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VIRTUAL NETWORK ORGANIZATIONS AND E-PROCUREMENT: A NEW OUTSOURCING PERSPECTIVE

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Abstract

The make-or-buy dilemma represents one of the most important topic in the IS research field. The IT function, in fact, has been one of the first business areas to be outsourced.

In this paper, we consider the outsourcing process not only as an economic decision driven by efficacy or efficiency but a real strategic move, driven by new business scenarios.

In this new perspective, we consider ICT as a main factor enabling this change, where outsourcing is no longer a one-to-one relationship between two actors who regulate their transaction by a contract which establish terms and conditions of the exchange, but a one-to-X relationship where the outsourcing process is mediated by a technological interface such as the electronic marketplace which establish terms and condition of any transaction regulating the participation to e-marketplace .

To this end, we analyze two case studies representing two different ways in which the electronic marketplace becomes the technological interface in the outsourcing of the procurement area.

The first one is a marketplace which manages transactions in a specific and limited market (the Italian market of food and ground products), the second one concerns an e-marketplace specialized in providing services in 5 different industry sectors across Europe.

Key words: outsourcing, global sourcing, e-marketplace, network, transaction costs, virtual organizations

1. INTRODUCTION

The make-or-buy dilemma in the IS field has been widely analyzed. The reason why the literature on this subject is so prolific is because the IT function was one of the first business areas to be outsourced.

While only a few marginal business activities were initially outsourced for the sole purpose of improving efficiency and controlling cost, in late Nineties, most organizations started to outsourcing entire "co called" "core" company functions, including in some instances core-business activities. (Campagnolo, Costa, 2006).

The subject of this paper is a specific process, namely, the procurement process, considering the strategic role that it plays in the value chain creation.

Since early Nineties, the environment in which companies had to work was characterized by a fast-paced globalization process with new emerging markets and competitors and increasing expectations from customers.

The access to quality and certified production inputs requires extremely complex information systems to satisfy today's procurement process needs.

These are the key elements that drive the governance methods of procurement outsourcing.

Therefore, this paper investigates on the role played by ICT in promoting the new company organizational boundaries in a continuum between market and hierarchy. In this respect, the digital- or e-marketplace, which are interpreted as Organization platforms (Ciborra 1997), re-design the procurement process.

2. THEORETICAL PERSPECTIVES OF OUTSOURCING: A LITERATURE REVIEW

Generally speaking, outsourcing can be defined as a process consisting in the enucleation of entire areas of both strategic and marginal activities and in the creation of

partnerships between companies wishing to outsource and enterprises that operate in the market as specialized companies.

The outsourcing phenomenon has been often explained in the literature by means of the Transaction Cost Theory (TCT) (Coase, 1937;Williamson, 1975; 1985).

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

In his work, Coase points out how the use of hierarchy represents an alternative to the action of the market's invisible hand in governing exchanges. According to him, the reason for that is related to the need for organizational efficiency.

When the market marginal use costs are excessively high, the management visible hand (Chandler, 1977) becomes more efficient in activities concerning the coordination of transactions. 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 mitigating uncertainty during the various transaction phases. Coase's suggested that, on the one hand, enterprises and market are alternative, although complementary, governance methods of transactions and, on the other hand, the methods used to process information affect the comparative efficiency of organizational forms (Ciborra, 1989; 1993).

Organizational design, following the transactional approach, is therefore connected with the choice of 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 regarding which business activities can be conveniently carried out internally and which ones 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 rope, the market structure.

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

A large section of literature has developed the concept of IS outsourcing. Willcocks and Lacity (1995) define IS outsourcing as handing over to third party management of IT/IS assets, resources and activities for required results.

Other authors (Clark et alii) widen this definition considering the importance of the contractual arrangements between the parties involved in the alliance.

Sobol and Apte (1995) gave a different contribution in their paper examining domestic versus global outsourcing. They consider global or off-shore outsourcing as a fast-

developing field characterized by very little literature that might help understand the reasons why organizations may or may not choose to undertake global outsourcing.

