Chapter XVII
Reconfiguring Interaction Through the E-Marketplace: A Transaction Cost Theory Based Approach

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ABSTRACT

The aim of this chapter is to analyse electronic marketplaces from an organisational point of view. These marketplaces are considered as a particular form of electronic network and are analysed from the perspective of transaction cost theory. This chapter considers the three classical effects identified by Malone et al. (communication effect, electronic integration effect, electronic mediation effect), and also evaluates a fourth effect on the grounds of empirical evidence; this effect is defined by Wigand as “the strategic electronic network effect.” Adopting the case study approach, the chapter describes how ICT affects marketplace organisation, and reshapes relationships among the actors involved in this particular type of electronic network.
INTRODUCTION

This chapter analyses electronic marketplaces as a particular kind of electronic network and studies their characteristics as an organisational form emerging as consequence of the diffusion of ICT (Information and Communication Technology).

We consider e-marketplaces as an ICT based organizational form that mixes market coordination mechanisms (prices) and network coordination mechanisms (trust and common values).

This chapter focusses on three principal aspects. First, how ICTs favour the establishment of more competitive markets; second, how the power exercised by the individual actors in the network chain is redefined within the e-marketplace; finally, what the impact is on organizational boundaries.

Building upon Kallinikos’s idea of “Networks as an alternative form of organisations” (Kallinikos, 2003), this study highlights how the network supporting electronic marketplaces is a structure connected by links of a different nature, as opposed to the links of an institutional and social nature which tie together formal organisations and markets.

In fact, these electronic networks can be described as strategic configurations able to support and foster specific economic opportunities in determined contexts of time and space that are contingent to specific decisions. These strategic configurations cannot be considered stable in the long term. The strategic network configurations are aimed at developing e-marketplaces, and are often the result of temporary configurations meant to defend particular economic interests. The strategic nature of these configurations are designed not to last in the medium term, since their survival depends largely on the strategic interests contingency of the agents involved.

These new strategic network organisational configurations are designed to provide a smoother market mechanisms functioning, but they are also modifying the underpinning logic that commonly drives the use of human resources and skills: the driving economic force for the efficient use of resources is substituted by the communication needs configuration designed to satisfy the agents. This change in allocative mechanism logic should be studied to better understand the interests that lead the different actors to participate in the network of exchanges.

The logic that leads economic actors to be part of a network of exchanges is a new perspective, and needs to be better analysed to understand the dynamics that characterise e-marketplaces.

The attention traditionally focused on hierarchical relationships and standard contracts evaluation must be refocussed on those aspects that are more closely related to information production and distribution and on the relative strategic implications.

Refocussing, it becomes clear that different and alternative forms of transaction management can be identified while studying electronic networks and e-marketplaces. These forms emerge from the interaction modalities between the network participants often associated with innovative work organisation and new strategic configurations.

Internet use represents a fundamental element in this reconfiguration of the interactions among agents in the economic system. The internet provides the premise to cross institutional and geographical boundaries, and thus facilitates new forms of collaboration and partnership. This fact requires ICT platforms to be developed to support inter-operational systems based on principles of “electronic mutability”. The platforms then become the central element of the new organisational forms based on networks of interaction.

The paper investigates whether the electronic network at the base of electronic marketplaces represents a new organisational form, or whether it is simply a new form of transaction management that tends to modify or replace intra-organisational and inter-organisational relations, which, in turn, are characterised by social relationships that were previously governed by other institutional
models. How do the relationships between the participants change? Is it a temporary structure with weak connections or is it a stable and long term configuration?

Transaction cost theory is the reference theory used to interpret this phenomenon (Williamson, 1975; 1981; 1991); it is tangled with the idea of networking as an expression of an emerging organisational phenomenon and a fundamental form of competition in the new global economy (Ernst, 1994; Ciborra, 1993; Cordella 2001).

BACKGROUND

Electronic Networks: Looking for a Theoretical Approach

Despite the existing knowledge on the nature, functions, and rules that regulate markets, there is not yet a dominant theory on the role of electronic networks and how the underpinning strategic configurations are affecting the traditional organisational forms of hierarchy and market.

E-marketplaces have often been explained in literature through Transaction Cost Theory (TCT) (Coase, 1937; Williamson, 1975; 1981).

