

# The Role of Intermediaries in Electronic Marketplaces: Developing a Contingency Model

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## Abstract

Early research in electronic markets seemed to suggest that E-Commerce 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 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 the form of a contingency model for intermediation in electronic markets.

## **Keywords**

Electronic Commerce, Disintermediation, Electronic Markets, Contingency Model, Economics.

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## **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 new 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, Porter 2001).

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 would 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.

From a strictly cost-based perspective, there appear to be strong economic incentives, at least in certain cases, 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 that are added by intermediaries and the economics of intermediation (Heijden 1996). As a result, the *disintermediation hypothesis* has recently started to receive considerable critique (Burton and Mooney 1998, Adelaar 2000), backed up by empirical observations suggesting that intermediaries, instead of disappearing, have re-emerged and gained considerable significance, at least in certain electronic markets. At the same time, wholly new markets for electronic intermediaries, or *cybermediaries* (Sarkar et al 1995), have been created.

Summarising, we can note that, while producers are in principle 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 the first steps towards a contingency model.

## **2. Traditional Markets: The Role of Intermediaries**

According to Bakos (1998), markets (electronic or otherwise) serve three main functions: to match buyers and sellers, to facilitate transactions, and to provide the institutional infrastructure for business. These primary functions 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.

### *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 (using tools such as buyer profiling and data mining), 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 markets and is usually based on an underlying mechanism, which depends primarily on the market type and its 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 retail stores). As liquidity, i.e. a sufficient amount of demand and supply, is a critical success factor 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 the entire 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, and subscriptions (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 (for example, a bank or other financial institution).

### *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. Third parties, such as banks, credit-reporting bureaux, rating agencies, etc, may facilitate trust mechanisms. 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 potential added value that intermediation can provide in market functions. It is evident that intermediaries are in a position to provide a variety of value-adding services, both to sellers and to buyers, which may more than offset the negative effects of the additional cost that intermediation is supposed to introduce in the value chain. In the next section, we will discuss how the advent of electronic markets affects this value-adding potential (positively or negatively) and therefore also influences the future of intermediation in electronic marketplaces.

## **3. Electronic Markets: New Roles for Intermediaries?**

Electronic marketplaces (typically Internet-based ones for the purposes of our analysis) rely on advanced uses of IT to perform essentially the same functions as traditional markets, albeit with increased

efficiency and reduced transaction costs (Malone et al 1987). 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 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. Make-to-order production has become a feasible and attractive option for suppliers, for example in the computer industry, mainly because of the ease of communication between suppliers and customers. This trend is especially visible in information-rich and digital products 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).

The second trend (aggregation and disaggregation) provides sellers with 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 ('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 a '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 product mix maintenance costs in electronic markets may

encourage sellers 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 locating prospective buyers and 'pooling' them together 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 (for example, Letsbuyit.com). The price reduction that can be achieved for the individual buyer depends on the overall number of buyers who have decided to buy a particular item within the defined period. This 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 ask.com), and intelligent agents, 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 also 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.

These changes have in many cases offset most of the initial information search cost reductions. Buyers may find it increasingly difficult to locate and process relevant 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 infomediaries (Hagel and Singer 1999), which act as customer agents and support the matching of buyers' requirements and sellers' offerings from the buyers' perspective, 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 search 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. This prediction is also supported by Porter (2001), who claims that the availability of a vast amount of information in the Internet will improve the bargaining power of buyers in electronic markets. Sellers will then be motivated to create more complicated product offerings in an attempt to 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 (namely auctions, negotiations, or firm offers). However, electronic markets have also witnessed a redistribution of price discovery mechanisms amongst different markets, while even wholly new paradigms for price discovery have begun to emerge. As a redistribution example, electronic auctions have emerged for products that traditionally were sold through negotiation or firm-offer policies (for example, eBay or auctions in the Dutch flower market: see van Heck and Ribbers 1997). As a new price

discovery mechanism example, Priceline has invented and patented a demand collection system in which the customer states (flexible) product/price preferences, which are forwarded to the suppliers who might accept, decline, or make counter-offers. In a similar scenario, 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 business opportunities for intermediation with new players 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 typically high 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. For example, third party logistics companies, like Federal Express 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 buyers.