Influential scholars (Beath, 1987; Klepper, 1993; Lacity and Hirschheim, 1993) have proposed TCT to explain the IS outsourcing phenomenon and provided a theoretical framework to interpret this practice.

Willcocks and Lacity (1995) have shown that TCT can only be used in some instances and that a different theoretical approach is needed to explain other cases. They describe some specific issues related to the very nature of IS and IT outsourcing decisions that require proper theoretical tools.

In a special issue of the Journal of Information Technology (Special Issue No.10, 1995), many articles investigate the importance of TCT to better understand how the IS outsourcing process develops in practice.

In addition to TCT, Cheon et alii (1995) suggest other theoretical approaches, like Resource Based Theory, Resource Dependence Theory, Agency Cost Theory.

Moreover, these authors suggest a contingency model to assist discussions in further empirical researches.

In agreement with Choen and alii (1995), TCT is better indicated to explain complex externalization processes, especially when the reasons behind such choices go far beyond the need to cut down production costs. For the purpose of this article, therefore, TCT will be used as a theoretical approach due to the fact that the investigated phenomenon, the procurement process outsourcing, is extremely complex. In fact, such theory appears appropriate to investigate different outsourcing options that can be found in all procurement processes.

3. NETWORK-WIDE E-PROCUREMENT

Most organizations are trying to improve their supply chains through process reengineering, partnership, etc., with the purpose of reducing total costs and improving performance of the entire chain.

Global sourcing or outsourcing, as described above, can offer real advantages for the functionality of Electronic Business thanks to a more flexible structure (Ashayeri, Chien-Liang Kuo, Selen, 2004) and can create new opportunities for communication and transaction activities with partners located all over the world. It allows the creation of new value chains and new forms of cooperation like networks. Following this perspective, this research investigates on the role played by organizing platforms in redesigning some specific aspects of the value chain, the procurement process, or better yet, the e-procurement process. A further research subject of this paper is the relationship between e-procurement and outsourcing in an effort to better understand how e-procurement strategies can produce better performances in outsourcing.

Procurement outsourcing is only one of the options that can be adopted to reach the desired results in a short time.

Therefore, a brief overview of the phases involved in the procurement process based on a digital value chain (e-procurement) is given below.

E-procurement is one of the many services belonging to the e-business family and, more specifically, to Business to Business, which includes all the tools supporting both e-sourcing (from the search for potential suppliers available on the web, to auctions and negotiations) and e-catalogs of goods and services (from the management of purchase orders, to forwarding to suppliers and related invoicing).

E-procurement is therefore the macro-class (container), while e-catalogs and e-sourcing are the two possible solutions to the procurement problem.

Possible meanings for e-catalogs and e-sourcing, within the e-procurement process, are shown in Figure 1.

Figure 1

3.2 E-sourcing

E-sourcing can be defined as a group of general activities, including the search for and selection of potential suppliers, price negotiation and final invoicing.

In particular, several e-sourcing models exist in the Italian market, which can be classified based upon the *implemented technical solution* and *used tools.*

Technical solution means the method selected to manage the search platform of suppliers and, in particular, how each organization adopts the technological infrastructure.

Two management methods exist, which are:

Internal solutions: Companies develop and manage an internal technological search platform or use one made available within the group to which they belong (insourcing).

External solutions: These can be divided into external solutions through ASPs and external solutions through global outsourcers.

External management through ASP. Technological platforms are customized and made available by external companies against payment of a fee. These companies provide technical and information support, services for the aggregation of the various buyers and sellers, reporting on declared values during negotiations and print-outs of final reports. This approach is preferred by buyer enterprises lacking in the economic and/or

technical capability to implement these services internally and wishing to maintain a fair level of autonomy in their decision-making and negotiation processes.

External management through global outsourcers. Specialized providers manage, on behalf of their client companies, the entire e-sourcing process, including the search for new vendors, their certification and selection and the proper negotiation phase. The purpose of this strategic choice is to improve the efficiency of the entire procurement process, even though the decisional autonomy of the outsourcee is sensibly reduced.

