

TAILORING MOBILE PHONES TO FIT THE ITALIAN LIFESTYLE

Erika R. Papaccioli



Introduction

The two main components of Italy's telecommunication system seem contradictory: a strong wireless network but an inadequate landline structure. Italy's phone line network is one of the least concentrated in all European countries, whereas the wireless market has become highly saturated. (Williams) Because 90% of Italians already own a wireless service plan, the opportunity for wireless companies to obtain new customers is limited. (Khajehzadeh) Instead, success in the telecommunications industry lies primarily in developing new features of wireless technology for current wireless users. The inherent differences between wireless and landline technologies, however, reveal complications that might arise if landline networking were completely phased out. Therefore, it is essential that wired systems be maintained for certain telecommunications functions. This article analyzes the aspects of Italian society that establish a basis for technological innovations and marketing strategies in the Italian telecommunications industry.

Four major components of Italian society have an impact on telecommunications: infrastructure, economy, education and culture. I explore each of these as a basis for prognostications of the Italian telecommunications market. I also discuss current technologies and forecast developments in Italian telecommunications. Finally, I assess the potential success of specific wireless capabilities, incorporating the possibility of Internet features on mobile devices.

Key Elements of Italian Society

Infrastructure

An analysis of the strengths and weaknesses of Italy's telecommunications infrastructure is essential to determine the direction that telecommunications developments should head. *Business Week* concurs that Italy's landline services are inadequate: "Europe's fourth-largest economy suffers from an outdated, expensive telecommunications infrastructure." ("Why Italy...") The cost of a phone

Table 1
The Five Largest European Mobile Markets

Country	Subscribers (Millions)	Annual Growth (%)	Penetration (%)
Germany	56.4	13	69
Italy	51.4	19	90
United Kingdom	45.9	12	78
France	37.5	24	64
Spain	29.9	20	75

Source: Khajehzadeh.

line in Italy is 70% higher than the European average and 400% higher than in the United States. (“Why Italy...”) Because of such problems with landlines, wireless telecommunications services quickly exploded after their introduction in Italy. The number of wireless accounts has surpassed the number of landline connections. Table 1 illustrates that Italy is currently second in Europe in the size of its wireless market and first in percent penetration. (Khajehzadeh)

Although Italy has embraced the modern technology of wireless communication, it has not shown comparable enthusiasm towards another significant technologic development, the Internet. Table 2 shows that although more than one of every two Italian households owns a personal computer, Italy lags behind most other European countries in online connectivity. (Williams)

The high cost of the Internet, security issues and an inefficient postal system all contribute to the minimal Internet use in Italy. For those who do use the Internet, e-mail is the

most popular feature. In fact, a survey of Italian managers reported that 92% of those with Internet access at their office use it only for e-mail. (Europemedia) One of the primary means of Internet connectivity in Italy is the dial-up modem, requiring Italians to pay for costly landline phone services. (Nascia et al) In addition to this expense, Italians must pay fees to their Internet service provider. Internet service providers in Italy typically charge based on time spent on the Internet rather than offering unlimited packages. Also, Italian telecommunications firms charge for local telephone calls, as well as the cost of Internet connection. (Williams) These expenses discourage Italians not only from paying connection and installation costs for Internet service but also from using the Internet for long periods.

Lack of Internet security also is an obstacle to Internet use in Italy. Italian websites have fallen victim to attacks by hundreds of hacker groups, some of which comprise multi-billion dollar online extortion rings. (Choo, 2001) Internet security breaches account, in part, for

Table 2
Comparison of Computer Usage in Italy to Europe and the United States

	Percent of Population Online	PCs per 1000
Italy	6.1	297
European Average	8.3	352
United States	64.0	580

Source: de Leo and Gabriele.

the limited provision of online banking services to Italians. (Seretti) The fear of insecure transactions inevitably leads businesses and consumers to shun e-commerce. Forty percent of firms that do offer e-commerce have not even begun to implement any form of security. (Choo, 2001) Therefore, the problem of Internet security will not likely be resolved in the near future.

Because complications are present, whether the Internet is accessed from a landline or wireless network, and because the quality of wireless technologies in Italy surpasses that of landline technologies, Italy should focus on development of wireless Internet services.