TCT was first developed by Williamson to explain the inconsistency between economic theories and real business practices. In his paper The Nature of the Firm, Coase investigated the issue of company boundaries. Coase’s contribution was then expanded by several authors and, with special reference to Information Technology (IT), was re-examined by Picot in 1991.

In his work, Coase points out how hierarchy represents an alternative to the market’s invisible hand in governing exchanges, and that it is related to the need for organizational efficiency.

In literature TCT has been adopted to analyze the efficient boundaries of buying organizations (Bakos, Kemerer 1992). The TCT approach has been applied in the field of IS to study the consequences of inter organizational systems usage on firms governance structure (Bakos 1997, Bakos, Brynjolfsson 1997; Choudhury et al. 1998; Ciborra 1993; Gurbaxani and Wang, 1991)

When market marginal use costs are excessively high, the visible management hand (Chandler, 1977) becomes more efficient in transaction coordination. When the costs for using the market exceed the organization use costs, it is more advantageous to change the governance method. The point is that hierarchy economizes on information processing cost, which allows for mitigating uncertainty during the various transaction phases. Coase suggested that, on the one hand, enterprises and market are alternative and complementary governance methods for transactions. On the other hand, the methods used to process information affect the comparative efficiency of organizational forms (Ciborra, 1993).

Following the transactional approach, organizational design is therefore connected with choosing the most efficient form of transactions governance (Grandori, 1984). Market and hierarchy represent two opposite ends of the same continuum, inside which different configurations of quasi-market and quasi-organization can be found. From an organizational design standpoint, the problem lies in the identification of an efficient boundary between interdependent organizations (management of inter-organizational processes) or, within the same organization, between different organizational units (management of intra-organizational processes). The objective is to minimize coordination costs. The choice of the most efficient form of transactions governance therefore is connected with the form that contains both production and transaction costs. Hence, the make (i.e., procure internally) or buy (i.e., procure externally) dilemma.

As a consequence, the decisions on which business activities can be conveniently carried out internally and which should instead be outsourced become extremely meaningful from a theoretical standpoint. In fact, the issue at hand is the definition of the balance governing the transactions
within the context of internal hierarchical structures and, at the opposite end of the spectrum, the market structure.

Based on this perspective, the purpose of an organization is to mediate the economic transactions either between its members or with other organizations (Ulrich and Barney, 1984).

Despite the efforts spent attempting to provide a comprehensive explanation of the dualism between markets and hierarchies, the traditional approach to the study of transaction costs does not appear to be sufficient. Insufficient, because it does not highlight, and thus study or evaluate the strategic factors which influence the information exchange processes that characterise those organizational forms chosen by the economic actors in order to manage transactions rather than economic relationships. It is therefore necessary to widen the investigative scope by focusing attention on the relational mechanisms that lead to the proliferation of strategic networks. But is there a true strategic network theory? Kallinikos (Kallinikos, 2003) maintains that there is not.

Strategic network theory originates from Ouchi’s work (Ouchi, 1980), which distinguished hierarchical organisational structures into two types: bureaucracies and clans. This distinction is based on the consideration that different uncertainty degrees of exchange and different congruency levels between the objectives pursued by individual persons and organisations require alternative organisational forms to be efficiently managed. The concept of a clan was mainly applied to study intra-company relations, and was conceived as one of the possible organisational structures designed to reduce transaction costs under specific circumstances. Similarly, the same rationale has been followed to study inter-organisational relations, and hence to frame the concept of the networks. According to Thorelli (Thorelli, 1986), networks are “two or more companies that, thanks to the intensity of their interaction, make up a sub-system of one or more markets”. Jarillo (Jarillo, 1988), however, defines long-term links between different organisations as strategic networks. In fact, companies can establish networks of relationships to achieve a competitive advantage over their competitors. Strategic networks are different from vertical integration, because the participating companies are relatively independent.

Strategic network theory enriches transaction cost theory in explaining the emergence of long term relations between various companies. It emphasises the lowering of transaction costs associated to the network’s internal coordination effect and those that must be faced when closing a transaction between the network and any external agents. When goal congruency is high, there is a high compatibility of objectives. The collaboration between several companies in a network relationship optimises various activities with a lower total cost than vertical integration. From this point of view, e-marketplaces can also be analysed as strategic networks.