### *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 potential opportunistic behaviour of players is more important in the evolving arena of electronic markets than in mature 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. 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 will also 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 e-commerce 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, and so on. Because of legal uncertainties and the relatively high costs for bilateral contracting among the trading partners, the regulatory function has traditionally been mainly covered by intermediaries and this trend is expected to continue in electronic markets.

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: Towards a Contingency Model**

As discussed previously, 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 (and perhaps even erroneous altogether) 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 intermediaries serve and the added value they can provide.

Table 3 summarises the analysis of the previous section by exemplifying the influences of electronic markets on traditional market functions and the potential effects of these influences on the future of intermediation. Furthermore, the analysis points to example markets (and market participants) that will be affected by each influencing factor in the electronic market arena. To aid the analysis in Table 3, the likely effects of electronic markets on intermediation have been grouped into three major scenarios:

- 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. 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 fundamentally restructured in the electronic commerce world. Some of these cybermediaries may even assume public roles, assisting legal and regulatory bodies in providing institutional support for electronic markets.

The major conclusion of the above analysis is that it should not be expected that the advent of electronic markets will have a uniform effect on the future of intermediation, contrary to what some previous research might imply (Palvia and Vemuri, 1999). In line with Bailey and Bakos (1996) and Chicau and Kauffman (1999), we note that the dominance of each scenario (disintermediation, reintermediation, and cybermediation) in different markets will be dependent on multiple factors.

A key factor that Bakos's (1998) market function model (see Table 1) does not address is the present structure of the physical market and how the potential added value that intermediation can bring is dependent upon this structure. Economic theory (for example, Scherer and Ross 1990) and recent evidence (for example, the Microsoft anti-trust injunction in the US) both show that the existing structure of a market will have a major effect on intermediation and future market structure changes. For example, markets where producers are fragmented will provide more opportunities for intermediaries to add value than markets where producers are an oligopoly. In the latter case, producers may have the power and information to directly interact with buyers, and will likely be unwilling to share information (let alone products) with intermediaries. An example of this is the airline industry, where flight ticket intermediaries are entirely dependent upon the airline providing seats to reservation systems. Airlines may choose to hold back seats for alternative distribution channels, or (like EasyJet in the UK) not engage with intermediaries. Moreover, buyers are likely to be aware of airline brands and will not require intermediaries to establish trust.

The future of intermediaries is thus dependent upon many contingencies; hence a contingency model approach would appear to be the best way forward for theorising about intermediaries. Here, as a first step towards a contingency model, we present a set of determinant factors in favour of the three alternative intermediation scenarios (illustrated in Table 4).

## 5. Conclusions

Electronic markets are still far from reaching a state of maturity. 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. We have provided the background theory, concepts and initial premises for a contingency model that can be further developed. We have argued that opportunities for disintermediation, reintermediation or cybermediation in electronic markets are contingent on the respective market structures, products and services, as well as relationships between the various market participants. On balance, the world of electronic commerce 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.

Since the future of intermediation is so much dependent upon a wide variety of contingencies, we have chosen to adopt a contingency model approach as the most appropriate means for theorising about intermediaries. Despite the fact that the majority of the determinants outlined in this model can be empirically validated by the prevailing intermediation schemes in a number of real electronic markets, the need remains for formulating empirically testable hypotheses that will further validate and enhance our model. In this concluding section, we present a number of such hypotheses in the form of premises.

*Premise 1: When the supplier market is monopolistic or oligopolistic (i.e. a small number of suppliers dominate on price or differentiation), and existing intermediaries are fragmented and have limited control over consumer behaviour, direct sales win. 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 off-the-shelf software and hardware markets, where the dominance of big players (for example, Microsoft, Cisco, and Dell) means that intermediaries have struggled to differentiate themselves through specialisation in order to attract customers. Similarly, in the music market, the copyright ownership of the traditional music industry,

presently embroiled in legal disputes with a number of cybermediaries (such as Napster), can be perceived as an attempt to retain supplier market dominance.

*Premise 2: When market or product knowledge or augmentation is vital, or products can be bundled, intermediaries can dominate, especially through differentiation and better positioning in the market. Cybermediation is a likely outcome.*

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. In the airline ticket market, many consumers need help with flight information and pricing knowledge. Tickets are still often part of a packaged product that includes, for example, a hotel booking or car hire reservation.

