New names for old practices? A research agenda for the new role of the e-strategic mediator

Cecilia Rossignoli
Department of Management, University of Verona, cecilia.rossignoli@univr.it

Lapo Mola
Department of Management, University of Verona, lapo.mola@univr.it

Andrea Carugati
Department of Business Administration, Business and Social Sciences, Aarhus University, andreac@asb.dk

Abstract

In the 25th anniversary of Malone Yates and Benjamin paper we try to reflect on the role plaid by e-marketplaces in the value/supply chain. Starting from the contributions of Wigand (1997), Bakos (1998) and Giaglis (2002) we try to classify the main type of e-marketplaces according to the different business model adopted. Moreover we also try to identify the main characteristics that distinguish modern e-marketplace that nowadays are operating as strategic mediator rather than pure intermediaries between suppliers and consumers.

1. Introduction

Most of the current literature and research on online communities and online collaborations focuses on the individual members of the community and on the reasons for the collaboration, the contributions, and the performances (Nov,Ye, 2010; Lakhani, von Hippel, 2003). However, much of this research also shows, whether highlighted by the authors or not, that the technical capabilities and the policies of the collaboration platform are important for the type of collaboration among members (Nov, 2007). On the 25th anniversary of the publication of the seminal work of Malone, Benjamin and Yates, “Electronic Markets and Electronic Hierarchies” (Malone et al. 1987), this paper wants to focus back on the platform as the central element of the online collaboration. Social platforms, market places and online work places are becoming the trading zone of commercial lives and social lives alike and as such are affecting the design of global communities and organizations. We aim to analyze the evolution of these platforms in their role as the enablers and constrainers of global collaborations.

In the last ten years many of these platforms have been created with the aim of riding the technological evolution of the Internet and building their competitive advantage on the intensive, if not exclusive, use of network technologies. Some experiences have ended up as big failures (e.g. Covisint reported in Klein, Krcmar, 2006), others have disappointed stakeholders' expectations (e.g. Barnes and Noble, (Barnes, Vidgen, 2002)), yet others have reached enormous success revolutionizing entire markets and industrial sectors (e.g. eBay, (Martin, Osberg, 2007)).

The 21st century has witnessed the birth of new players that have been able to position themselves in the value chain of mature industries reconfiguring the rules of the business.

Most IT professional would not have thought in the '90s that part of the organizations' IT budget would be designated in the near future to developing applications able to provide visibility in social networks or blogs, or to develop websites in order to appear on the first page of Google.

Those strategies, policies, tactics on the allocation of IT budgets are applied by individual enterprises in response to or in collaboration with mediators such as Google, Amazon, eBay, Facebook, or Wikipedia that are able to control a considerable amount of traffic on the Internet.

Despite the pervasive presence and influence of such new platforms, little attention in the Information Systems and organizational literature has been dedicated to the role actively played by these actors in organizing or re-organizing the way in which companies manage relationships among themselves and how this ability to shape the relations can contribute to spark life into new organizational forms.

The aim of this paper is to analyze the effect of these players as market makers positioned in the mainstream opened by Malone, Benjamin and Yates in 1987, and enriched by the contributions of Baley and Bakos (1997) and Wigand (1997) progressing our understanding of business and organizational dynamics enabled by those new players.

2. Theoretical background on electronic markets

Over the last two decades information and communication technologies have remarkably affected the traditional patterns of production and distribution thus restructuring the industrial organization of Western firms and reshaping firms' existing boundaries.

Since 2000, academic and practitioner literature has focused on the role of the Internet as the main driver to facilitate collaborative business processes. Across industries and product types, services using the Internet as basic infrastructure promised to bring down any type of boundary to collaboration (Kalakota and Konsynski, 2000; Dikey and Ives, 2000; Tan, Shaw and Fulkerson, 2000). New players – now known as electronic marketplaces or e-marketplaces – entered the scene as the mediators of virtually any type of transaction (Grieger 2003; Hopkins and Kehoe, 2006; Wang et al., 2006; Wang and Archer 2007; Wang et al. 2008). The main aim of the first generation of electronic marketplaces was the reduction of buyers' search and selection costs, increasing transparency, and increasing market efficiency, thus reducing prices (Bakos, 1998; Brynjolfsson et al., 1994; Gurbaxani and Wang 1991; Malone et al. 1987).