Inefficiency of the postal system, another flaw in the Italian infrastructure, compounds these weaknesses of existing technologies. If Italian shoppers relied on delivery of purchases through the postal system rather than traveling to the retailer, they would not save much time. Although it might be more efficient for people to initiate purchases via technology in their own home or business rather than by the conventional method at a retail shop, they must wait considerably longer to actually receive their purchase because of delivery delays. (Seretti)

Economic System

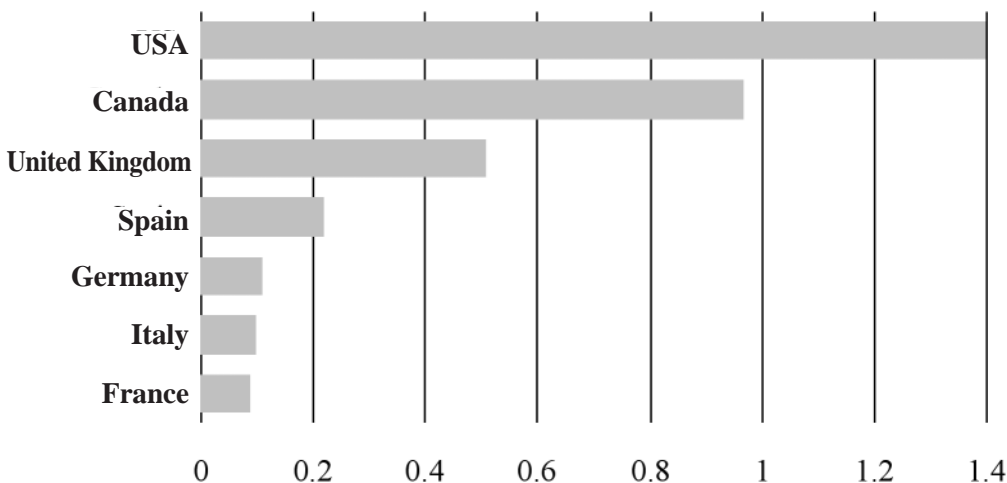
Italy's economic system also plays a role in determining the future of Italian telecom-

munications. Italy's economy is dominated by small to medium-sized enterprises (SMEs) that are generally family owned. According to Italian labor consultants Drs. Manuela Facco and Claudio Veronese, integration of new technologies into businesses is a slow process because the employees of family-owned companies usually lack university-level education. These businesses are run through family succession, so most family members focus on learning their trade rather than expanding their knowledge to other areas and cannot take advantage of new technologic advancements, such as the Internet, for business enhancement purposes.

Choo (2002) confirms this dilemma. He reports that actual Internet access among Italian businesses has reached as high as 69% in the 500 SMEs polled, and 89% of these companies use e-mail. However, only 38% of the SMEs surveyed have a website. Because of the family structure of the businesses, "companies generally possess poor knowledge of the full potentialities of the Internet, and lack the requisite technological infrastructure and skills to exploit them." Less than 1% of the surveyed SMEs that have a website offer e-commerce and only half offer online catalogs.

Another feature of the Italian economic system is the popularity of cash versus credit in retail sales. Figure 1 compares possession of credit cards among Italians to that of other countries. Credit card use is low for several rea-

Figure 1
Number of Credit Cards per Head of Population, 1995



Source: CCRG.

sons. Many businesses find it inconvenient to offer credit transactions because of their small size. For those that do offer the option to pay by credit, an added deterrent is that cardholders must pay a fee for each transaction. Finally, credit card fraud is prevalent in Italy, creating high risks for owners of credit accounts. The number of debit cards in Italy is twice the number of credit cards, yet purchases made with debit cards are rare. Rather, they are most commonly used for cash withdrawals. (CCRG) Italians will probably not be receptive to new technology requiring credit payments. As a result, innovations for wireless phones that attempt to capitalize on Italy's economic structure will not likely meet success.

Education System

The degree to which telecommunications technologies are used in Italian education varies by level. Emphasis on new technologies has not been a priority in elementary education. A 2000 survey found that in Italian elementary schools there were 51 students per computer, compared with 31 in France and 11 in Finland. ("Why Italy...") The shortage of computers continues despite the directive of Italy's Educational Technologies Development Program of 1997: "all schools will be furnished with a fair amount of hardware by the end of 2000." (World Wide School) At the high school level, where computer use is more prevalent, only simple features such as word processing are used the majority of the time. (Suess) The Internet, likewise, is not emphasized on this level of education. Part of this lack of progress is attributable to insufficient funds set aside for improvements. Former Italian Prime Minister Massimo D'Alema resolved in 2000 to spend \$237 million over three years to increase the number of computers in classrooms. In comparison, British Prime Minister Tony Blair at the same time allotted \$2.7 billion. ("Why Italy...")