3.3 E-catalog:

The second element in the e-procurement process is the e-catalog. This term refers to the concept of catalog aggregator, or on-line catalog, i.e., a web-based tool that allows retrieval of information on the desired products, subdivided by category, price range, quality, combined characteristics, etc.

The phases involved in e-catalogs are:

Catalog management. This phase mainly includes uploading, changing and updating of catalogs content (descriptive information, products, prices, etc.).

Creation of procurement requisitions. Once the products/services described in the catalogs have been viewed and related quotes received, sale conditions are confirmed (with delivery time, delivery and payment methods, etc.).

Authorization to buy and purchase order. The authorization to buy is usually checked against the decisional autonomy of the buyer, correctness of general information and product category of the order. If everything goes smoothly, then an order is issued to the supplier/s.

Logistics. In this phase, ordered products are packaged, shipped and delivered to the warehouse and/or point of consumption – based upon the conditions set out in the

second phase, the procurement requisition – and then received and verified for correctness.

Management of the administrative/accounting cycle. With this phase, the on-line procurement process is completed. Contractual conditions are checked and receipt of the invoice and remittance of payments verified. On-line catalogs are being further analyzed depending on the implemented technical/organizational solution or based upon the product category and catalog size.

The following models can be found in the organizational/technical macro-class:

1) Totally internal organization. As described in the title, in this case catalogs are implemented and managed through the company intranet – or the intranet of the holding to which it belongs – using *ad hoc* platforms owned by the same company (basically, extended ERPs are being leveraged).

2) Internal organization with use of punch-outs. Catalogs are available on both the company intranet (as in the case above) and the extranet of supplier/s. In this case, catalogs are more customized, in terms of product variety or range of products/services and in terms of price and quality level.

3) External organization through the use of ASPs. In this case, catalogs are not available on the company intranet but run on network infrastructures of providers. In exchange for this service, companies pay a fee. More specialized providers are also able to manage the content of catalogs. In this type of organizations, logistics and accounting are still managed internally and are not being outsourced.

4) External organization based on outsourcing. In this case, management of on-line catalogs is totally outsourced to external companies, which are responsible for managing the platform and any other associated service (content update, verification of potential customers, logistics and accounting).

5) External organization with e-marketplace. The catalogs of companies are available on the platforms of the marketplaces to which they have subscribed. Catalogs are available to the general public and therefore can be viewed by any user of the marketplace, although customization is limited.

4. NEW FORMS OF COOPERATION AMONG ENTERPRISES AND THE ROLE OF ICT: A THEORETICAL FRAMEWORK

Organizations that combine characteristics of both market and hierarchy and rely on external vendors prove how cost reduction is only one of the reasons behind such phenomenon. Key aspects affecting this choice are the search for a differential advantage, on the one hand, and the search for a change in the value chain, on the other (Imai, Nonaka, Takeuchi, 1985).

In this scenario, ICT brings about the adoption of network organizations, as these promote the integration of the value chain of each participating enterprise and allows implementing, in an easier and more flexible way, business agreements that can even be complex and difficult to manage on a practical level. Bloch and Pigneur, in fact, speaking of the influence exerted by ICT in bringing to life new types of relationships among enterprises, stress the importance of the seven channels through which ICT exerts its influence (Bloch, Pigneur, 1995). In summary, these are: improved methods for gathering information, improved ability to coordinate the work between several locations, more efficient management of the relations between customers and vendors, a

boost in the potential of distribution channels and in the opportunities of marketing channels, creation of virtual workplaces, introduction of virtual enterprises and finally the development of electronic marketplaces.

In this scenario, ICT plays a critical role not just because it cuts down the contact costs between different economic entities, but also and foremost because it enables new models and types of relation and cooperation among companies, providing a technological platform that more often than not becomes an organizational platform (Ciborra 1996; Rossignoli, Cordella, Mola, 2005).

The cases analyzed in this contribution represent possible methods of cooperation between enterprises along the value chain, outsourcing a number of activities and processes that can no longer be advantageously managed internally and bringing about a number of different forms of cooperation among companies.

All of the above create real strategic networks between cooperating companies.

