding services such as assisting buyers in locating items in on-line auctions.

6. Conclusions

Electronic markets are still far from reaching a state of maturity. It is therefore difficult to safely predict the market structure of the future. However, it is becoming evident that, at least as far as intermediation is concerned, initial predictions do not seem to materialise in the majority of cases. The dynamics of market restructuring may lead some intermediaries to extinction, but the overall market picture will compensate the losses by providing opportunities for both existing and new intermediaries to enter the market through providing value adding services to electronic transactions.

Understanding the role and market position of intermediaries has been identified by the OECD as a pre-requisite for understanding the economic efficiency of electronic commerce (OECD, 1999). More research, both conceptual and empirical, is necessary. The stream of research in Information Systems collectively called electronic markets has brought a multi-disciplinary approach to the topic of intermediation, and is well positioned to provide a lasting contribution to thinking.

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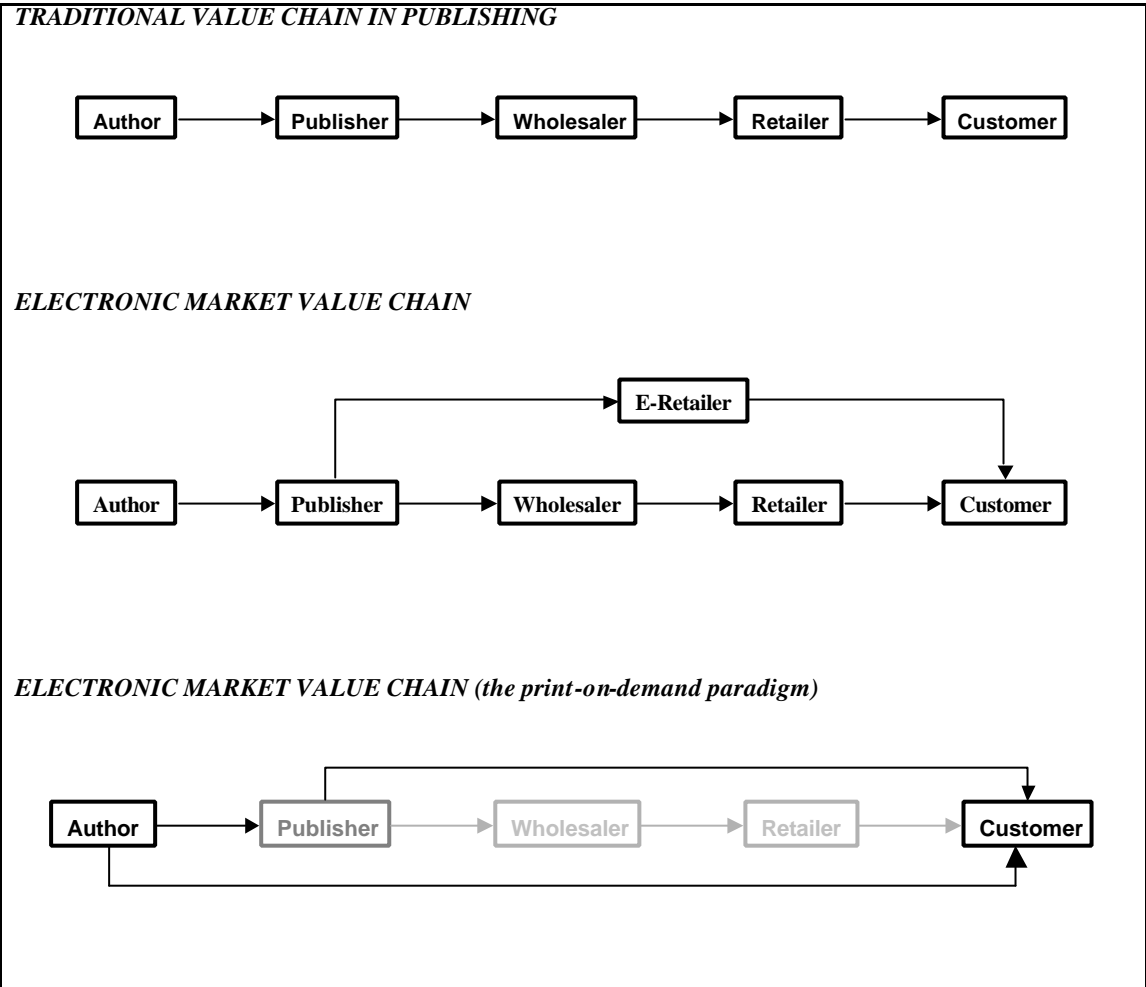


Figure 1. Transformation of the publishing market value chain.