Considerable improvement has been made implementing new technologies at the university level. A primary goal of higher education reform in Italy is that students who complete their first three-year university degree must attain competence in computer use. (British

Council) This upsurge of computer use in universities has occurred recently. Professor Giorgio Gottardi of the University of Padua claims that the Internet has completely changed his life, specifically by expediting communications of new scientific developments with students and other professors. Professor Enzo Rullani of Universita' Ca' Foscari di Venezia agrees that the Internet is widely used among students, professors and researchers, not only for interacting via e-mail, but for obtaining information for their studies and teaching.

Culture

Italian values likewise have an influence on the telecommunications industry. Italians often are described as a loquacious people, as they place high value on personal interaction. (CRM Today) They also consider it of utmost importance that family relationships are maintained. (Howard) These factors create a social setting where a convenient method of telecommunications is beneficial. The prioritization of one-on-one interaction also is manifested in Italy's business sector. According to de Leo and Gabriele, "Italy is known for having numerous small retail shops rather than big chain stores and/or shopping malls." Consumer preference in countries such as the United States has caused a shift from "mom-and-pop" to mega-stores to meet growing demands for efficiency and low-cost products. However, in Italy, the "time is money" philosophy is overshadowed by the need for intimate customer-salesperson relationships. Therefore, an attempt to use a technologically advanced form of commerce in Italy that compromises personal interaction for convenience may be ignored.

Like the need for direct communications, fashion is a dominant force in Italy. A common phrase among the Italians is *la bella figura*, referring to the well-composed outward appearance that must be maintained in both social life and the business world. According to Executive Planet's Business Culture guides, Italians prioritize fashion, as it represents social status and success. Accessories contribute to this overall image that Italians are trying to convey, supported by the flourishing gold, leather and

designer handbag industries. Observing Italians today, it seems that this fashion-hungry society has even begun to use wireless devices as wardrobe accessories.

Although Italians are very interested in fashion, they have a lax attitude towards acquiring news reports. Only one in ten households receives the newspaper daily. ("Consumer Lifestyles...") Most news-seeking Italians watch television for current events. They do not demand real-time reporting and choose to view news reports at their leisure. Moreover, newspapers and news stations do not follow strict guidelines for factual reporting and often are littered with biases and inaccuracies. (Manto) Italians seem to be content with the current situation, as there are no significant movements in Italy to improve the quality and quantity of news circulation. New technologies such as wireless phones for news reports would not meet much success in Italy.

The Potential for Success of Various Wireless Capabilities

Which telecommunications technologies would best suit the Italian lifestyle? The most obvious strength of Italy's telecommunications market is the efficacy of wireless communication compared with its landline counterpart. Italians steer away from landline telephone networks for voice communication because the wireless alternative is available. Assuming that Italians will have similar preferences with the Internet, it follows that online services will be adopted more willingly via wireless access. The key question is to determine the nature of these services.

Part of the charm of wireless phone service is its ease of use. Success in the transition from landline to wireless phones simply required a transfer of audio capabilities from one technology to another. The sole function of landline phones is to provide a means for conversation, so no features were sacrificed with the release of mobile phones into the market. Improvements such as lighter, more compact handsets and cheaper communication costs made mobile phones even more desirable. Moreover, the quality of the wireless network

in Italy prevents poor sound and interference from compromising these enhancements.

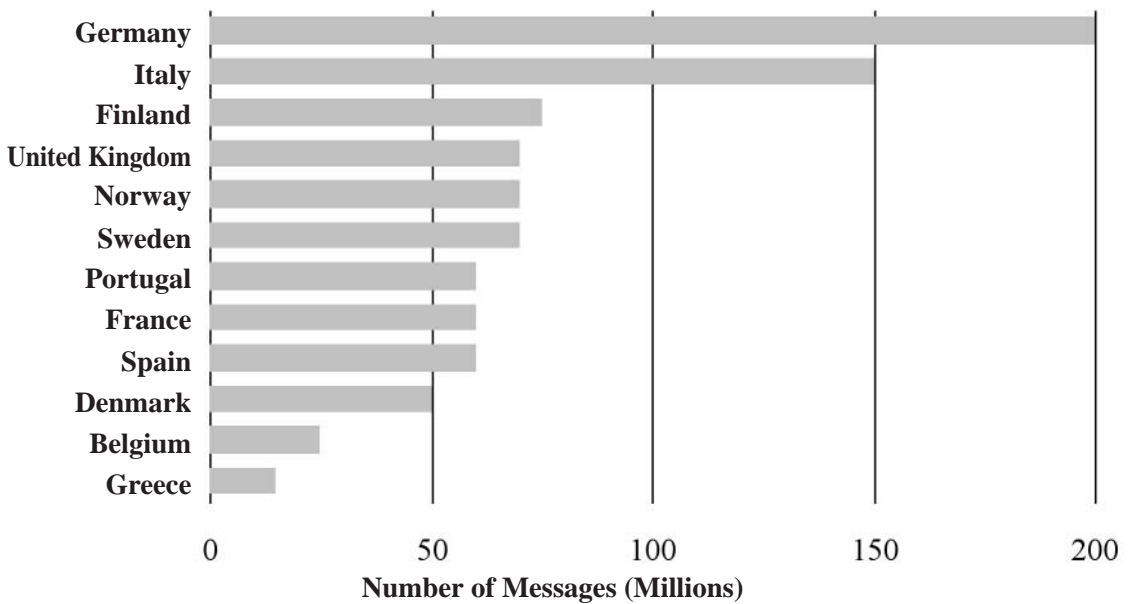
The benefits of mobile phones for voice communication also apply to wireless Internet-enabled phones. Unlike mobile voice service compared with landline networks, the wireless Internet on mobile phones presents limitations not evident in fixed Internet access on personal computers. The quality of Internet use is dependent on both the capacity of the graphic user interface and the ease with which information is entered into and retrieved from the system. A personal computer's monitor is able to display large amounts of data without sacrificing clarity. According to the Verizon learning center website, most web pages should be viewed at 640 x 480 pixels, but displays on wireless units cannot support this specification. (Tyson) The large keyboard of a personal computer provides a facile means of entering data. Text input on a small mobile phone is not as efficient.