*Premise 3: When traditional intermediaries position the electronic channel to augment their traditional service offerings, they have a good chance to defend their position. Reintermediation is likely.*

Existing news intermediaries, for example Reuters, have market knowledge and pricing strategies that are allowing them to compete with new cybermediaries. Logistics providers (such as Federal Express) have not faced serious threats despite the proliferation of electronic markets. Instead, they have found opportunities to augment their traditional logistics offerings and emerge as major players in the new market. Traditional intermediaries have an even better chance to defend their market position as buyers are beginning to support click-and-mortar arrangements (Gulati and Garino 2000), in which online and offline activities are designed to support and complement each other.

*Premise 4: 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. Furthermore, in the book market, cybermediaries like

PriceScan have been successful in providing meta-search facilities that allow buyers to search (automatically) through multiple e-retailers and directly compare the offerings of multiple sellers.

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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## **Author Biographies**

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<i>Primary Market Function</i>	<i>Sub-Functions</i>
<b>Matching Buyers and Sellers</b>	(a) Determination of Product Offerings (b) Searching (c) Price Discovery
<b>Facilitation of Transactions</b>	(d) Logistics (e) Settlement (f) Trust
<b>Institutional Infrastructure</b>	(g) Legal (h) Regulatory

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

<i>Market Function</i>	<i>Sub-Functions</i>	<i>Potential Added value of Intermediation</i>
<b>Matching Buyers and Sellers</b>	(a) Determination of Product Offerings	Intermediaries receive market signals and pass them on to sellers, allowing them to configure an improved product mix.
	(b) Searching	Intermediaries can reduce search costs for both sellers and buyers by providing a ‘one-stop-shop’ for information gathering, advertising, and transaction management.
	(c) Price Discovery	Intermediaries can generate the necessary liquidity for smooth market operation and in certain cases (e.g. auctions) may even provide the infrastructural mechanism for price discovery.
<b>Facilitation of Transactions</b>	(d) Logistics	Intermediaries can achieve economies of scale and scope for logistical operations easier than individual sellers can.
	(e) Settlement	Intermediaries facilitate, monitor, and guarantee the settlement transactions.
	(f) Trust	Intermediaries guarantee to sellers and buyers the non-opportunistic behaviour of other market participants.
<b>Institutional Infrastructure</b>	(g) Legal	Intermediaries (usually governments and international bodies) provide the legal basis for market operation.
	(h) Regulatory	Intermediaries provide mechanisms for the enforcement of legal, ethical, and behavioural rules in markets.

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

<i>Market Function</i>	<i>Potential Electronic Market Influences</i>	<i>Likely Effects on Intermediation</i>	<i>Example Markets and Participants</i>
<b>Determination of Product Offerings</b>	(a) Personalisation of Products/Services	<i>Disintermediation:</i> Direct marketing strategies will allow sellers to employ ‘one-to-one’ targeting of buyers.	Information-rich and digital products (e.g. news, software)
	(b) Product/Service Bundling	<i>Cybermediation:</i> Product bundling and cross-selling will provide opportunities for new entrants (product aggregators) to enter the market.	Integration of related products/services in a single market (e.g. car dealership and insurance)
	(c) Disaggregation of Product Components	<i>Disintermediation:</i> Lower product mix handling costs will motivate sellers to maintain more complex and piecemeal product offerings.	Component-based products (e.g. news) and pay-per-use products (e.g. individual event broadcasting)
	(d) Demand Aggregation	<i>Cybermediation:</i> Lower costs of buyer ‘pooling’ will strengthen the bargaining power of intermediaries when negotiating volume discounts for products.	Products where volume discounts can be achieved and a critical mass of buyers can be pooled together (e.g. home electronics)
<b>Searching</b>	(e) Higher Search Costs for Buyers	<i>Cybermediation:</i> Infomediaries will ‘step in’ to assist buyers in locating and filtering information in the extended search space of the electronic market.	Fragmented markets, where no sellers dominate and buyers may engage in potentially complicated comparisons between product offerings (e.g. tourism)