The consequence of marketplaces continuously improving the level of services and trying to enlarge the number of participants has been that the marketplaces have made available to their participants increasingly advanced technologies.

Despite the existing knowledge regarding the nature, functions and rules that regulate markets, there is not yet a dominant theory to explain the change brought about by electronic marketplaces in affecting global collaborations. Electronic marketplaces influence the traditional organizational form of hierarchy and market prompting new forms of collaborative business processes, which are fundamental to companies' operations and strategies (Wigand et al. 1997).

Transaction cost theory, the dominant theory used to study this topic, affirms that the choice between market and hierarchy as alternative coordination forms depends on the costs of use of the market. When transaction costs become too high, the market is no longer able to govern transactions efficiently. Above a given level of complexity and specificity of investments, hierarchies become more efficient than markets (Coase 1937, Williamson 1975, 1985). The implementation of new ICTs tends to decrease transaction costs, facilitating the creation of hybrid forms for the governance of transactions based on mechanisms of pricing, contracting, and hierarchies (Wigand et al. 1997). In other words the emerging technologies allow businesses to adopt more frequently hybrid forms of collaboration, like clans and strategic networks. These forms of collaboration are placed in the continuum between market and hierarchies, where businesses can enjoy both the low prices of the market and the stability of the hierarchical relation (Wigand 1997). By decreasing the cost of information processing and communication, ICTs promote the so-called "move to the market" (Malone et al. 1987, Picot 1997, Wigand 1996, 1997).

In this scenario it is useful to adopt a framework to study the evolution of marketplaces that allows us to see the factors that influence the collaborative business processes. The main effects of e-marketplaces are increased communication, decreased transaction costs, and increased price transparency. Malone et al. (Malone, Yates, Benjamin, 1987) identified and integrated these three effects as the defining effects of ICT in determining the ability of organizations to execute business transactions in collaborative business processes. Malone et al. (1987) propose a framework comprised of three effects:

- communication effect: the effect of ICT on transmitting information more quickly and in reducing transaction costs;
- electronic integration effect: the effect of ICT in tightening and simplifying the electronic connections between suppliers and buyers;
- electronic mediation effect: the effect of ICT in increasing transparency enabling buyers and sellers to compare offers much more easily on the electronic market.

Wigand (1997) adds the network dimension to these three effects, a fourth effect called the

- strategic electronic network effect: ICT allows for the design and strategically planned formation of links between companies cooperating to achieve strategic objectives, the final aim being to obtain competitive advantages (Wigand, 1997).

This latter aspect is often underestimated, but is fundamental to explaining the strategic implications of network relations, not only those involving relations within the network itself, but also those outside the network. In fact, participating in a network also means forming a barrier to entry for those who are outside hence creating the "strategic electronic network effect" (Wigand, 1997). In this perspective ICTs can shift the limits of markets, allowing a movement from hierarchy to market and allowing the choice of hybrid forms as clans or networks.

What appears from the most recent evolution of studies of on-line electronic platforms (Rossignoli et al., 2009) is that firms are using these platforms actively to support the design of global organization in a way that actively uses the services proposes by the platforms. As the services change and the configuration of the platform/members evolves, so does evolve the role of the platform and the demands of the members (ibid). Given these dynamics, from the literature in the topic a question remains open: is there a new role emerging for these on-line platforms?

3. Towards the e-market model of strategic mediator

According to extant literature on electronic markets, information technology, rather than dis-intermediating the relationships in the market, has created a new area for those companies that act as intermediaries between players (e.g. producers and consumers). The role of the intermediary was initially focused on “aggregate buyer demand or seller products to achieve economies of scale or scope and to reduce bargaining asymmetry; protect and sellers from the opportunistic behavior of other participants in a markets by becoming an agent of trust; facilitate the market by reducing operating costs” (Bailey and Bakos 1997 p.7). Today it has become more and more central in the business arena playing significant new roles as predicted by Bailey and Bakos (1997). In some cases they are able to establish the rules of transactions (prices and specifications), in other cases they impose the price/channel strategy, in other cases they can manipulate the visibility/reputation of the members.

In this last role, the electronic marketplaces have been described as assuming a new role of strategic mediator (Rossignoli et al, 2009). This role is at odds with the original plan of the e-marketplace to become a mediator of transaction and collaboration, which would thrive on big numbers (ibid). The strategic mediator defines its purpose in actively shaping the structure of the collaborations rather than in accepting every member. The outcome is an improper market, where the mediator, designs and controls the access to the technological platform, which in turn becomes more and more a platform that designs the processes and collaboration structures of the members of the platform (Rossignoli et al; 2009).

