

THE “MEZZOGIORNO” AND THE WEB. BETWEEN INTEGRATION AND NEW MARGINALITIES IN SOUTHERN ITALY

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1. The role of IT in economical development

The IT industry is a driving sector in industrialized economies and the growing diffusion of such technologies is bringing about considerable transformations in the organization and production of several activities. The influence of IT is also changing the behaviour of economical agents, even in terms of conduct and effect on the territory (Zook, 2001). The ability to produce and to assimilate these technologies is becoming (or has already become) a competitive element in modern economies.

Back in 1998, a document entitled 'New directions for Industrial Policy' by OECD, stated that "A new economic paradigm is thus emerging: the mastering of IT and the introduction of knowledge-intensive means of production have become key to competitiveness, and even survival". Again last year, OECD opened the *Information Technology Outlook* (OECD, 2003), reflecting on IT as the new engine in world economy. The key question is whether IT development and spread is causing an increase or a decrease in development differential between countries and regions. Many maintain (as in the neglected 1994 European Commission report) (Commissione delle Comunità Europee, 1994)¹ that the performance of the American economy in the 90s, compared to European and Japanese economies, was mainly based on the development of the Internet and Internet-based activities. As a matter of fact, USA per capita income in the 90s has grown to a level that is notably higher than in past and higher than in other countries. This occurred due to two main reasons. First of all, Internet-related innovations were born in USA where all producers are concentrated, both for network systems (Cisco), for software (Microsoft, Netscape, etc.), and e-commerce innovators (Amazon, eBay etc.), as well as main portals as Yahoo, etc. Secondly, United States are the country that has mostly exploited Internet potentials with respect to changes in corporate and public administration organizational structure (U.S. Department of Commerce, 2002).

Nowadays the first reason is not applicable to other countries, especially for less developed ones. In order to develop the web, these nations need to purchase switches and hubs from Cisco, browsers from Microsoft or Netscape, computer appliances from Dell, Compaq, HP, etc., and application programs to create sites and to develop e-commerce from companies located in USA. This will last until all innovative companies will be located in USA. The second reason is applicable to all economies. If the spread of the Internet goes along a profound transformation in the organization of economic activities and production methods, it will allow a considerable increase in productivity. If on one hand this can have positive effects, on the other hand it will gradually change many existing activities and will bring about a drop in employment. Hopefully, the birth of new activities' connected to the development of the Web could compensate the loss of jobs. Depressed areas as Italian *Mezzogiorno*, which are poorer both in human capital and in infrastructures, are the ones that risk to be more affected by this mechanism. In order not to let IT become an element of difference between depressed areas, new policies are needed so to favor not only the spread of the Internet, but also the birth of new business linked to the new activities.

2. The web and the development of Southern Italy

2.1 The crisis of the distributive model based on local nets.

One of the most striking aspects in the development of the Internet is that through the Web one can offer kinds of services that a few years ago were necessarily bound to localized distributive models. This is even more evident in banking, insurance, consultancy, professional training and tourism activities. As for financial services, the distributive model of services

¹ (known as the Delors report).

traditionally emphasize the personal relationship with consumers who are offered a wide range of products by the bank. According to this model, competitiveness is based on the quality of the service and on consultancy rather than prices. If on one hand such personal relationship-based model cannot be obviously performed on the internet, on the other hand there is a wider range of more simple transaction that are more affected by prices (as payments or fund transfers – known as 'telebanking'). The effect of 'telebanking' is that of reducing the role of local branches and favoring the centralization of on-line service management; as this requires specific skills, telebanking has a serious influence on employment in bank branches.

Banking in Southern Italy, especially after recent fusions and take-overs, is not dominated by local banks, but by branches of external banks. Thus, the effect of this trend reduces the overall employment in Southern regions and increases it in more advanced areas of the country. Another sector that may have negative effect on employment in marginal areas is the development of web-based insurance activities. Again, the importance of the local net is based on the consumer-broker personal relationship. The standardization of insurance products makes them more marketable through the internet, but it reduces the importance of local nets, with a consequent loss of employment and added value. Also the sector of travel agencies could be badly affected by this trend. The use of the Internet for the purchase of flight tickets is one of the areas that has recorded the fastest growth. If in 1998 on-line booking reached three million dollars, in 2003 it verged on thirty million dollars. Estimates count more than 40.000 tourism web sites in the world. Airlines sell 80% of their tickets through travel agencies, and agents commissions, marketing, and computerized booking system cover 20% of the ticket price. Of course this is a great incentive for airlines to use on-line sale, and there is great pressure on prices and agencies margin of profit. So agencies will still have a significant role especially for non-business travels, which require a crucial direct relationship with customers; but a reduction in margins of profit will favor a process of concentration and specialization in search for scale economies. Therefore, not only do Southern small and medium-sized businesses see their margins shrink due to on-line booking, but they also suffer from bigger enterprises competition, located in more important urban centers. Also in that case Internet favors a centralization process.