<b>Price Discovery</b>	(f) Redistribution of Mechanisms between Markets	<i>Reintermediation/Cybermediation:</i> Intermediaries may reinvent themselves in the electronic marketplace, while new entrants will also emerge to provide alternative price discovery mechanisms for a certain market.	E-markets where there is scope for innovation through price discovery mechanisms not normally used in their traditional market counterparts (e.g. auctions for home products and holiday packages)
	(g) New Price Discovery Mechanisms	<i>Cybermediation:</i> New entrants will enter the electronic marketplace to provide infrastructure support to the new price discovery schemes.	Multiple-seller, multiple-buyer markets, where there is scope for price discovery through innovation (e.g. flight tickets)
<b>Logistics</b>	(h) Lower Costs for Digital Products	<i>Disintermediation:</i> Electronic product delivery will enable direct sales strategies, putting pressure on traditional wholesalers, retailers, and resellers.	Markets for digital (or digitalisable) products and services (e.g. software)
	(i) Economies of Scale & Logistics Expertise	<i>Reintermediation:</i> Traditional intermediaries will leverage their expertise by emerging as major players in e-markets.	Markets for physical products with high distribution/delivery cost (e.g. international trade)
<b>Settlement</b>	(j) Increased Need for Trust	<i>Reintermediation:</i> Traditional intermediaries with strong brand names will transfer their service portfolio in the electronic market.	Banks, credit card companies, financial markets brokers, and other parties providing secure payments in electronic transactions.
	(k) New Payment Mechanisms	<i>Cybermediation:</i> New entrants (usually affiliated to established financial institutions) will emerge to provide settlement support for e-payments.	Electronic cash providers, smart card based payments, and other operators/facilitators of new payment mechanisms.

<b>Trust</b>	(l) Increased Requirements for Monitoring and Protection	<i>Cybermediation/Reintermediation:</i> New, specialised intermediaries will provide trusted third party support in e-market transactions, while traditional intermediaries will also have to assume additional roles and responsibilities	Public key infrastructure providers, certificate authorities, secure payment providers, and so on.
<b>Legal and Regulatory</b>	(m) Institutional Support for Electronic Markets	<i>Reintermediation/Cybermediation:</i> Governmental organisations will continue to set the rules for electronic markets' operations, possibly co-operating with new entrants to ensure transaction transparency and tractability.	National Governments, International Policy Makers (e.g. the European Union), Private Public Key Infrastructure Providers, and so on.

**Table 3: An Analysis of the Likely Effects of Electronic Markets on Intermediation**

<b>DISINTERMEDIATION</b>	<ul style="list-style-type: none"> <li>➤ <i>Markets for information-rich, digital, or near-digital products.</i></li> <li>➤ <i>Component products, coupled with market opportunities for disaggregation and provision of individual components.</i></li> </ul>
<b>DRIVERS</b>	<ul style="list-style-type: none"> <li>➤ <i>Pay-per-use products.</i></li> <li>➤ <i>Concentrated markets, where one or few sellers or buyers prevail (monopolistic, monopsonistic, oligopolistic, and oligopsonistic markets).</i></li> </ul>
<b>REINTERMEDIATION</b>	<ul style="list-style-type: none"> <li>➤ <i>Markets where there is scope for redistribution of price discovery mechanisms.</i></li> <li>➤ <i>Markets for physical products with high distribution/delivery cost.</i></li> <li>➤ <i>Markets where economies of scale and expertise are important.</i></li> </ul>
<b>DRIVERS</b>	<ul style="list-style-type: none"> <li>➤ <i>Markets where transactions are non-opportunistic (established relationships).</i></li> <li>➤ <i>Markets that are governed by strict (governmental or other) regulations (such as international markets).</i></li> </ul>
<b>CYBERMEDIATION</b>	<ul style="list-style-type: none"> <li>➤ <i>Markets where product/service bundling opportunities exist.</i></li> <li>➤ <i>Markets where volume discounts can be negotiated due to the increased bargaining power of buyer concentration ('pooling').</i></li> </ul>
<b>DRIVERS</b>	<ul style="list-style-type: none"> <li>➤ <i>Fragmented markets, consisting of many sellers and buyers.</i></li> <li>➤ <i>Markets where barriers to entry are low.</i></li> <li>➤ <i>Markets where there is scope for establishment (and patenting) of innovative price discovery mechanisms.</i></li> <li>➤ <i>Markets where innovative settlement schemes can provide market advantage (such as financial markets).</i></li> </ul>

**Table 4. A Contingency Model for Intermediation in Electronic Markets**