Strategic network theory substantially shifts the analytical focus to the elements that govern the strategic relationship integration, and away from the traditional effects discussed by Malone et al (1987), that is, ICT in terms of communication speed among economic agents.

It is necessary to bear in mind how Thorelli and Jarillo faced the question of strategic networks in an historical-environmental context; the internet did not yet favour the development of new types of electronically mediated relations between companies.

Malone et al (Malone, Yates, Benjamin, 1987) identified the three “famous” ICT effects on transaction costs through examining the ability of organisations to coordinate economic activities:

1. Communication effect: the possibility of transmitting information increasingly more quickly favours a reduction in transaction costs.
2. Electronic integration effect: ICT makes electronic connections between suppliers and buyers closer and easier.
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3. Electronic mediation effect: buyers and sellers can compare offers much more easily on the electronic market.

Wigand (Wigand, 1996) adds another effect, called the strategic electronic network effect: ICT allows for the designing and strategically planned formation of links between companies who cooperate to achieve strategic objectives, with the final aim of obtaining competitive advantages (Wigand, 1997). This latter aspect is often underestimated, but becomes fundamental to explain the strategic implications of network relations, not only those involving relations within the network itself, but also those outside the network. This topic will be discussed further when analysing the case of TileSquare.

In reference to Cohendet and Llerena’s studies (Cohendet, Llerena, 1989), Castells underlines how organisational change, which led to the phenomenon of company networks, occurred independently from technological progress; rather, it was a necessary answer to survive and face an increasingly complex environmental context.

When operational feasibility became apparent, the new technologies facilitated or even enhanced the tendency towards networked organisational forms (Boyett, Conn, 1991).

Strategic alliances, sub-supply agreements, and decentralised decisional processes managed by large companies with the support of computer/network based systems are all part of the phenomenon of networking, which has developed progressively since the 1980s. Castells maintains that it was organisational innovation that, to some degree, induced the technological path (Castells, 2000).

By means of a series of empirical analyses, Bar and Borrus (Bar, Borrus, 1993) show how information technology has favoured the establishment of flexible processes of management, production, and distribution, both at an inter-company level and in intra-company relations. Since the late 1990s, the internet has favoured and accelerated the company network phenomenon. In his research, Ernst demonstrates how networking, with the subsequent organisational and technological changes, is only another “fundamental form of competition in the new global economy” (Ernst, 1994).

Participating in a network also means forming an entry barrier for those on the outside as a result of the “strategic electronic network effect” (Wigand, 1996). Castells (2000) raises this theme in terms of network access, a phenomenon that can also be found in the analysis of the case shown below. The purpose of the network is to defend the members from unfair competition and to give them more favourable strategic positions compared to those who are not members of the network. The questions that arise are numerous and do not only concern production costs. The real and fundamental problem is: How high is this barrier to entry? And: What happens if the unfair competitors also implement a much more efficient network? And: What if some participants of the old network also become part of a competing network? The fundamental problem changes and becomes: Is it possible to defend rent seeking positions through the network? The answer is undoubtedly negative. But: Is it possible to create new rent seeking opportunities through the network? Is it only a question of time? How do participant roles and their strategic positions change? What are the implications for the protagonists who are either inside or outside of the network? As can be seen, many questions arise, and this study cannot answer all of them. Here we focus attention on the new challenges and opportunities for the future based on using the new transaction management forms in a more systematic and organised manner, and all of this is strictly connected to the use of ICT.

In any case, the concept of network seems to be the efficient solution to overcome the institutional and strategic restrictions of other organisational forms, such as markets and hierarchies. The network, if studied as an alternative to transaction management, is a form of management where the
four previously mentioned effects (communication, brokerage, integration and networking) play new roles and call for a redefinition of relations between the actors involved in the organisational network.

The first marketplaces were open electronic platforms enabling transactions and interactions between several companies (Holzmuller, Schlichter, 2002). The primary purpose of first-generation e-marketplaces was the creation of a more competitive market and friction-free commerce (Bakos, 1997; 1998). They were therefore characterized by large numbers of participants and basic services.

With time, for the purpose of creating a more sustainable business model, some e-marketplaces re-oriented their processes to include the management of the entire transaction, from the on-line definition and development of orders to logistics management (Philipps, Meeker, 2000). The technological drive towards increasing the volume of transaction pushed the marketplaces to develop new processes and tools. However, the development of these portals was crippled by the pricey nature of these services, so that in some instances the number of participants was too low to guarantee the survival of the platform. The gist of the problem is that both the business model and the service model required a high number of members to reach critical mass (MacDuffie, Helper, 2003) and this was difficult to obtain because of the pricey services.