In a totally different sector, new activities are born which substitute the traditional distributive model. They do not require a particularly trained manpower and they can be located in less developed areas, as it is happening indeed in some parts of Southern Italy whether the cost of factors (in particular that of work) is lower than in other richer areas. That is the area of call-centers. They represent an investment in information and communication technologies that allows a notable improvement to the customer service system; they also represent the instrument of the new business organizational model that places customers satisfaction at the core of their activities. In this kind of activities, mostly women are employed, jobs are not well-paid and they are not particularly qualified. For this reason many call-centers which cover the entire country are placed in depressed areas.

2.2. The development of e-commerce

The market of *e-commerce* due to its own nature tends to have no limits. Theoretically, a business that is expanding in new geographical markets does not need substantial funds to settle a fixed distribution net. This could favor small and medium-sized business that would have the opportunity to improve their commercial policies and overcome financial issues related to creating commercial structures in remote areas, especially abroad. Another factor that could give favorable opportunities to Southern Italy is that many companies are reluctant to use the Internet because either they have a conservative mentality, or they are afraid of destroying their activity based on traditional distributive model through on-line sale. From this point of view, newly-born companies can have a more aggressive approach through the opening of new market niches.

In fact, the above mentioned advantages are not automatic as they could appear because marketing a label on the Internet is not easy or inexpensive. As a matter of fact, creating a successful web site is not enough; some specific features are needed and it is necessary that the site appears in main search engines. The average cost for the maintenance of a web site is 18.000 Euros per year: one third of the cost is represented by e-business software purchase and development, one third for an ISP net access and hosting, and one third is represented by

consultancy, promotion and marketing services. Such figures on a yearly basis cannot be budgeted by many small or medium-sized enterprises, and they cannot be acceptable to many bigger companies. Moreover, inasmuch as a company sells tangible goods, distribution costs can be even extremely high and subject to scale income. A positive policy could be that of promoting new deals between companies that produce complementary goods so to share a web site, and pursuing new incentives for that purpose. In order to get further advantages from e-commerce, companies in depressed areas should overcome the weakness of their organizational structure, which is based the work of entrepreneurs who tend to center all competence and power on themselves. Actually, entering the e-business is even harder than suggested in the above mentioned figures. In order to conquer a slice of the market for a web site and to keep consumers' loyalty, it is necessary to invest considerably in advertisement.

Gartner Consulting (www4.gartner.com/research/research_collections.jsp) estimates that around one million dollars is needed to launch a new web site. New companies that successfully work in e-commerce dedicate 90% of their income through IPO (Initial Public Offerings) in advertisement and marketing expenses. In young companies the turnover percentage used for such expenses is much higher than in traditional companies. However, success in e-commerce is not straightforward. The advantages of being the first company to discover a new market area are extremely high, and this makes it very hard for other companies to enter market segments that are not totally new. Only well-established companies with a renowned label can compete with companies that have already been successful in e-commerce. The risk is that while e-commerce grows, small and medium-sized companies which work in local niches and cannot develop a successful site will be rapidly swept away by companies located in more developed areas. During the 50s and 60s the construction of new motorways and the improvement of secondary roads has unified Northern and Southern markets, but it has also brought about the crisis in local business traditional sectors; it is very likely that the same will happen due to new 'IT motorways'.

2.3 The sectors that are more favored by the development of the Internet and the possible localization in Southern Italy

Besides the telecommunications industry, the areas that will be more favored by the development of the Internet are those, which produce network systems². Such companies are located in more developed areas while their production plants are located in more depressed areas. Often these factories have traditional production structures, and therefore they are necessarily subject to reorganizations. It is evident that the development of this sector cannot offer significant advantages for Southern Italy. Nevertheless, greater opportunities for the *Mezzogiorno* are to be found in the software industry. The expense for software is focusing both on network architecture applications, which make the Web friendlier for single and corporate users, and on the development of protocols for new digital platforms. Many traditional software companies have moved very slowly towards the new opportunities, even though the great extent of this field will let them catch up. There are many opportunities for new businesses, which should pinpoint the new requirements and bring new products rapidly on the market. Outsourcing is another branch that opens a wide range of opportunities for large software companies. Although, this is partly true. In fact, India has developed a considerable software industry thanks to its low-cost qualified intellectual capital.

