

The virtual information: a case study

Ginevra Gravili

Management and Economics Department, University of Salento,
Lecce, 73100, Italy

Abstract

In today's economics, the fact that information is a major factor of production and of increasing importance as a source of competitive advantage is a generally accepted truism. The trend towards global markets has strongly impacted the competitive situation of many enterprises. Never has the economic environment been subject to so many drastic and rapid changes. This put new weight factors on the requirements for design of business process.

This paper explores the case of an Italian legal office that has studied more and more innovative solutions both to satisfy the demands of the clientele and to oppose the action of the new competitors. Comparing classic models and the theories of Porter with the characteristics and needs of new economy, it shows as the ability to possess, to easily have access, to creatively use of information constitutes one of the more strategic sources of the competitive advantage.

Keywords: *Virtual information, social networks, virtual value chain.*

1. Introduction

The explosion of computer-focused communication over the past 20 years has brought about numerous changes in the labour market: a real revolution, not yet finished, that is changing the way organizations work. Today, people have a "digital identity", they spend their free time online in social networks (Peluchette and Karl, 2008), they have energy, enthusiasm and ability to use the computers, they like the virtual interaction. The consequences of this phenomenon have permeated every type of activity and they have given rise to the "connected society." The use of the Internet has promoted the development of new economic rules those of the network economy and of new models of production, new strategies of enterprise and new organizational structures, in order to modify the structure of the economic sectors and the relationships in the markets. The Internet has altered the nature of competition, accelerating the flow of information, of new products and of services in all the world. This has encouraged managers of a lot of firms to re-examine the

way business should be managed and to identify lasting sources of competitive advantage. In fact, the possibility offered by the Internet is to organize business activities in a different way, to offer new goods and services and to almost simultaneously distribute them to millions, the firms face the reality of a competitive edge that can be there one day and gone the next. To be competitive on the Internet means to be able to quickly move on to new combinations of products, services and flexible markets; flexibility is required in strategies, in the structure and in the carrying out of operations with the purpose of maintaining a lasting competitive advantage.

2. Virtual information as an economic variable

The term information has been used in many senses in the scholarly literature. This article treats information as an economic variable, although various authors have proposed different definitions of information (Dertouzos, 1997; Levitan, 1982; Loose, 1997; Rose, 1999).

For a good part of the XX century the driving force of the world economy has been that of the car industry, that has created Ford's enterprise, mass-production and mass-marketing. Now the car sector has lost its role, the economy is driven by the great sector of information and communication technologies (ICT). It produces a product qualitatively different from any other product: knowledge. Information has become an important factor for the success of firms in the new economy. Information Technology cannot be relegated to a role of support, every company must understand the broad effects and implications of the new technology and how it can create substantial and sustainable competitive advantages.

Every value activity creates and uses information of some kind. Logistics activities, for example, use information like scheduling promises, transportation rates, and production plans to ensure timely and cost-effective delivery. A service activity uses information about service requests to schedule calls and order parts, and generates

information on product failures that a company can use to revise product designs and manufacturing methods.

For most of industrial history, technological progress principally affected the physical component of what businesses do. During the Industrial Revolution, companies achieved a competitive advantage by substituting machines for human labor. Information processing at that time was mostly the result of human effort.

Now the pace of technological change is reversed. Information technology is advancing faster than technologies for physical processing. The explosion of the computer-focused communication has brought about numerous changes in the work place.

The substantial difference is that, until some time ago, the traditional economy activities were identified as either capital or labor intensive, today every firm will have to be valued for its information intensive content. Then the ability of every institution to possess in abundance, to access easily and to creatively use information constitutes the most strategic source of the competitive advantage and one of the most important value generators. In the new information intensive economy, an innovative and original aspect is the process of separation between physical things and knowledge, imputable to the diffusion of the ICT that through the Internet allow and facilitate access to information in a way separated from physicality. Besides, while the physical things are exploited and are subject to a process of impoverishment of the resources with which they are realized, information isn't subject to physical consumption and is nowhere and everywhere. Things can be subject to incremental return; information and knowledge almost always guarantee increasing return, above all if the generator of the knowledge has tools that prevent potential competitors from gaining access to the information, producing in such cases a monopoly.