Clear examples of these strategic networks are the digital or e-marketplaces, which, for the purpose of this work, will be considered as a special form of strategic network (Jarillo, 1988; Thorelli, 1986).

This paper, therefore, will analyze some case studies and in particular the organizational implications of outsourcing the procurement process. Virtual e-marketplaces especially thriving on B2B markets are the starting point (B2B).

Outsourcing, as it is considered in this paper, becomes a strategic choice to increase the competitive advantage, as it enables efficient cost allocation.

The real reason driving organisations toward the outsourcing configuration is more than just a wish to reduce costs.

4.2 The B2B electronic marketplace

B2B e-marketplaces are 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).

For the purpose of creating a more sustainable business model, some e-marketplaces are oriented towards the so-called second-generation architecture, which includes the management of the entire transaction, from the on-line definition and development of orders to logistics management, using the tools made available by the virtual marketplace (Philipps, Meeker, 2000). However, the development of these portals is crippled by these services being too pricey, so that in some instances the number of participants is too low to guarantee survival of the platform. The gist of the problem is that a high number of consumers should be involved to reach critical mass (MacDuffie, Helper, 2003).

Today, the literature on digital markets is very prolific and commenting on it is not the purpose of this paper. However, it is worth mentioning the works of Bakos (Bakos, 1997) Christiaanse and Markus (Christiaanse, Markus, 2003), (Wang, Archer, 2004) on the roles played by the platforms and their organizational impacts.

The use of an e-marketplace, i.e., a web-based information system, as a tool/place for managing transactions, results in the creation of decentralized business structures, which in no way depend on the physical boundaries of a given company. In fact, the end point seems to be the digital integration of all phases involved in the value chain (procurement, production, distribution and sale), irrespective of the fact that these may

be controlled by a leading company or by independent entities specialized in various sectors.

Finally, the integration process enabled by e-marketplaces impact organizations in the following two ways:

6) Restructuring and changing of preexisting processes and functions, due to the adoption of ICT.

7) Involvement of new players in the supply chain and subsequent need of companies to establish and manage new relations.

In this scenario, the strategic choice between make or buy is no longer about a single product or a specific production factor, but it is a decision that concerns a set of services structured in different activities grouped in a particular process.

4.3 A possible new scheme

Traditionally, the outsourcing process was considered as a particular form of negotiation between two players conducting transactions through a special type of contract that regulates such relationship. Usually, this term describes an agreement whereby an external organization provides a client with a service that was previously carried out internally. In other words, the outsourcing agreement can be seen as a one-to-one relationship mediated by a contract establishing terms and conditions of each transaction between the parties.

In our view, the adoption of technology alters the very nature of this relationship. The outsourcer is no longer one single contractor. The counterpart of the transaction is a technological interface, such as an internet portal or e-marketplace, which mediates the

transactions between organizations with procurement needs and a number of contractors providing the required services.

In this perspective, a process that can no longer be advantageously managed within the boundaries of an organization (hierarchy), due to high production or transaction costs, can be managed through ICT-mediated market-specific coordination mechanisms.

Contrary to the traditional transactions carried out in the market, in the cases analyzed below, marketplaces are not free-access sites. In order to participate in the transactions, participants must satisfy a set of parameters in terms of quality and reliability. In fact, even if the e-procurement process seems to be a relationship regulated by market rules, there are some aspects involved, typical of other organizational forms like clans or strategic networks.

The internet portal represents a virtual place where actors can meet with each others. However, contrary to the marketplace, participants undergo a selection process in order to verify their ability to fulfill the requirements for participation in the marketplace.

5. CASE STUDIES

5.2 AgriOk

AgriOk is an e-marketplace in the agricultural and food sector specialized in dairy products. The e-marketplace was created in 2000, thanks to an agreement reached by Granarolo (holding 94% of the share capital) and Granlatte S.p.A., while business activities started in March 2001. As of today, AgriOK counts 750 participating enterprises and over 100 subscriber suppliers.

Revenues in 2005 were in the approximate amount of € 313.000.