The existence (and success) of strategic mediators shows that a network does not always thrive on the reduction of transaction costs. On the contrary, new intermediaries like the strategic mediator emerge to fill structural holes (Powel and Grodal, 2005) with different objectives than price reduction. The strategic mediator does not produce an effect on prices, but rather expands and expedites the purchase process reducing information asymmetries and directing the focus on the service and not on the price. In other words, it improves the quality of the service connected with the business process and offers a larger variety of choices to all participants.

4. A first attempt of classification of e-strategic mediators

Despite the attention provided to the topic of online collaboration, little attention has been paid to the role of those organizations/institutions that came into the game organizing, managing and governing the marketplace/network in their role as controllers and owners of the technological platform. The interesting emergent characteristics of these new players seem to be the fact that they represent the focal firm in the network.

If the construct of focal firm is not new (Lorenzoni and Ornati 1988, Norman, Ramirez 1993), the new perspective is that the role of the focal firm is now played by the organization that manages the market which is, by definition, outside the traditional supply chain. Historically, the focal firm was considered the lead firm which established special types of relationships with sub suppliers and it was the large enterprise hierarchically integrated. From an analysis of marketplaces and online collaboration platforms we evince that in modern online collaborations the focal firm is becoming an electronic mediator and it can be useful, in order to deeper understand the nature of this type of mediator, to provide a classification of them according to the different business model adopted.

- On line stores: on line stores like iTunes or Amazon.com are electronic platforms that allow producers to display their goods achieving an worldwide market, according to processes and rules established by the owner of the platform.
- Industry specific E-markets are those platforms that allow customers to search for different goods and services in a specific industry such as fashion or IT.
- Special offers providers are those platforms that provide special offers to clients in a wide range of industries/services. Examples of such intermediaries are Groupon, Privalia etc.

- Travel services are those platforms that support customers in planning business or personal trips. They can be "limited" to the accommodation service (Booking.com) or cover the entire travel experience (Expedia.com).
- Market aggregators are those platforms that aggregate different e-marketplaces providing/comparing the best options for a specific good or service.

5. Interpretation

Table 1 summarizes the relative importance of the characteristics emerging from the literature on electronic intermediaries (Giaglis et al 2002; Bakos,1998). Following Giaglis (2002), our contribution attempts to highlight the characteristics of such electronic intermediaries, often represented by Internet platform, and their role in the constellation/network/chain of economic actors.

Table 1: merging intermediaries effects on market and platform characteristics

Market function	Sub-functions	Potential added value of intermediation	Platform characteristics	Evolution
Matching buyers and sellers	Determination of product offerings	Intermediaries receive market signals and pass them on to sellers, allowing them to configure an improved product mix.	Position	Internet platforms play an active role in connecting players along the value chain/network
	Searching	Intermediaries can reduce search costs for both sellers and buyers by providing a 'one-stop shop' for information gathering, advertising and transaction management	Position	
	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.	Price regulators	The platform is able to influence the process of making the price
Facilitation of transactions	Logistics	Intermediaries can achieve economies of scale and scope for logistical operations more easily than individual sellers can	Market coverage	The platform covers a global market allowing economies of scale and scope
	Settlement	Intermediaries facilitate, monitor and guarantee the settlement transactions	Rule designer	The platform establishes rules and processes that facilitate the settlement transaction
	Trust	Intermediaries guarantee to sellers and buyers the non-opportunistic behaviour of other market participants	Builder reputation	The platform guarantees the reputation of members (both side supply ad demand) increasing the level of trust
			End to End services	The platform provides services that allow client to carry out the transaction without any other intermediary
			Barriers to entry destroyer	Platform allow small size companies to achieve markets and clients otherwise non accessible
Institutional infrastructure	Legal	Intermediaries (usually governments and international bodies) provide the legal basis for market operation	Rule designer	The platform guarantee the compliance of the transactions to local and global regulations
	Regulatory	Intermediaries provide mechanisms for the enforcement of legal, ethical, and behavioural rules in markets	Rule designer	The platform establishes rules and norms that affect participants behaviours
			Technological Dominium	Platform knows the technology, how it works how it is evolving etc..