3. The information revolution is transforming the nature of the competition

Information technology is transforming the nature of society, companies, processes, structures, and even competition itself.

Over the past years, it has developed a phenomenon known as "always on-line", that is, individuals who are never off-line. This is the generation of instant communication, a generation that wants to have content accessible anytime, anywhere, in any way. This is the generation ("post-generation" or "Zappiens"¹ or "C-generation") which is very capable of managing the flow of information that circulates in the new media, in weaving communications face to face with virtual ones

and to exploit interlocutors connected to the network to resolve problems in a collaborative way.

It is a generation that love create contents, create active communities, using social networks to participate in discussions, control their lives, work in organizations characterized by creative and flexible social structures. A generation that is mainly characterized by the use of technological applications, that have changed and continue to change the way to communicate on a global scale.

The entry of this generation in the world of work has generated by the companies need to find different approaches to manage the processes, imposing them to rethink the traditional processes and adopt new ways to attack the market.

So, it is important for firms to redefine their business models on the net in general and on applications in particular, if they want continue to be competitive.

"Information technology is permeating the value chain at every point, transforming the way value activities are performed and the nature, of linkages among them. It also is affecting competitive scope and reshaping the way products and services meet buyer and clients' needs. These basic effects explain why information technology has acquired strategic significance"¹.

This technological transformation is expanding the limits of what companies can do even faster than managers can explore the opportunities. The information revolution affects all nine categories of value activity. Today information technology:

1. "is generating more data as a company performs its activities and is permitting it to collect or capture information that was not available before. Such technology also makes room for a more comprehensive analysis and use of the expanded data. The number of variables that a company can analyze or control has grown dramatically"
2. "is transforming the physical processing component of activities."
3. "not only affects how individual activities are performed but, through new information flows, it is also greatly enhancing a company's ability to exploit linkages between activities, both within and outside the company. The technology is creating new linkages between activities, and companies can now coordinate their actions closely with those of their buyers and suppliers."

¹ Michael E. Porter and Victor E. Millar, How information gives you competitive advantage, *The information revolution is transforming the nature of competition*

- “allow companies to coordinate value activities in far-flung geographic locations. (For example, Boeing engineers work on designs on-line with foreign suppliers.) Information technology is also creating many new interrelationships among businesses, expanding the scope of industries in which a company must compete to achieve competitive advantage”¹

Every business today competes in a world “market sphere” constituted of two sub- worlds: a physical world of resources that managers can see and touch and a virtual world made of information. We have adopted the definition of Rayport and Sviokla² which have referred to this new information world as the “market space” to distinguish it from the physical and traditional world, of the “market place” .

Most products and services have always had both a physical and an information component. Historically, a product's physical component has been more important than its information component. The new technology, however, makes it feasible to supply far more information along with the physical product. For example, law firm’s virtual office data base supports a client hotline that helps differentiate Loop's³ service support from its rivals. The new technology is also making it increasingly possible to offer services with no physical component at all. Loop's customers have access to legal data filed.

In both the markets, the objective remains the same: to create value for the clients, possibly greater in comparison to the competitors. Nevertheless the exchange and creation of value in the virtual markets are different in comparison to the physical market.

4. The virtual value chain

Signing up to the Internet does not automatically endow a company with a competitive advantage. Several important components are necessary to move from connecting to competing.

To gain competitive advantage through information, Porter advises that managers must understand not just the technology but also the ‘value chain’ in which their company operates. In Porter’s definition, the value chain for any business includes several basic components. The first its inputs – these are sources of information and technology, as well as suppliers of other goods and

services to the company. The second component is the company’s own internal activities that create a product or service. Finally, the value chain includes the distribution channel for the company’s product, and the customers who ultimately purchase it.