5.2.1 Applications and services

The development of portal activities has faced several problems, such as complex and cumbersome logistics, low profit margins, globalization of agriculture and food industry, strong competition and reluctance of companies to use highly automated procurement tools.

The purpose of AgriOk was to expand its business, both vertically, along the entire supply chain, and horizontally, towards the fruit-and-vegetable, wine and meat sectors. In this way, it is possible to provide the companies of the sector with outsourceable support, thus creating a vertical integrated value chain and therefore allowing immediate product traceability and other benefits.

AgriOk enables a strong integration of the supply chain, from suppliers of raw materials (milk and agricultural products) to food processing companies, working exclusively with ICT and creating a real strategic network capable of competing at a global level.

The services offered by AgriOK can be categorized into two macro areas. These are: standard services for the supply chain and additional services. The purpose of the first type of services is to give to farmers and technical staff support to their activities through an easy, effective and consistent connection with the logics within the supply chain. The second group of services are available through the Internet:

Information and customized service. Customization means the ability to identify users accessing a given service, adjusting the response accordingly. Depending on the identity of the users accessing it, the portal provides sector-specific, technical and marketing information and links to local businesses.

Information services to screen useful products to correctly manage the entire supply chain, such as:

Presentation of fact sheets and characteristics of useful products by sector: feed-stuff, raw materials, equipment and tools.

Catalog management and traceability of orders: web links to suppliers of farmers connected with the value chain for the transmission of orders. Connection with warehouse tracking system.

Product traceability along the value chain. This is a detailed information gathering system for the entire processing cycle of products, from harvesting to manufacturing into finished products, with different levels of use and visibility, based upon the type of role: farmer, expert, agricultural hubs, etc.

5.2.2 Partnership model

On-line catalogs and services outsourceable through AgriOK create an opportunity for sellers and suppliers to meet with each other, thus promoting relationships and sharing along the supply chain. When sellers are not satisfied with the conditions set out in a catalog, such as when handling large quantities of products, buyers have the opportunity to negotiate, using a Request for Proposal (RFP), the most advantageous conditions with the selected suppliers and to describe in detail their needs, even attaching documents and any special request.

Requests are entirely managed through the website. Moreover, AgriOK automatically forwards requests to suppliers companies and delivers the received offers to buyers. At the end of this process, buyers can select the most advantageous offer or reject all offers, if so they wish. AgriOK's core business activity is the management of information exchange between buyers and sellers in a safe and effective way. Thanks to this type of service, costs and time of transmission of requests are minimal, since faxes, couriers or even traditional mail services are no longer required.

Besides reducing market failures, this information exchange also allows to dramatically reduce transaction costs (TCT) and to establish alliances between different companies, thus creating the so-called business community, as defined in a slogan appearing in AgriOK, and, consequently, a strategic network.

5.2.3 Client scenario

The companies participating in the AgriOK's network are ususally small/medium enterprises operating in the agricultural and food industry within the Italian territory and, in particular, in central and North Italy. Some of the major suppliers are: Nutristar, Ecloclin for feed-stuff and supplements, Geocentro for phytopharmaceutical products and FIS for livestock feeding.

Initially, AgriOk's customers would only use the services connected with the marketplace and therefore would adopt the platform for the direct sale/purchase of goods, thus reducing intermediation costs and keeping TCT to the bare minimum. Today, AgriOK's technological platform is not just used to reduce costs, but first and foremost to improve and enable sharing of information along the entire supply chain, thus creating a real strategic virtual group capable of competing at an international level with both new emerging countries and large multinational corporations.

5.3 BravoSolution

BravoSolution was first established in June 2000 thanks to an initiative of Italcementi Group, which holds more than 80% of the share capital. It is one of the leading companies in the market of e-procurement solutions and tools. The company mission is to create value for potential customers providing them with the best technical and

logistic support in the procurement processes, through the use of information services and technologies.