The simplistic features of the wireless web on mobile phones are more favorable than complex technologies. Transferring the Internet from the personal computer to a small mobile device results in a significant loss of quality and content. According to *Wireless Internet Magazine*, "The desktop and the handheld are vastly different, each with their own strengths. (Smith) The mobile 'Net has its own unlimited potential, but not as a poor cousin of the desktop." The strengths of mobile Internet are its simple, user-friendly features. Moreover, Italy's societal aspects (discussed previously) must not be overlooked. In the following sections, I assess potential features of mobile phones in term of Italy's infrastructure, economy, education system and culture, taking into account the need for simple and user-friendly devices.

Voice, Textual and Pictorial Communications

Success in voice communications and other wireless communications applications has been met. Figure 2 shows that short message system (SMS) services already have established a wide user base in Italy. Italians consider text messaging a means to

Figure 2
Short Message System Traffic in Europe in 2000



Source: Caslon Analytics.

broaden their capacity for interpersonal communication. For example, Father Paolo Zago sends his parishioners text messages providing advice from the Bible on a regular basis. He sums up the convenience: "You can do this in the Metro, while you're at work or even while you're shopping." (Ananova)

At first glance, it seems contradictory that text messaging is deemed simplistic, because the process of entering text into a wireless device is not as efficient as typing into a personal computer's keyboard. However, the decrease in expediency that results is not sufficient to negate the improved accessibility enabled by SMS. Most text messages are not lengthy transmissions and do not require an elaborate keyboard device. Also, word input on a wireless device has been made faster with predictive text input. ("Frequently Asked...") A dictionary inside the phone attempts to recognize a word that is being entered so the user does not need to enter each letter. In addition to improving speed, this development raises the appeal of wireless e-mail. E-mail is a popular service among those Italians who have access to it; recall that a high percentage of Italian businesses that have Internet capabilities use

e-mail. Hence, wireless e-mail capabilities will meet growing success in business and personal sectors of the Italian telecommunications market.

A high demand for a third means of personal communications on cell phones, picture messaging, may emerge in Italy. Although viewing a transmitted digital photo of one's mother, for example, might not be as desirable for an Italian as meeting the mother in person, it still provides an alternative for maintaining the personal communication that this society values so highly. According to the AT&T Wireless website, some of the more recent wireless devices do possess the ability to transmit photos from phone to phone.

Monetary Transactions and E-Commerce

Although the Internet can provide purchasing services, conversion of these services to an Italian mobile device will generate mixed levels of enthusiasm. Wireless phones that function as ATM cards will be welcome in the Italian economy. A device on the phone must be able to be digitally read by ATM machines,

just as they would read the magnetic strip on a credit card. This feature is not complex, but can add to the multifunctionality of wireless phones by eliminating the need for ATM cards while meeting the high demand in Italy for automatic cash withdrawal. However, as credit is not a popular service in Italy, less emphasis should be made on an attempt to expand the use of wireless devices for credit payments. Credit also should be avoided as the method of payment for wireless service itself. Plans that offer prepaid minutes will meet the most success in Italy; pay-as-you-speak pricing plans, the most common methods of payment in the United States, should not be encouraged.