Support Activities	Firm infrastructure	Planning models				
	Human resource management	Automated personnel scheduling				
	Technology development	Computer-aided design	Electronic market research			
	Procurement	On-line procurement of parts				
Primary Activities	Automated warehouse	Flexible manufacturing	Automated order processing	Telemarketing Remote terminals for salespeople	Remote servicing of equipment Computer scheduling and routing of repair trucks	
	Inbound logistics	Operations	Outbound logistics	Marketing and sales	Service	

Figure 1. The value chain, adaptation from Porter

Traditional interpretations of the value chain consider knowledge and information (fig.n.1) as functions of support to the physical activities, not as generating an autonomous source of value for the client. The enterprise in this way devotes all of its attention to the activities related to the management of the store, of the productive and commercial trials, resulting in a limited exploitation of the knowledge and the information provided to the clients. Considering the developed activities to a law firm, object of the case study, can see that there are some services that isn’t developed in presence of the client, but they are to every way essential. If the activities developed by the law firm can be defined a distributive phase of the process of allocation, this developed in its absence represent the productive phase. To understand better the differences between the productive phase and the distributive phase, it can useful to analyze the chain of value of a law firm (fig. n. 2).

Support Activities	Firm infrastructure				
	Human resource management				
	Technology development				
	Procurement				
Primary Activities	Inbound logistics	Operations of back office	Operations of front office	Procurement of clients	
		PRODUCTIVE PROCESS	DISTRIBUTIVE PROCESS		
		ALLOCATION PROCESS		Margin	

Figure 2. The value chain of a law firm

The value of the service received by the client is recognized through an operation of a whole range of trials, separated in primary activities and support activities. These activities come to them it turns you gather in three macro-trials: productive, distributive, and allocation

¹ Michael E. Porter and Victor E. Millar, op.cit

² J. F. Rayport and J. J. Sviokla, Managing in the market space, in Harvard business Review, Nov.-Dic., 1994.

³ Loop is the name of the law firm object of this study.

process. The information is and will stay a resource employed to support the physical activities of the enterprise, however the information revolution induces more and more enterprises to operate in an autonomous virtual market, where the creation of value responds to different rules. The characteristics of the Internet can have a strategic impact on the activities of business at two levels:

1. they allow businesses to improve the efficiency and the effectiveness of their activities (both inside and external to the enterprise); in this case the on-line channel as an alternative channel can be used for the actual business of the enterprise;
2. they allow business to develop new business, offering new products/services to the actual clients or exploring new geographical markets.

Support Activities	Firm infrastructure	Planning models			
	Human resource management	Automated personnel scheduling			
Technology development	Computeraided design		Electronic market research		
	Procurement				
Primary Activities	Automated warehouse	Flexible manufacturing	Automated order processing	Telemarketing Remote terminals for salespeople	Remote servicing of equipment
	Inbound logistics	Operations	Outbound logistics	Marketing and sales	Computer scheduling and routing of mail/trucks Service

Figure 3. Information Technology and the value chain – adaptation from Porter

5. Competing in the age of information

The development of the ICT in the economic system and the increasing diffusion of the Internet has brought about a deep change in the models of interaction and communication between individuals and organizations. The introduction of radically new technologies influences the competitive behaviour of business and gives a stimulus to economic growth. Nevertheless to fully gather the offered opportunities it's not enough to respond to the technological advances but the promotion of processes of reorganization and restructuring are also necessary. After all, the new economy is synonymous with "innovation", or rather the ability to develop new models of business, new typologies of service, new activities able to satisfy the demands using the Internet. In other words, business will have to adopt a virtual organizational structure. The potential for development in the new economy doesn't have to be sought after only in technological factors, but particularly in the use of the Internet as a means for reorganizing HRM activities. Traditional enterprises that