Since 2000, the company has supported over 45,000 on-line negotiations, for a total amount of 15 billion Euros. 50,000 suppliers from 70 countries are represented in the various vertical marketplaces. Moreover, advanced e-procurement technology in 7 languages and on-line support service to negotiations in 14 languages are available for a global service offering. During 2003, the BravoSolution group has managed transactions of goods and services on their vertical markets and e-procurement portals expressly created for their customers, for an estimated value of over 5.2 billion Euros and carrying out approximately 18,400 negotiations. In 2005, BravoSolution S.p.A. and its subsidiary companies have recorded a total of 18.5 million Euros (16.6 million Euros in 2004) in revenues, with a gross operating margin of 0.6 billion Euros.

5.3.1 Applications services

Procurement is considered one of the most important business processes for profit-making inside each company. This is the reason why a vast array of solutions and services able to optimize each phase of such process has been developed, from the analysis of the needs of a given purchase and the related supplying market to the examination of offers and on-line negotiations through the platform (management and use of the e-marketplace). BravoSolution is for its customers an outsourcer of solutions for the procurement process. Therefore, it can be considered as a supplying company of ASP systems (provider of customized systems) for e-procurement or as a global outsourcer for e-sourcing.

Based on a combination of technological tools and professional services, these solutions support the entire sourcing process, including the definition and analysis of the buying

needs and the supplying market, evaluation of offers and, finally, negotiations on the web. The range of available modules can be synthesized as follows:

Search for and selection of suppliers fulfilling the desired requirements. The internal platform uses its database, which is updated and/or changed on a daily basis through the interactions occurring between thousands of suppliers around the world.

Support to the preparation of RFPs (Requests for Proposal) and drafting of specifications. Thanks to the use of proper Competence Centers specialized in different business sectors (construction, food & grocery, government, industry and transportation), it is possible to fully understand the needs of the various customers.

Analysis and alignment of offers. Thanks to this service, a number of parameters are attributed to each seller, sorted out by quality level, price, general company information, delivery time, etc., making a buyer's choice easier and faster.

Definition of strategies for on-line negotiation and auction parameters. Depending on the type of goods, required quantities, etc., the best strategies to determine the most efficient buying methods are being defined (on-line auction through the e-marketplace or purchase through e-catalogs). Once the buying method has been selected, negotiation rules are defined (for example, auction price, auction type, authorized suppliers, etc.).

Automated management and on-line verification of the entire negotiation process.

Automatic transmission to all suppliers of the information necessary to actively participate in the on-line auctions and real-time notification of negotiation events.

Assistance to buyers and suppliers during negotiation. Numerous services are available, including technical assistance, organizational assistance and linguistic and procedural support during the various phases.

5.3.2 Partnership model

BravoSolution cooperates with a limited number of partners specialized in the ICT sector to manage and maintain the platform. Some of these are: Oracle and Sun, for database and infrastructure management, Colt for communication services between the companies, and TXT e-solutions for Demand & Supply Chain Management solutions in the platform. Most operations are internally managed by companies of the Italcementi Group, through a sophisticated VPN (Virtual Private Network) system.

5.3.3 Client Scenario

BravoSolution is an international company subsidiary of Italcementi with a large number of customers located all over the world. Customers can be classified into five business sectors (industry, food, construction, transportation and goverment) or by size. Some of the major customers are: Cogestil, Ciments Calcia and Essroc in the construction sector; Cogelec, Alitalia, EDF GDF Services and Vodafone in the industrial sector; Autogrill, Gruppo Cremonini and Gruppo Pam in the food and grocery sector and British Library, the municipalities of Boulogne-Billancourt and Genoa in the government sector.

6. DISCUSSION AND CONCLUSIONS

The two cases described above show how companies, once they have established which processes should be outsourced, access the portals offering the desired combination of services.

Contrary to other outsourcing methods, the companies accessing the portal of AgriOK and BravoSolution are allowed to redesign the entire process, or each single process activity, thus altering in a short time the required services.

In fact, AgriOK and Bravosolution are no substitutes for the procurement function of companies wishing to outsource, but rather enablers of procurement processes optimization, such as e-scouting or e-catalog, only when companies considered it strategically advantageous.