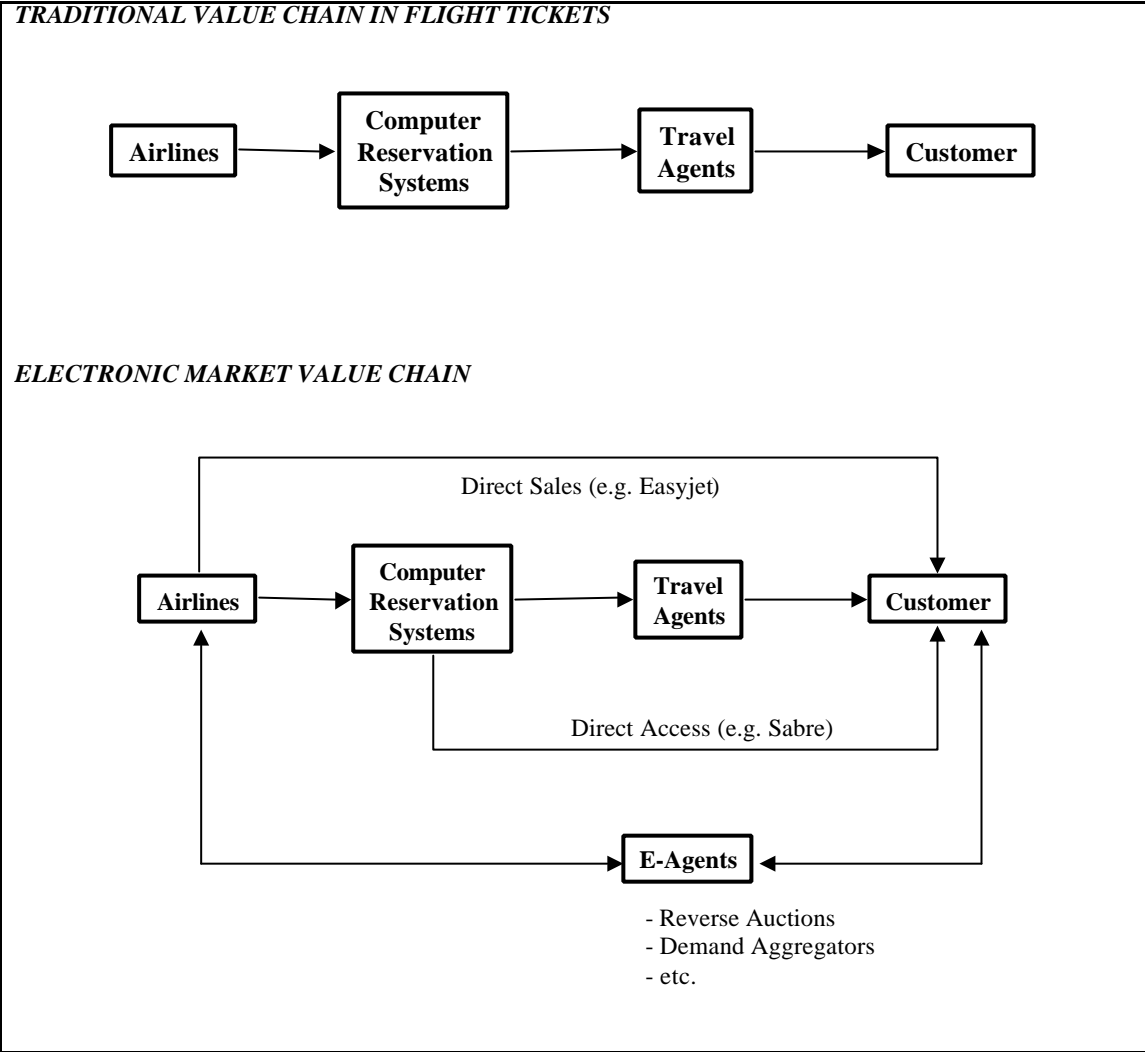


Figure 2. Transformation of the flight tickets market value chain.