want to compete, have to promote new business ideas, or rather define new services to offer that benefit from the use of the new technologies. The competitive advantage is unquestionably the business model of an enterprise: that is" an architecture for the product, service and information flows, including a description of the various business actors and their roles; and a description of the potential benefits for the various business actors; and a description of the sources of revenues" ¹. The contemporary enterprise has in front of itself an ambitious and yet necessary finishing line to reach: the transformation of the "cylindricity" which has been used for decades, where the flow of information races on the north/south axis involving the different departments with their different decisional and operational responsibilities. A transformation that sees the solid object of the cylinder turn itself into a sphere, where every point of the surface is a contact with the external world that transfers information toward its centre. If we want to call it e-business or any other definition, it is clear that the Net will transform firms, opening them toward the outside without resolution to continuity ...they will integrate among themselves forming new socio-economic entities that can be called, using the latest neologism, ecosystems. Firms have the arduous task of trying to judge the benefits of sharing useful information with the users in general whether they be prospective clients on just visitors. To do this the first step is to build the critical factors of success, in optics of e-business. Two words reassume the fundamental levers of the success: service and synergy. Different concepts whose symbiosis assumes a particularly intense meaning for the direct and interactive nature of the relationship. The consumers of Internet tend to be demanding and impatient. They don't passively receive the communication but they actively look for what they want and feel they have a right to a service that justifies their investment of time. To be able to speak then of synergy is necessary to identify from the beginning the factors of the relationship, of the system undertaken that they are able to follow it. The successful evolution depends on a continuous experimentation that has the double objective of developing and improving the project as has been planned and to gather new signals that suggest new hypothesis improved with a more effective management on the communication.

6. The case study: a virtual law firm

¹ Timmers, Business models for Electronic Market, in Elettronic Markets, v. 8, n.2, 1998

Developments in information technologies increasing competition between different sectors and the applications of the more and more demanding clients have pushed a lot of Italian firms to reflect on the new sources of the competitive advantage: I.T. and the diffusion of the Internet allows firms to cross geographical barriers and this means to be able to give form to a new economy of knowledge and relationships.

The legal sector is characterized by a notable increase in the competitive pressure induced by the increasing integration and concentration of the market and by the incessant appearance of new competitors. Most firms use information to support their current business model, but only a few of them focuses strategies to competitively leverage information.

To be competitive organizations are going in two directions:

- ✓ reduction of the costs;
- ✓ orientation to the client and human resources

To reach this last objective, some firms have set up new multi-channel strategies that aim to be looking for new client and to catch new excellent staff. The traditional law firm is not the exclusive channel of contact anymore with job seekers but it is placed side by side with other channels (web site, e-recruitment, virtual social networks) characterized by an elevated technological content. Also for the firms starts a new way to use the virtual social networks, first used exclusively as social aggregators. This has opened new frontiers, a new market in which they can quickly position themselves. The weapons of competition in this context are firstly effectiveness, that imposes an offer of services at an elevated quality and secondly efficiency that can be optimized establishing partnerships with new professionals. Management of the activity based on the respect of these two fundamental principles allows, in fact, to satisfy the client's demands, the excellence of recruiting staff and those of the legal practice: besides guaranteeing a specific level of quality of the recruiting service for the firms, it assures an elevated level of the service for the client and of competitiveness in the long term, minimizing the costs for the organization. The novelty in comparison to traditional politics concerns the externalization of phases of the trial toward more qualified professionals, that, even though located in other geographical areas, they are able to assure a service of high quality.

Today companies will develop strategic social recruiting plans to create and maintain relationships with prospective candidates through social networks and branding tactics. Recruiters and staffing firms have begun to focus on the strategy of social recruiting. One of the case of "new company" more meaningful concerns a law firm in Rome, specialized in family law, that has given

origin to a web site called "divorzionline". This office uses information to get competitive to advantage. This may represent a significant opportunity in today's uncertain economy: to competitive be the companies leverage information as an integral part of business strategy and use it to deliberately change the game.

This demonstrates that also a leader firm, with traditional services has to adopt an integrated management of the recruitment phase, so as to minimize the costs and to discover new centres of creation of the value, that mostly satisfy all the different actors involved in the supply chain.

7. The evolution of a law firm

Activity on-line rise in September 2001 as complementary activity to traditional business following two main considerations:

- to maintain and to consolidate the traditional image of the firm;
- to catch job seekers that were already interested in the new recruiting channels and that would prefer to take advantage of the services not tied to normal working hours.