Table 2 shows then, how the platform characteristics impact on different type o intermediaries.

"Yes" indicates that the characteristic can be fully applied to the mediator, "maybe" indicates that the characteristic can only partially be applied, "No" indicates that the characteristic doesn't fit with that specific mediator

Table 2: platform characteristics impact on different type o intermediaries

	Kernel Position	Technological Dominium	Market Coverage	Barrier To Entry Destroyer	End To End Services	Rules Designer	Price Regulator	Builder Reputation
On Line Stores Itunes.Com/ Amazon.com/ e-Bay	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry specific E-markets Yoox.Com/	Yes	Yes	Yes	Yes	Yes	Yes	Maybe	Maybe
Special offer providers Groupon.Com/ Poinix.Com	Yes	Yes	Yes	Yes	Yes	Maybe	Yes	Yes
Travel Services (Booking.Com/ Expedia.Com)	Yes	Yes	Yes	Yes	Yes	Maybe	Maybe	Yes
Market Aggregator Kayak.Com/ Edreams.Com/ Trivago.Com	Yes	Yes	Yes	Yes	No	No	No	No

- **Position**: The Platform/mediator is the kernel of a network of relationships both from the side of producers and the side of consumers. This kernel can be considered the focal point which connects partners that are involved in the business selected by the owner of the platform. It represents the core of a network.
- **Rules designer**: It defines who can enter in the constellation of relationships and establishes the rules of the game. The owner of the platform (or the platform?) decides the characteristics that the producer must have, sets standards that must be respected by those who want to enter the platform. It is through the platform that transactions take place and that enable providers to offer their services and customers to purchase the products / services desired. Precisely because it is located in the center of the constellation it sets the rules and decides who should be out and who may stay inside the network. The owner of the platform decides the characteristics that the producers should have, establishes standards that must be complied by those who want to enter the platform. However, it can decide whether or not new companies can enter.
- **Price regulator**: It forces/defines the price of the goods/services that it intermediates. This is an essential aspect and for this reason we can say that the mediator "makes" the market. It often decides if goods can be sold at a particular price because it knows the consumer market and is able to evaluate the congruity of the price in that

specific business environment (see iTunes). As it knows the consumer market it can also influence it. When the owner of the platform has no power to enforce the price at which to sell the product/service through the platform it still has the power to affect prices as all sellers can be compared in the same screenshot. In any case, the electronic mediator has at the least the power to negotiate the price of its mediation, and often that price remains the same throughout the world.

- **Global market coverage**: It covers a global market both in terms of demand and supply. The success of the platform derives from the fact that it covers a global, international market. The global coverage seem to create the side effect of concentration of players. The number of mediators in a specific business tends to decrease over time focusing on few big, global competitors.
- **End to end service**: It can provide tangible goods (i.e. clothes) and intangible goods (music) or services (consultancy). In all cases the platform plays a significant role in the value chain. Clients usually conclude the transaction directly through the platform as it represents the interface between the supply side and the demand side.
- **Barriers to entry destroyer**: It facilitates the access of small and medium sized companies who might otherwise have no access to a global market. It plays, in this sense, a role in rebalancing the power between large enterprises and small medium enterprises.
- **Reputation Builder**: It permits suppliers to be assessed for products / services offered. For this, customers can make a ranking that serves as an indicator to the next and future customers. This aspect makes it clear how suppliers work and allow the electronic mediator to punish suppliers incase of misconduct or unreliabilty higlited by clients.. The rationality and the formalization of the processes through which all clients can now evaluate the services or products provided by the electronic mediator has accelerated the process of communication and formalization of suppliers reputation. The feed-back has become part of the whole process. This has created a more unambiguous market which is not subject to improper influences.
- **Technological dominium**: It has great skills and knows how to use the Internet and technologies related to the Internet. The owner of the platform uses its power, based on the knowledge of Internet technology, to influence organizational actors of the network. It provides technical and organizational support and consultancy to partners participating in the network. Very frequently it can offer consultancy for the marketing industry as it works with great expertise in this area that represents its field of reference. So it is able to provide specialist support in marketing both on the side of producers and consumers.

6. Conclusion

In the last few years we have witnessed the emergence of new actors in the value chain that contribute to creating value for the network because of their ability to facilitate trade. The role of facilitator, just adds to the market, however, other tasks, in particular that of a guide in connecting the many parts of the network. These new actors, which we call electronic mediators, are central because they "manage" and "drive" flows and operational information necessary to the effectiveness of the transactions.