The improvement of information industry brought by the Internet allows companies that produce good value and good quality products to be competitive on the global market, especially if products have low shipping costs. This new organization tends to reduce the importance of the distance between manufactures and consumers, and this is particularly significant in purchaser-supplier relationship (the so-called *Business to Business* sector or B2B). Through specialized B2B web sites where offers are placed on an auction basis, suppliers can easily reach global market suggesting a price offer for a given product, while purchasers can search for best suppliers all over the world. This system allows companies located abroad to be integrated in national production chains. Therefore, large companies are urged to outsource from smaller external companies that are connected on-line to the main

² The main companies in Europe are Alcatel, Siemens, GEC, Ericsson, Nokia while in USA are Cisco and Lucent.

one. The development of EMS (*electronics manufacturing services*), i.e. the production of components and systems, and product assembly for main hardware companies, will be boosted by future web developments. This process, which started about a decade ago, has given birth to such giants as Californian Solectron and others that produce PC and mobile phones for electronics companies³. Systems producers tend to outsource manufacturing activities and focus on product development, sale and marketing. Even if the electronics industry is in the forefront in the process that places the Internet at the core of their organization, both for the relationship with suppliers and for the production of personalized goods for consumers, there are also other production sectors, as the automobile industry, which tend to use this kind of organization.

This context could be a positive phenomenon for Southern Italy if competitive suppliers step forward; but it could also have drawbacks for many suppliers that manufacture products for larger companies, which benefit from close proximity. In many areas in *Mezzogiorno* where supplies quality is good only for not particularly sophisticated productions, there is a high risk for this sector that has already struggled to emerge.

3. Elements for the identification of digital divide in Southern Italy

So far this paper has analyzed the possible opportunities and risks offered by the spread of the Internet and IT in Southern Italy. Through the observation of available data, this chapter will analyze the characteristics and the extent of the gap that divides Southern regions from the rest of Italy, both for infrastructures and for the use of new technologies.

In 2002, the expense for IT in Italy was about 20 billion Euro. Through the observation of Italian macro-area markets, it comes out that the largest user of IT is North-West, which covers 37% of the entire Italian expense, thanks to the contribution of Piemonte and Lombardia. North-West is followed by the Centre, whose higher level is recorded in Lazio. The expense for IT is very low in the South and on the islands, which represent around 13% of overall Italian expense.

Tab. n. 1. IT expense trend per geographic area

AREA	2000	2001	2002
North-West	6.986	7.532	7.410
North-East	3.929	4.274	4.200
Centre	5.496	5.914	5.781
South and Islands	2.548	2.757	2.643
Total Italy	18.959	20.478	20.035

Source: Processed Assinform data

The region relevance analysis highlights that Lombardia holds the higher market share (22,7% of total market), followed by Lazio, Piemonte and Veneto. At the bottom of the list, with a share that is lower than 1%, are four Southern regions (Abruzzo, Sardinia, Basilicata, Molise), besides Valle d'Aosta. The analysis of regional IT expense brings about some reflections on the spread and development of these technologies in different Italian areas, and on their *digital divide*. This analysis is actually very important for the identification of areas that need an infrastructure support for the development of their competitiveness and the growth of their business. The analysis of IT expense on GDP (that in Italy is 2%, compared to 3,8% in USA and 3,2% in France) highlights that there is a wide gap between the four main regions and the rest of the country. Lazio, Piemonte, Valle d'Aosta and Lombardia alone have an IT expense that is higher than 2% of the produced added value, underlining a good integration of ICT within its production sector.

³ For a picture of the organization and the kind of production of these companies see Solectron web site: <http://www.solectron.com/>.

Tab. n. 2. IT expense on regional GDP, year 2002

REGIONS	EXPENSE % GDP	REGIONS	EXPENSE % ON GDP
Lazio	3,7	Tuscany	1,8
Piemonte	2,5	Marche	1,7
V. d'Aosta	2,2	Campania	1,3
Lombardia	2,1	Puglia	1,1
Trent. A.A.	1,9	Basilicata	1,0
Friuli V.G.	1,9	Molise	1,0
Veneto	1,8	Abruzzo	1,0
Umbria	1,8	Calabria	0,9
Liguria	1,8	Sicily	0,9
Emilia R.	1,8	Sardinia	0,7