Christiaanse and Markus (2003) call collaboration mediators those second generation marketplaces that managed to provide advanced services of process integration. They “act more as purchasing process facilitators, enabling interorganizational systems integration and providing specialized supply chain collaboration capabilities”.

The case study analyzed in this paper can be considered a second generation e-marketplace; it provide a good framework for study in detail how, and to what effect, the organisational networks, and particularly the e-marketplaces, are closely correlated to the technological variables that sustain the activities concerned.

THE CASE STUDY

The research project required analysing a case study considered significant for the following reasons:

1. The case study is based on a company founded in Italy, but which immediately found international relevance.
2. The electronic marketplace has played a role in the industry since 2001 (more than 7 years). In this same year, the Tilesquare marketplace changed its role in the industry and took several initiatives despite a turbulent context.
3. The number of members in this digital market is particularly high.
4. The significant ICT role in the modification of the “function rules” and the balance of power of the productive sector participants.

The investigation required qualitative data collection, mainly based on interviews of strategic and operational managers, system designers, managers and users of information systems in the marketplaces concerned.

The case study research method was chosen because it is useful for the examination of a phenomenon in its natural settings (Benbasat, 1984). The table below shows the major study phases flow. Case study research can also be an ideal vehicle for developing a deeper understanding of implicit and explicit business processes, and of the roles of people and systems in organisations (Campbell, 1975; Dukes, 1965; Hamel et al., 1993; Lee, 1989; Stake, 1995).

The following case study was qualitatively researched using semi-structured interviews.

The samples were set up by the e-marketplace
Table 1. Major phases of the study

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Task Description</th>
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<tbody>
<tr>
<td>June 2004</td>
<td>Scanning and preliminary investigation</td>
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<tr>
<td>August 2004</td>
<td>Selection of research topic and subject organisation</td>
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<tr>
<td>September 2004 – November 2004</td>
<td>Collection and analysis of secondary data</td>
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<tr>
<td>November 2004 – April 2005</td>
<td>Collection and analysis of primary data</td>
</tr>
<tr>
<td>March 2005 – April 2005</td>
<td>Overall assessment</td>
</tr>
<tr>
<td>June 2005 – September/October 2005</td>
<td>Preparation of paper preliminary version write-up</td>
</tr>
<tr>
<td>June 2007 – January 2008</td>
<td>Updating of data</td>
</tr>
<tr>
<td>March 2008 – April 2008</td>
<td>Preparation of paper final version write-up</td>
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general managers, the IT managers, and the project managers. The interviewees responded to questions on the development of platforms, project management and organisational impact.

**TileSquare**

TileSquare was founded as a joint stock company in 2001.

TileSquare is an e-marketplace, a business market that reproduces production modalities in the ceramics sector with the aim of favouring and developing relations between digital market participants. It is ideally designed for operators but also available to final consumers, who have free access to a vast area of goods and services.

The company’s mission is to build a reference marketplace for the sector by grouping together organisations with commercial relations in the ceramics field. It does so through the standardisation of more effective and efficient homogeneous procedures designed to support all sector operators, i.e. raw material suppliers, machinery producers, and retailers. These operators are the e-marketplace members; presently there are about one thousand, some of which operate abroad, particularly in East European countries. One of the fundamental aspects of the portal is its neutrality, an indispensable condition for the initiative’s own survival. Neutrality means respect for the rules of the real market with no interference in how the actors do their business. They can act with complete autonomy and with no intrusion in how they conduct their affairs and activities.

As a neutral actor, the first aim of TileSquare was to facilitate communication between the producer and the re-sellers such that the final user service available could be increased. (See Figure 1.)

The company’s shares are held by strategic partners, such as InterAge S.r.l., a company which develops Internet sites and portals. This company has consolidated experience in the ceramics field and presently acts as the marketplace coordinator.

**The Services Offered by TileSquare**

Initially founded as a digital platform for tile producers, over time, the system oriented itself more and more towards assisting retailers with the new requirements. This change in orientation came about due to the use of three-dimensional display software, the 3DWeb system.