This limited use of credit also creates an unfavorable setting for e-commerce, as e-commerce transactions usually require credit payments. Several other characteristics of Italian society support this conclusion, even if e-commerce were possible on mobile devices. Internet purchasing fails to maintain the intimate personal interaction that is prevalent in small retail shops. As discussed previously, Italians are not enthusiastic about switching their shopping experience from small retailers to large stores and supermarkets because of the loss of personal interaction. Therefore, they probably will not be willing to sacrifice such relations for the possible purchasing speed that results from the even less personal means of purchasing: e-commerce. Moreover, this efficiency is questionable, as the time gained from speedier transactions might be lost in the lengthy shipping times required by the Italian postal network.

In addition, many businesses do not possess the competency to develop e-commerce systems for their customers. As discussed, most employees are trained in their respective trade and do not have university-level education. Because the Internet has not been taught extensively in Italy below the university level, these employees do not have the knowledge to create a website that functions as an e-commerce tool. A 2002 survey shows that 30% of SMEs that have gone as far as creating websites still do not have a person in charge of the website management. (Choo, 2002) Even if the majority of Italian businesses had the know-how to set up e-commerce, which equipment

would they use? No tool is ideal, as fixed Internet access in Italy is slow and costly, and the construction of e-commerce websites via mobile devices would be difficult because of hardware limitations.

The problem of Internet security is yet another obstacle to the success of e-commerce in Italy. If Italians somehow succeed in establishing e-commerce as a preferred method of selling and purchasing, they will have to be concerned that personal information is being misused and that unauthorized purchases will result.

An analogy of Italian businesses to Italian banks illustrates the current market situation for e-banking. Banks are often SMEs operated by people trained specifically in banking. They provide personal contact with customers, just as small retail shops do. Therefore, e-banking will not meet much success in Italy for the same reasons that e-commerce will fail.

Fashion and News

Certain attributes of Italian society can be used to predict the success of other possible wireless developments. Because Italy is a fashion-conscious culture, cell phones that simultaneously allow Italians to accessorize their image will maintain (or increase in) popularity. Designer phone faces and distinctive ring tones are examples of features that achieve this purpose. Wireless phones can be used as news sources; however, as Italy is not a very news-savvy culture, it is doubtful that Italians will be eager to obtain news from their wireless device.

Education

There is one case in which Italians should resort to landline connectivity. The Internet is thriving in university education and research in Italy and will continue to grow. This phenomenon has not yet been witnessed at primary and secondary education levels, but initiatives are being taken to introduce technologies in those classrooms. It is just a matter of time before the Internet is a comparable force in lower-level education. Because of the nature of educational Internet use, the benefits resulting from increased dexterity of personal comput-

ers versus the mobile web outweigh the problems presented of connection and costs. Landline networking, therefore, not only is necessary but will receive a great deal of support in Italy's education system.

Conclusions

Wireless technologies will continue to dominate the Italian telecommunications industry into the next generation, while landline voice communications will near extinction. Voice, textual and pictorial communication on mobile phones will remain prevalent and potentially will increase in popularity if new developments for input and output on the devices are made. Development of fashionable hardware will contribute to the success of wireless technologies, taking advantage of Italy's cultural attributes. The predicted growth of technologic education among Italians also will foster an increase in demand for these types of communication, as Italians become more accepting of modern technologies as part of everyday life. Some common threads run through these forms of telecommunication. First, they do not compromise the Italians' value of personal interaction, rather they encourage it. Second, they are fairly simple in that they do not call upon the small wireless device to perform tasks that it is not suited to handle.

Several factors remain fixed in Italian society that will suppress demand for certain web-oriented features on mobile phones. Italians

will always demand personal interaction, and there are no significant trends suggesting that Italians are moving toward credit payments. Many infrastructure characteristics also remain fairly constant, as little action towards improving Internet security or mail delivery has been taken. Therefore, Italians will not witness a considerable increase in domestic e-commerce and online banking transactions in the near future, even if these features were made widely available on wireless devices.

Although Italian demand for the Internet will increase in academia, it is not feasible for small mobile devices to meet this need in the near future. Although cell phone manufacturers are constantly making improvements, such as predictive text input and better graphic displays, as William Webb states, "A drastic revolution of the man-machine interface is required before mobile Internet access meets a level of success equivalent to that of mobile speech...The heralded success of mobile Internet will not come soon." (p. 226) Instead, the need for landline Internet access in schooling will grow.

Although I have demonstrated that mobile phones are not ideal for educational use and that Italians will reject some web-based features of mobile phones, it is evident that mobile phones will remain a primary force in Italian communication. As mobile mania embraces the country, it is important for those in the telecommunications industry to recognize the features of wireless phones that best suit Italian society.

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