Source: Processed Assinform and Unioncamere data

Actually, five Italian regions invest in IT capital, which represents less than 1% of the produced added value. These are five Southern regions, Molise, Abruzzo, Calabria, Sicily and Sardinia. There is a definite gap in technology investments between Northern and Southern Italy: while eight out of the first ten positions on the list, are Northern regions, the last 10 belong to Central and Southern regions. The situation is self-evident, but at the same time there is a great concern about it: the integration of IT in Italy decreases gradually towards the South, so much, that it may seriously endanger the role of new technologies as a support for Southern companies and regional systems' development and competitiveness. Another element that can give different perspectives about the spread of IT in Italian regions and help the identification of the *digital divide* between regions with a high IT expense and those with a low technology employment, is the expense per employed factor. Of course this indicator is widely influenced by the industries of single regions, by the number of large, small and medium-sized companies, and by the extent of illegal employment.

Tab. n. 3. IT expense per employed person, year 2002, values in Euro

REGIONS	EXPENSE % ON GDP	REGIONS	EXPENSE % GDP
Lazio	1.686	Umbria	749
Piemonte	1.195	Marche	737
V. d'Aosta	1.091	Campania	536
Lombardia	1.053	Basilicata	445
Trent. A.A.	998	Molise	430
Friuli V.G.	854	Puglia	427
Veneto	844	Abruzzo	399
Liguria	844	Calabria	389
Emilia R.	841	Sicily	386
Tuscany	774	Sardinia	302

Source: Processed Assinform and Istat data

Nevertheless, the analysis in terms of expense per employed person shows a situation that is almost completely symmetrical to that concerning IT expense on GDP; this confirms the stronger innovation of Northern companies compared to Southern ones. A further comparison based on the calculation of IT expense per employed person on regional basis is that on the analysis of expense differentials, while Lazio spends almost 1,700 Euro per operator in Information Technology (though Lazio covers all investments made by companies located in the regions, which distribute on the entire national territory) and Lombardia around 1,000, Abruzzo, Campania, Sicily e Sardinia spend less than 400 Euro per operator every year, less

than a quarter of Lazio's expense and less than half of Lombardia's. Another subject of analysis useful to understand the characteristics of the *digital divide* is the estimation of extent to which local companies can provide actual competence and support, and if they will be able to meet the future development of IT demand in different regions.

Such issue is crucial because it is clear that if there are no local infrastructures and qualified operators that can meet companies' demand, a proper ICT market will hardly emerge and companies will not autonomously acquire a real culture of innovation. In general, an adequate development of territorial structures and local supply is needed in order to transform the potential demand into a real one. A comparative analysis can show how single regional IT markets are balanced in terms of local supply and demand. Dimension differences between regional markets and operators' support are evident: while Lombardia reaches 22.7% of overall market and covers the 23.6% of IT companies, Lazio becomes the second market in terms of values but it covers only 7.7% of companies.

Tab n. 4. Comparison between IT market division and supply division, year 2002

REGIONS OF IT MARKET	RATE OF IT COMPANIE	RATE OF VALUE OF IT MARKET	REGIONS	RATE OF IT COMPANIES	RATE OF VALUE OF IT MARKET
Lombardia	23,6	22,7	Marche	2,7	2,3
Lazio	9,2	19,0	Friuli V.G	2,6	2,2
Piemonte	8,2	11,2	Trentino A.A.	2,4	2,1
Veneto	7,7	8,2	Umbria	2,4	1,3
Emilia R	7,7	8,0	Calabria	2,0	1,0
Tuscany	7,2	6,2	Abruzzo	1,7	0,9
Campania	6,8	4,5	Sardinia	1,5	0,8
Liguria	5,9	2,7	Basilicata	0,8	0,4
Puglia	2,8	2,6	Molise	0,3	0,3

Source: Processed Assinform and Unioncamere data

In Southern regions the situation overturns: in general the IT market rate is lower than the percentage of local companies. Evidently, IT supply in Southern areas is not sufficient yet, or more precisely, it is not efficient. The high number of companies cannot meet the development and the growth of IT in business, and it actually prevents an adequate dimensioning of regional market. Thus, it is necessary to understand whether the high birth rate of IT companies in Southern Italy is an answer to such inefficiency or if it is a concomitant cause that prevents other companies to reach a proper dimension. On the other hand, one should consider that IT culture in the *Mezzogiorno* is spreading at a lower pace due to the shortage of fundamental infrastructures, as the broadband, which are key elements for companies' technological advance. Moreover, some important regions with a high IT expense have a well-developed market even if on their territory there are not many IT companies. In such cases, it is possible that the demand comes mainly from operators located in other regions, especially from Lombardia, which actually exports technological know-how and plays the role of innovation promoter even in the rest of Italy.

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