This software is available for retailers who join the e-marketplace. It is a sales support programme rather than a real design project instrument. According to retailers with average confidence in IT and computer based applications, the software is extremely easy to use. Moreover, the final user is
not a designer but a salesperson. The main reason why these final users are attracted to this software is the speed with which an initial approximation of an interior design project can be created.

With 3DWeb, once the materials have been selected and the parameters set, it is possible to have an immediate cost estimate; the program also allows entry of any discount policies that the individual retailer may obtain from the producers. Each individual retailer enjoys particular conditions for which it would be almost impossible to establish management and accounting standards, given the present situation. The hypothetical final transaction, however, is made with the utmost reserve and with no interference whatsoever from the virtual market managers. TileSquare’s price policy also tends towards this direction: there is no commission on the effective final transactions; instead there is a fixed cost regime based on the service package the user has requested.

Another peculiarity of the software is that it allows the retailer to suggest a range of goods to his client; this advantage is atypical of the ceramics sector.

The real application strong point is the homogenisation and standardisation of the link between the individual producer and the retailer. There is no longer one software programme for each individual producer, but one single procedure that manages the whole sector upstream from the retailer. Before, there was only an ad hoc programme for each individual product with the inevitable management problems for the retailer.

Furthermore, the portal offers the possibility to update catalogues instantly, to introduce new products, not to mention new lines, and to offer special conditions for end-of-range stock (in the special offers section).

The retailers listed in the e-marketplace can make their clients exclusive offers for certain product series only found in their catalogue. The environment created allows for standard conditions among the listed retailers (by means of a password) and the final consumers (free access).

Another service that TileSquare offers to its members is the possibility to access the WWW site, the most authoritative on-line magazine in the ceramics sector. WWW guarantees its readers the latest sector news and updated statistical data.

Listed below are a series of “applicative areas” also available within the e-marketplace; they can be personalised and eventually integrated with other projects.

- A directory service for the companies in the portal
- A sophisticated search engine for publishing catalogues and a product database that can be linked with external data sources
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- A well-developed content management system to create and review documents and to manage the publication process of data and applications
- An e-learning system, including management and sales courses
- An e-marketing section with efficient instruments to divide, analyse and monitor the target over time
- A community system, a mechanism that puts users of the same company or different companies in contact in order to achieve a goal
- The possibility to add vertical applications, integrating them with the rest of the portal
- E-commerce systems, both B-to-B and B-to-C
- Web services that allow the platform to exchange information with other systems
- A discussion forum

As can be seen from the analysis of the case, widespread alternative forms of transaction management can be compared to the traditional ones. These new forms of transaction management support innovative interaction modalities between network participants and new production organisation modalities. An example is how retailers work: first, they develop their projects and designs with 3D instruments, thus saving on designer costs. Second, they create projects in a matter of minutes rather than days. Another aspect that becomes evident is that retailer collaboration gives rise to the so-called community of peers phenomenon. Lastly, the retailers themselves are able to offer their clients simulations and alternative suggestions, which was not possible before.

DISCUSSION: TILESQUARE: AN IMPROPER STRATEGIC NETWORK

The description of TileSquare’s characteristics has presented some food for thought on ceramics industry development trends.

On a worldwide level, some countries have rapidly developed (especially China) and are now able to offer products which are qualitatively very similar to Italian products, but at decidedly lower prices. Since these products are easy to produce, and especially since the technological gap has been breached in these emerging economies, it can be stated that Italian products find themselves in the medium-high market bracket, more due to marketing reasons than a real difference in quality. Asian products cannot find outlets in the internal Italian markets because there are obstacles in the traditional trading venues. These obstacles could stimulate looking for new venues, such as electronic channels or digital markets, which would therefore become real alternative outlets.

Moreover, it has been seen how a portal founded particularly to satisfy producer needs has been particularly successful with retailers. Producers who enjoy competitive advantages in the traditional market generally cannot see the necessity of becoming part of a virtual market. Only marginalized producers understand the advantage of trying to erode market shares away from the stronger producers. The balance of the ceramics market has thus been modified by the establishment of TileSquare, especially since there currently is product excess on the market; the retailer can choose the best combination of quality, quantity and price for his particular needs. The digital market tends to undermine producers in oligopoly positions, thus the retailer is guaranteed the necessary information transparency to make a rational choice.