Amazon, eBay, iTunes, Expedia, Groupon etc. are not only virtual marketplaces where supply and demand meet. Those organizations are platforms that shape the transactions, suggesting or influencing the price, establishing the rules of behavior, building credibility to the seller. This is because these "middle men/players" are able to govern the technologies through which participants in the platform can achieve economies of scale and scope, approaching a global market and breaking down the barrier of entry, providing services to manage an end-to-end relationship, without having to switch from one platform to another or from the web to the physical world.

Moreover those mediators are also able to rebalancing the power. On one hand, the re-equilibrium occurs between the small and medium enterprises compared large companies. On the other hand we can observe the influence of the electronic mediator to act as an agent capable of influencing the balance of power between the actors of the value chain. This concept is linked to how the electronic mediator is activated in the specific field of reference.

In some cases, the electronic mediator has "invented" new ways to sell services through the adoption of the digital channel services, by creating an "almost" new product, such as the collection of customized music. In other cases, the electronic mediator has changed the rules of the sector in which it operates i.e. Expedia or Booking.com. Expedia and Booking.com have led the rebalancing of power in the supply chain reducing the role and centrality of tour operators, who previously had the capacity of imposing room fares to hotels. A more extreme example of this would be the case of iTunes where the role of the electronic mediator has favored the emergence of new distribution channels, reconfiguring the whole value chain.

At this point the value chain rather than reducing their steps, due to the reduction of intermediaries, stretches precisely because of increases in the number of intermediaries. There is, however, a fundamental difference from the traditional concept that postulates that the more numerous the players in the value chain the higher the price of the final product. In the case of electronic platforms it is true that the chain gets longer but the price does not increase. Moreover, sometimes the increase of the number of rings in the chain is the cause of the reduction of the final price, because those who govern virtual platforms direct the consumer to where the price is lower, agreeing to share the commission with other owners of the platform. From the point of view of the supply side this should not create a problem because what is lost in terms of unit profit is gained in terms of volume. The key that anyway makes this a win-win situation is the fact that these platforms operate globally and therefore operate with a large numbers of clients. This allows them to share the global market and remain leaders until new competitors with new ideas reinvent the sector.

However, it has emerged from the analysis of what is actually occurring in the nowadays reality that the impacts generated by the electronic mediators respect to the industrial sectors within which they operate are not always the same from the point of view of their ability to disintermediate or to create new forms of intermediation.

While in the tourism sector the value chain of the intermediaries may increase, in other sectors, such as the on-line stores the chain tends to shrink due to the elimination of some traditional intermediaries such as wholesalers. Furthermore, the electronic mediator is taking a central role in the value chain: for example, Amazon as well as having eliminated the figure of the traditional wholesaler is trying to replace the same vendor's product / service, becoming a bookshop and an online publisher. Their objective (or one of many) may therefore be to replace the traditional book publisher by printing the text and managing it directly. In this way it can manage on the one side the relationship with the author and, on the other, the relationship with the reader/end customer. From the point of view of the value chain such an effect has a particularly significant impact because the electronic mediator becomes the main actor of this value chain.

In any case, what is possible to observe is that in areas where the electronic mediators operate they have determined radical changes, continuing to invent and reinvent the rules of the game such as E-booking.com which has used new search engines to offer very advanced consulting services to end customers, forcing competitors to offer similar services.

7. Potential implication for practices

The trend that many companies are following today in the management of their organizational processes consists in turning to a growing number of new, hybrid, mobile, hard-to-manage methods for managing various company processes. The extent to which this will happen through imperfect markets created and maintained by strategic mediators can represent new opportunities for many organizations operating in mature industries enabling new business models and reshaping market's equilibrium.

8. References

Bakos, J.Y. (1997). Reducing Buyer Search Costs: Implications for Electronic Marketplaces. Management Science (43:12), pp. 1676-1692.

Bakos J. Y. (1998). "The Emerging Role of Electronic Marketplaces on the Internet" Communication of the ACM (41:8), pp. 35-42

Bailey, JP., Bakos, J.Y. (1997). An Exploratory Study of the emerging role of electronic intermediaries. International Journal of Electronic Commerce, 1(3) pp. 7-20.