Following this thinking the initiatives on-line is interpreted as a "cost centre", in so far as they require high spending on promotion.

Like all first generation sites the law firm has entered online to establish the brand name and to illustrate the services offered and only subsequently it has become a specialized site. The on-line activities becoming "profit centres" it constitutes a natural evolution! In January 2003 there was a restyling of the site and to the insertion of greater materials with a new section devoted to exploiting issues fully. Today Internet and Facebook are perceived as independent channels with its own clients. The visitors to the site are around 600 a day and the number of the pages viewed daily has climbed to 6.500. It is recorded, therefore in comparison to the first phase visitors and pages viewed have almost doubled. But since a lot of operations must be regulated, due to the nature of the services offered, in the traditional way or through direct relationship, they continue to make use of direct content with the professionals.

The organization of the "new virtual law firm" has changed over time: the number of professionals that they take care of the services on line has moved from two in 2001 to five (all of in the law firm in Rome) today, and the number of lawyers that operate in traditional way has also grown, but with clients contacted through the web site. The office network counts on the collaboration of

more than ten law offices located in all Italy, in addition to Rome.

In today's economy, the traditional strategies for gaining market share and growing revenue are no longer effective. Most firms operate in expanding markets in which new services can be copied within days. The pace of change means strategies that succeed today may very well be outdated in less than a year. What's needed is the ability to extract valuable insights from data throughout the enterprise, and use those insights to build and implement successful strategies. Maintaining an "intelligent view" of all aspects of the market-sphere (competitors, clients, the internal organization, services, etc.) is the key to remaining competitive and attaining market leadership.

A possible model of growth of law firm can be represented by the following figure:

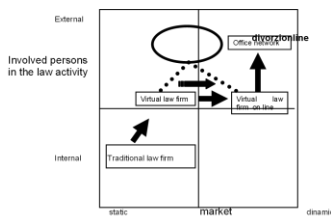


Figure 4. Growth of a virtual law firm

The traditional law firm exploits new technologies to create new channels and through virtual activity it involves clients in its activity. The law firm as an object of study is in a phase of transformation that will change it from being a "virtual law firm" to that "an law firm on-line": a part but not all the external subjects, are involved in the activity of the law firm, in way a far too static considering the market. The arrival of new competitors will force the law firm to become more dynamic in respect to services and to new clients. Also in this new vision law firm will keep on exploiting the competitive edge of their presence by now consolidated in the field. Using to keep ahead of those who don't use the Internet.. Contextually it will be necessary to reorganize, even more than has already been done, the structure for making firm more and more dynamic and flexible. In this sense the partnership with new professionals seems to be the necessary strategy to adopt in order to compete in new markets. "Office network" is a term that is used with the purpose describing a series of relationships and co-operations with subjects that work outside the law firm's offices. A network can, for instance, be created when subjects such as law firm, commercial businesses, and

other suppliers of similar services collaborate in offering complete packages of services. This is done, in the traditional net, but mainly through channels alternative. In such cases a further evolution of the on-line practice can be had in comparison to the levels analyzed, in which an enterprise exists with limited points of physical location, and that it manages through the Internet all the relationships with the clients thanks to its informative system. Characteristic of this particular structure is that competitive conditions exist with the clients having leverage on the varying price. In other words a pure virtual law firm.

The functionality of the web suits to a significant group of potential clients, ready to use the law firm that it has no limits in space and time, and is able to furnish low cost services.

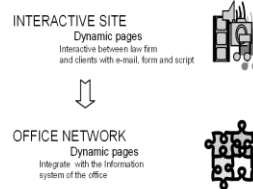


Figure 5. Growth of a law firm

The "pure virtual law firm" constitutes an extreme case however, that doesn't manage to hide its weakness: in the mid-term it is necessary to restore personal relationships. Some activities remain nevertheless excluded that have an elevated content of interactivity.