To date, the TileSquare e-marketplace has not reached its aspired objectives in terms of transactions concluded directly on the digital market. No contract has yet been signed through the Website; traditional channels are still being used. Several conflicting reasons can probably explain this effect. On the one hand, purchases are not made on impulse; the final retailer customer feels the need to physically see the product and to evaluate the various possibilities before finalising the
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transaction. On the other hand, the presence of the portal itself may be seen as a restriction on virtual market development, particularly in B-to-B. In fact, in some cases, there is no requirement for physical distance between the producer and the seller, so the contract can be concluded in the traditional manner because the parties can meet in person. But this trend is changing. The constant increase in foreign retailers will force TileSquare to offer services aimed also at supporting the final stages of a purchase or sales contract, and will require these services to be increasingly developed. TileSquare could thus become a disruptive channel for introducing foreign goods into Italy, and it is exactly in this environment that it could truly function as a virtual market.

To study the electronic network created by TileSquare, it is wise to consider the three effects highlighted by Malone et al., i.e. the communication effect, the brokerage effect and the integration effect.

- Communication effect: this implies the creation of an efficient information flow. TileSquare definitely makes this effect possible in that the various participants in the ceramics production chain can be seen by everyone else (and therefore generate information). At the same time, they can receive information from other economic actors or access specialised magazines through special links to view sector studies and other areas in the portal.

- Brokerage effect: this implies matching the needs of the buyer to the offers by the sellers. From this point of view, TileSquare potentially offers its clients the possibility to finalise a transaction on-line by means of the RFX method. In truth, this has never happened because the various actors prefer to conduct such operations following traditional methods, particularly by meeting the other parties in person.

- Integration effect: this implies the creation of closer links. TileSquare is definitely one instrument that allows the agents in the ceramics sector to veer away from strictly competitive logic and instead favour the development of collaborative relations, between subjects who hold a different hierarchical position and between those at the same level.

A different but more complete understanding of the consequences associated with the development of the TileSquare marketplace can be found through an analysis of the networking effect as described by Wigand (1996): TileSquare reshapes the relations of the ceramics product market creating a competitive advantage in favour of the retailers that participate the marketplace. The e-marketplace therefore creates rent seeking opportunities for the actors involved. By reducing the transaction costs, the retailers are able to make their offers more competitive on the e-marketplace, thus favouring those within the network rather than those outside of it. All this should urge producers to participate in the e-marketplace, even if Wigand’s networking effect causes an increase in the level of industry competition and thus reduces oligopolistic revenues. Should producers decide not to participate, they would theoretically be excluded from the market because the transaction costs for finalising economic activities with non-participants would be higher than the costs retailers would face when finalising transactions with e-marketplace participants.

This transaction cost effect should lead retailers and producers to be more interested in joining the e-marketplace, and would create positive spin offs, which in turn would increase the range of offers within the e-marketplace, thus making it yet more advantageous for the retailers and, at the same time, increasing the disadvantages for those not participating. This virtuous/vicious circle, depending on the point of view, creates a new ceramics product market strategic configuration as
a result of the ICT effects on: 1) coordination costs within the network; 2) transaction costs between participating agents and those who interact with them through economical transactions.

In short, TileSquare allows for the creation of an electronic, strategic and improper network.

Tilesquare can be called an improper strategic network since each member is present on the portal and also on the traditional market. If, on the one hand it is useful to be on TileSquare as a channel to access information, on the other, the actual transaction takes place externally. From an organisational point of view, the retailers can install contacts and, for example, form purchase groups through the communication instruments that TileSquare makes available (e.g. direct contact or video-conference).

A brokerage effect is not created inside the network. At the moment there are only collaborative links.

Another interesting aspect which emerges from the TileSquare case is the role played by the network in terms of exceeding the traditional limits of market access for producers and suppliers. TileSquare creates a new electronic market superimposed over the existing one, mainly limited to geographical boundaries, thus permitting the development of new trading activities for the other actors involved in the network. In this case the electronic marketplace can be defined not only as a new organisational form to support relations between the institutional actors directly present on the digital market, but also as a mediation instrument that allows new economic relations to arise between the actors, who, in a market that is not mediated by ICT, certainly could not meet because of high transaction costs. The Chinese producers case is a clear example of this point. TileSquare therefore, not only supports “existing” relations more efficiently, but also allows new relations to be created which would otherwise not have been possible given the high transaction costs: it therefore also plays the part of a market-maker.