In the case of e-procurement, considered as the whole of processes such as e-catalog, e-scouting, selection and certification of suppliers, etc., the portal represents a virtual outsourcer, where the contractual relationship does not concern the object of the transaction but rather the possibility to access a combination of services.

Since early Nineties, the environment in which companies had to work was characterized by fast-paced globalization with new emerging markets, new competitors and increasing expectations from customers. Some companies reacted to the need to reduce costs adopting new organizational solutions in which communication technologies play a leading role in the design of new orders, balances, processes and activities.

Therefore, in order to grasp the essence of current phenomena, competences are required not only in the organizational sector but also in the field of information systems.

In fact, based on the cases studied in this research, it becomes apparent how the availability of web technologies and their implementation for procurement purpose have altered the procurement organizational process.

The very concept of outsourcing is being reconsidered, no longer being a one-to-one relationship between two entities wishing to carry out, on a contractual basis, transactions that can no longer be conveniently governed through internal hierarchy, and becoming a multilateral technology-mediated relationship, where technology becomes the real counterpart of the outsourcing relationship.

Portals, platforms designed in a scalable way, allow organizations to model their procurement processes and decide which activities can be outsourced and which ones should be protected within company boundaries.

The availability of platforms and technologies represent only a side of the equation. Organizational design should play – as it is – a fundamental and indispensable role. The procurement process should be carefully analyzed and separated into different and logically independent phases that are strongly interconnected.

A good balance between organizational design and strategic use of ICT creates flexible boundaries in a company and at the same time optimizes transaction and production costs, searching for the optimal configuration.

Dividing the entire e-procurement process in e-sourcing and e-catalog allows to decide which processes can be outsourced and to incur in lower lock-in risks with the outsourcer.

Destructuring the e-procurement process in sub-phases or modules allows redesigning the market/hierarchy trade-off, giving the management the possibility to reconsider their decisions in a dynamic way.

Outsourcing, as it is meant in this paper, can enable strategic choices that maintain the competitive advantages of the companies opting for such organizational solution. Therefore, the decision to outsource is not only attributable to the need of the

management to contain costs. Outsourcing is the organizational solution that allows the companies implementing it to design operational structures and mechanisms that are more flexible, mobile and dynamic, closer to the end market and finally more competitive.

As a consequence, it is necessary to redefine the organizational boundaries of enterprises, where, in a continuum between market and hierarchy, the procurement outsourcing process, which is allowed by the very adoption of ICT, becomes a major factor in creating such new organizations, characterized by networks of enterprises. In reality, the outcome is an improper market or closed market, whose participants are the subjects having access to the technological platform, which in turn becomes more and more an organizational or organizing platform.

While the traditional concept of outsourcing consisted in the investigation of the various opportunities offered to companies when facing the choice between the mere making externally or internally, the current complexity of emerging organizational interdependencies, due to ICT giving easy access to a growing number of participants, calls for the adoption of new decisional criteria. The concept of market is being altered, where networks of increasingly more overlapped companies compete against and/or cooperate with each other. Therefore, the alternatives are: to make within the company boundaries, to buy within a closed market or to buy outside a closed market? The prevailing alternative here is to buy within the closed market, which represents a real strategic network, i.e., the subjects participating in the network enjoy competitive advantages that cannot be enjoyed by those who do not participate in it.

And what about the role of the technological interface? The traditional concept of outsourcing implied two contractual parties and therefore a bilateral relationship,

whereas according to the new concept of outsourcing a relationship is being established between one subject and x, where x stands for a network of companies connected through a single technological interface. This very single technological interface becomes the reference base of the improper, or closed, market. The access to this closed market is regulated by the manager of the technological interface. Is it fair, then, to define such improper or closed market as a technology-mediated market?

Based on the few cases studied in this contribution, it is actually possible to come to this conclusion and give an affirmative answer to the above question. However, these results are the first available information in a research area that needs to be further investigated through in-depth studies supported by quantitative analyses. One thing is for certain: 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 externalization of various company functions, such as production or even human resources (Campagnolo, Costa, 2006; Comacchio et. al. 2006).

7. REFERENCES

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Figures:

Figure 1 e-procurement framework