Let's take for instance the case of telephone consultation, through which the client seeks general information and an idea about a common problem. The most frequent questions, in fact, concern the necessary time for the conclusion of the procedures in front of the judicial authority, the necessary time for the divorce and the relative costs. The more complicated problems, with technical questions, are set by other professionals (colleagues): law firms not specialized in family law that ask opinions related to controversies of particular complexity.

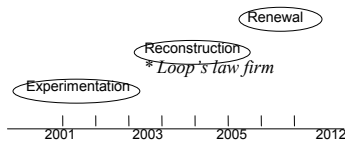


Figure 6. The evolution of Loop's law firm

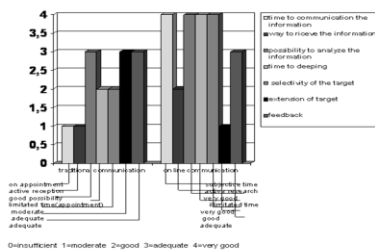


Figure 7. Traditional and on-line communication

From the graph it emerges that the substantial differences between the two methods of communication can be summarized in two principal elements: selectivity and interactivity. The use of a virtual legal practice implicates that the message doesn't reach all the potential clients, but only a part. In reality this is not a choice made by the law firm, but rather by who uses the Internet, that is the surfers. And therefore turns upside down capsized the classical logic of the lawyer/client relationship, where the recipient, once chosen the law firm, passively suffers what even is offered. Consumers select what sites to visit, what information to have, as with entertainment. The selectivity, certainly, changes in a drastic way the number of people that make contact, but it has as an undeniable merit that only people who are really interested make contact thus, avoiding the notorious time wasters from a professional point of view. The interactivity, that is the possibility of having a constant relationship, increasing the effectiveness of the contact and compressing the times of the contact is made more profitable by the use of the web. A new imperative becomes that of capturing the attention of the consumer, that can be reached expressly asking for permission. If a potential client voluntarily asks for information there is a good possibility of making him a real client, and a loyal customer. The Loop's law firm

with this in mind periodically sends a newsletter to the consumers that have applied expressly for it.

9. Conclusion

Digitalization is a chief driving force for change in the markets both in their dynamics and in their range and value.

The new electronic markets suddenly appear on the business radars bringing amazement, enthusiasm and fear at the same time. For the majority of firms the new digital technology will alter the very roots of relationships with clients, the behaviour of competitors and the economies of scale. The models of business believed unassailable until now are suddenly becoming monuments to the past. They feed the macro trends of deregulation and globalization of the markets. Until now the resources which we have used to furnish of our strategies have been taken from the physical world (the physical assets) while information has played a supporting.

The traditional role law firm can be seen as a physical chain with value vertically integrated, through which the services are produced, organized and offered to the clients through the practice (physical) that the distribution channel defines traditional. In this case the management of the system of distribution must be addresses toward the perspective of the maintenance of the source of generation of value, constituted by the maintenance of an excellent and loyal relationship with the clients (as if the lawyer were the faithful confessor, the confidante to whom the client goes to express his problems, a friend!).



Figure 8. Business model of a traditional law firm

Today, as J. Rayport and J. Sviokla have underlined, it is possible to create value through information. It is achieved by adapting the entrepreneurial formulas using a mix of resources taken from the virtual world in addition to that of the physical.

I.T. makes new models of possible business that gravitate around new paradigms so possible: "intermediary free", "new intermediary", through the "personalization", the move of the power toward the clients thanks to the transparency of information.

The landscape begin to be characterized:

≈ from the entry of new actors who will build their competitive advantage through asset free systems : we will have publishers without copiers and law firm without practices. The new arrivals won't have physical assets. In the new digital economy what was an advantage becomes a disadvantage. The collapse of the physical barrier means that the new digital competitors can get started very quickly with low start-up costs;

≈ from the evolution of the existing firms through the exploitation of their information asset (contact with the clients, experience, brand,). Those who can recognize and exploit their virtual assets can develop more efficient and flexible business models, those who don't risk failing in a more competitive market;

≈ from the development of alliances and partnership among different and extraneous firms in the Marketplace but complementary in the Marketspace. For example the law firm, that is the object of this case study is regenerating its own competitive advantage finding loyal clients through the supply of new services on-line.