**CRITICAL NETWORK REMARKS: CONCLUSIONS AND FUTURE OPPORTUNITIES**

The research topic of this chapter is to discuss whether:

- E-marketplaces are an organisational network and what role ICT plays in this organisational configuration.
- ICTs favour new and/or alternative organisational forms.
- ICTs change the definition and the nature of organisational boundaries.

From the analysis of the case, it can be seen how ICTs enhance the establishment of more competitive markets because they are more transparent. A particularly important fact is that the power exercised by the individual actors in the network is redefined within the e-marketplace. This fact is very evident in the case of TileSquare. The producers participate in the e-marketplace so that they are not excluded in favour of other producers ready to supply the relative information on their own goods, catalogues and direct on-line warehouses. It is obvious how all of this could, over time, modify competitive relations between medium to large-sized producers and those less known. Unlike the obligation in the brick and mortar market, in the digital market, the latter do not have to make large fixed cost investments to be more broadly visible. Therefore, rent seeking opportunities are reduced, as they are not closely connected to real competitive factors.

Lastly, it becomes easier to widen the organisational boundaries of the virtual market by involving participants from countries that otherwise would find it difficult to integrate through structures with high fixed costs. The digital market presence of member retailers from Eastern countries is a typical case.

Interesting food for thought is therefore presented, particularly with regard to the role
played by technology, not only in defining the inter-organisational networks that are at the base of e-marketplaces, but also in the redefinition of traditional organisational boundaries (according to the transaction cost model). The distinct boundaries between markets, electronic markets and traditional hierarchical organisational forms become less clear. Though not the topic of this chapter, but certainly of interest for future study, e-marketplaces are a supporting instrument for traditional markets, electronic markets or relational networks with specific characteristics.

As further directions of this research we wish therefore to continue the study analyzing how through Business Intelligent Systems it is possible to analyze the data on the use of the portal by retailers and in this way provide to manufacturers information that they can use for marketing purposes.

Using empirical evidence from the case presented, this chapter has tried to answer how ICT reshapes relationships among actors. It is obvious how e-marketplaces are a true form of transaction management but have particular characteristics that require looking into more deeply.

In recent years, literature has shown a growing interest in these organisational forms, but we are certainly only at the beginning of a more general phenomenon; organisational planning will be ever more closely correlated to the development of ICT. New organisational paths and new organisational forms cannot ignore the implications that ICTs determine for them. At the same time, there is no point in studying the new technologies without considering the organisational content that every technological decision suggests and implies. The research questions posed by Straub and Watson (Straub, Watson, 2001) on the new ICTs as “facilitators” of new organisational forms or modalities point in this direction.

REFERENCES


**KEY TERMS AND DEFINITIONS**

**Brokerage Effect:** This implies matching the needs of the buyer to the offers by the sellers. From this point of view, TileSquare potentially offers its clients the possibility to finalise a transaction on-line by means of the RFX method. In truth, this has never happened because the various actors prefer to conduct such operations following traditional methods, particularly by meeting the other parties in person.

**Communication Effect:** This implies the creation of an efficient information flow. TileSquare definitely makes this effect possible in that the various participants in the ceramics production chain can be seen by everyone else (and therefore generate information). At the same time, they can receive information from other economic actors or access specialised magazines through special links to view sector studies and other areas in the portal.

**Electronic Marketplace:** Open electronic platforms enabling transactions and interactions between several companies or people. We consider e-marketplaces as an ICT based organizational form that mixes market coordination mechanisms (prices) and network coordination mechanisms (trust and common values)

**Integration Effect:** This implies the creation of closer links. TileSquare is definitely one instrument that allows the agents in the ceramics sector to veer away from strictly competitive logic and instead favour the development of collaborative relations, between subjects who hold a different hierarchical position and between those at the same level

**Strategic Electronic Network Effect:** ICT allows for the designing and strategically planned formation of links between companies who cooperate to achieve strategic objectives, with the final aim of obtaining competitive advantages

**Strategic Electronic Network:** Strategic configurations able to support and foster specific economic opportunities in determined contexts of time and space that are contingent to specific decisions.

**Transaction Cost:** Are costs incurred in making an economic exchange