Barnes S.J., Vidgen R.T. (2002) An integrative approach to the assessment of e-commerce quality journal of electronic commerce research, 3(3) pp.114-127.

Brynjolfsson E., Malone T. W., Gurbaxani V., Kabil A., (1994). "Does Information Technology Lead to Smaller Firms?, Management Science 40(12), pp. 1628-1644

Coase, RH (1937). The Nature of the Firm, Economica.

Clemons, E. K., Reddi, S. P., & Row, M. C. (1993). The Impact of Information Technology on the Organization of Economic Activity: The "Move to the Middle" Hypothesis. Journal of Management Information Systems , 10 (2), 9-35.

Dikey, M.H., Ives, B., (2000). The Impact of Intranet Technology on Power in Franchisee/Franchisor Relationships, Information Systems Frontiers, Vol. 2, No. 1, pp. 99-114

Giaglis, G.M., Klein S., O'Keefe R.M., (2002) The role of intermediaries in electronic marketplaces: developing a contingency model, Information Systems Journal Vol.12, (3), pp 231–246.

Grieger, M. (2003). Electronic marketplaces: A literature review and a call for supply chain management research. European Journal of Operational Research, 144, pp. 280–294.

Gurbaxani, V., & Whang, S. (1991). The impact of information systems on organizations and markets. Communications of the ACM , 34 (1), 59-73.

Hopkins, J. L., Kehoe, D. F. (2006). The theory and development of a relationship matrix based approach to evaluating e-Marketplaces. Electronic Markets, 16, 245–260.

Kalakota, R. , Konsynski, B. (2000). The Rise of Neo-Intermediation: The Transformation of the Brokerage Industry, Information Systems Frontiers, Vol 2 , N. 1 , pp 115-128

Klein, A.,Krcmar, H., (2006). DCXNET: e-transformation at DaimlerChrysler, Journal of Information Technology v.21 n.1 pp 52-65

Lakhani, K-R. , von Hippel, E (2003) . "How Open Source Software Works: "Free" User-to-User Assistance." Research Policy 32, no. 6 923-943.

Lorenzoni G., Ornati O.A. (1988) Constellations of firms and new ventures, Journal of Business Venturing 3(1) pp 41–57.

Malone, T. W., Benjamin, R. I., & Yates, J. (1987, luglio). Electronic markets and electronic hierarchies. Communications of the ACM , 484-497.

Norman R., Ramirez R., (1993) From value chain to value constellation: designing interactive strategy. Harv Bus Rev.71(5) pp 39-51.

Martin R.L., Osberg S., (2007) Social entrepreneurship: the case for definition Stanford social innovation review, spring, pp 29-39

Nov, O. (2007). What Motivates Wikipedians. Communications of the ACM 50 (11) 60-64.

Nov, O. and Ye, C. (2010). Why do People Tag? Motivations for Collaborative Content Tagging. Communications of the ACM 53 (7) 128-131.

Picot, A., Bortenlanger, C., & Rohrl, H. (1997). Organization of electronic markets: contribution from the new institutional economics. The Information Society (13), 127-123.

Rossignoli C. Carugati A., Mola L., (2009), The strategic mediator: a paradoxical role for a collaborative e-marketplace , Electronic Markets , vol. 19, pp. 55-66

Tan, G. W., Shaw, M. J., Fulkerson, B. (2000). Web-based supply chain management. Information Systems Frontiers, 2(1), pp 41-55.

Wang, S., Archer, N. P., & Zheng, W. (2006). An exploratory study of electronic marketplace adoption: A multiple perspective view. Electronic Markets, 16, pp 337–348

Wang, S., & Archer, N. P. (2007). Electronic marketplace definition and classification: Literature review and clarifications. Enterprise Information Systems, 1, 89–112.

Wang, S., Zheng, S., Xu L., Li D., Meng H., (2008). A literature review of electronic marketplace research: Themes, theories and an integrative framework, Information Systems Frontiers. Published online: 5 June 2008.

Wigand, R. T. (1997). Electronic commerce: definition, theory and contest. The information society , 1-16.

Wigand, R. T., Picot, A., & Reichwald, R. (1997). Information, organization and management: expanding markets and corporate boudaries. Chichester: Wiley & Sons.

Williamson, O. E. (1975). Markets and Hierarchies: Analysis and Antitrust Implications. New York: The Free Press.

Williamson, O. E. (1985). The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting. New York: Free Press.