The traditional chain of value of the law firm ought therefore to be re-phrased and regenerated if it is to keep on creating value for its own clientele: through the Internet and cable network, the client gets any type of solution regarding his/her own demands.

applications able to use IT to make the old models of business obsolete and to replace them with new ones. The planning of a digital strategy, and the conceptualisation of new models of business requires the development of new competences both at the vertex of the firm and in the functioning of the Information Systems.

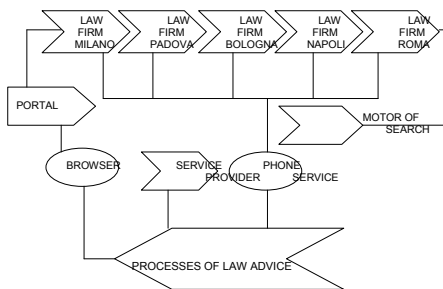


Figure 9. New business model of to virtual law firm

The firms, as we know than, won't disappear but they will become smaller, strongly integrated with external business partners (clients, suppliers, shareholders, employed, competing,). The digital economy will replace the big and general firms with specialized closely linked small firms. The new frontier for many will be brand management.

To develop the new models of business a new approach to business strategy is necessary: the Digital Strategy, that is by its very nature destabilising. The principles on which it is based are the destruction of the chain of value, the cannibalisation of the markets, the management of the assets as liabilities. The consequences of this digital strategy are the "killer applications" which are

REFERENCES

- [1] K. J. Arrow, *The Economics of Information: An Exposition*, in Kluwer Academic Publishers, Printed in the Netherlands, 1996.
- [2] J. Barret, M. Douglas and S. Turtz, Computer focused communication: change and challenges for the contemporary organization, in *Telematics and informatics*, n. 15, 1998.
- [3] S. B. Castleberry, The web as an information source for sales recruits. Its effectiveness in aiding anticipatory socialization of sales people in *Industrial Marketing Management*, December 2001.
- [4] T. L. Esper, A.E. Ellinger, T.P. Stank, D. J. Flint and M. Moon, Demand and supply integration: a conceptual framework of value creation through knowledge management, in *Journal of the Academy of Marketing Science*, Volume 38, Number 1, 2010.
- [5] C. M. Drott, Personal knowledge corporate Information: the challenges for competitive intelligence, in *Business Horizon*, March April 2001.
- [6] S. Ghosh, Making Business Sense of the Internet, in *Harvard Business Review*, March-April 1998.
- [7] C. Linderjane, Uncover hidden competitive value using information strategy, in *Outlook* august 2002.
- [8] N. Melville, K. Kraemer and Vijay Gurbaxani, Review: Information technology and organizational performance: An integrative model of IT business value, in *MIS quarterly*, 2004.
- [9] M. E. Porter, and V. E. Millar, How information gives you competitive advantage, in *Harvard Business Review*, July-August, 1985.
- [10] J. F. Rayport and J. J. Sviokla, Managing in the marketspace, in *Harvard Business Review*, Nov.-Dic., 1994
- [11] J. F. Rayport and J. J. Sviokla, Exploiting the Virtual value chain, in *Harvard Business Review*, Nov.-Dic., 1995.
- [12] D. Rouach, and P. Santi, Competitive Intelligence adds value: five intelligence attitudes, in *European Management Journal*, vol. 19, n. 5, 2001.
- [13] K. H. Sternemann, and M. Zelm, Context sensitive provision and visualisation of enterprise information with a hypermedia based system, in *Computers in Industry*, 1999.
- [14] R. Womack, Information intermediaries and optimal information distribution, in *Library & Information Science Research*, 2002.

Ginevra Gravili was born in 1969. She graduated in Economics, in 1992 and obtained the PhD in Economics in 1998. She is professor of Organization Theory at "Management and Economics" Department of University of Salento in Lecce, Italy, from 2002. The main research interests are sme's, knowledge management, virtual communities, social recruiting, etc..