E-COMMERCE ADOPTION IN THE PHARMACY RETAILING: *THE SMART SOCIAL COMMERCE* DISTRIBUTIVE INNOVATION

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Abstract:

The sale online of pharmaceuticals is a recent issue in Italy and still under evaluation by the government because of its sensitive implications for the health as well as the unavoidable consequences it might have in the pharmaceutical market. It will, first, be presented an excursus on the change sustained by the pharmacy over the last years, generated by legislative developments which obliged the pharmacy itself to reconsider its role. The brief normative overview has the objective to describe the Italian-specific pharmaceutical context; from the Bersani Decree, to Law Monti, ending with the recent European Directive 2011/62 UE, which regulates the online sale of the OTC Pharmaceuticals. After that, It will be described in detail the innovation concerning the pharmaceuticals distribution that will be triggered by the above European directive i.e. all the aspects about *Internet Pharmacies*. In conclusion, an overview on the social commerce, its forecasts and implications for the healthcare retailing sector, will be presented, as well as the proposition of the *smart social commerce* as combination between social commerce and smart, the leading concepts of the current digital reality.

REGULATORY EVOLUTION OF THE ITALIAN PHARMACY

In the last years, in Italy, can be observed a series of legislative changes concerning the Pharmacy's point of sale, in parallel with the changing governments, but still all aimed at achieving the same goal that is, on the one hand to stimulate the competitive pharmaceutical market, and on the other to meet the needs of the population, especially for lower income groups.

- Bersani Decree

In 2006 occurred one of the most important regulatory changes that approaches Italy to major countries with a developed economy, the Bersani Decree 2007 [1] entered into force and became law; such law granted the possibility, for some types of drugs, to be sold also outside the classical pharmacies where everyone can usually buy. These types of pharmaceuticals are: *OTC drugs*, those drugs which are commonly exposed even in advertising. They fall into the so-called C[2] category, which also comprises prescription drugs, over the counter medicines without prescription and recommended drugs that can cause side effects if taken concomitantly with other substances. The OTC pharmaceuticals, if taken properly, should not cause significant side effects for the health (they cannot contain substances whose effects are unknown), must not be injectable (neither intravenous nor intramuscular) and they can be safely recommended by a pharmacist . Then we have : *products for self-medication, Cosmetics, Homeopathy, Childcare products, Hygiene products and Veterinary.* After the entry into force of the Bersani law, in Italy, arose two new points of sale where it is possible to sell and buy type of drugs mentioned above: Drugstore or *Parafarmacia*[3] ,as it is called in Italian, and the Corner GDO[4] but without forgetting the presence of the existing pharmacies, rooted in the whole territory.

[1] July, 4th 2006 no. 223, converted into Law on August the 4th , 2006

[2] Article 8, paragraph 10, Law n. 537/93, amending art. 1, paragraph 166, Law n. 311/04.

[3] Points of sale born to sell only products liberalized by the reform, i.e. those one that can be bought without a prescription (OTC or SOP, dietetics, cosmetics etc..)

[4] A retailing Modern system which sells through a network of supermarkets, i.e. the evolution of single supermarket, such as Coop, Carrefour and Auchan.

- Monti's Law

According to the same willingness to align the country with the European decision, Monti's recent Law Decree *01.24.2012, n.1* [5] aims to enhance pharmaceutical services with a comprehensive regulation which encourages growth, creates efficiency through liberalization, new ideas and a broader space for market's mechanisms. Without going into details, the most important changes are: new demographic parameters which determines the opening of a higher number of pharmacies, other pharmacies will be provided at railway stations, airports, highways , shopping malls etc..; the opening hours of pharmacies are substantially liberalized, the selling price to the public of each product (including ethical drugs), not paid by the NHS[6], is entrusted to the discretion of each pharmacy's holder.

- European Directive 2011/62 UE

The new tendency that we will try to analyze in the next pages, concerns the legislative alignment of the Country Italy, with the European Guidelines[7] because of the urgency to define rules and strategies for the online sale of pharmaceuticals. This alignment is expressed by the approval by the Italian Council of Ministers of the Legislative Decree 2011/62 EU on 12/03/2013 (which is not yet law). Based on that, some type of pharmaceuticals will travel in Italy On-line, "but with well-defined limits" , as Federfarma[8] asked. Three points must be immediately highlighted : 1st , behind the website there must be a *real* drugstore, in the sense that a web pharmacy could be open only from a physical Pharmacy, already authorized to sell and established in the pertinent territory; 2nd , only OTC and SOP (without Prescription Obligation) pharmaceuticals can be sold. The scheme contains regulations on pharmaceutical products for human use "in order to prevent the entry of illegal medications in the legal supply chain". In particular, it is determined that the Internet sites should contain a link connected to the website of the Health Ministry, which in turn will return the list of all the entities and persons authorized to sell Drugs online. Moreover, these will be clearly identified through a common symbol, prepared by the Health Ministry, in

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[5] "Riforma Monti", namely Article 11 of the Law Decree January the 24th 2012 n.1 , converted with amendments by Law on March 24th , 2012 n° 27 (in the "Gazzetta Ufficiale" , Supplement no . 53 of March , 23th 2012).

[6] National Health Service Or SSN Servizio Sanitario Nazionale

[7] DIRECTIVE 2011/62/EU

[8] National Federation of Italian Pharmacists

accordance with the European "label" (currently study-object in Europe) which will make the sites authorized and recognizable, and will prevent confusion with other illegal , or at least not allowed , websites. 3rd , as explained by the Health Ministry Beatrice Lorenzin now the Health Minister " may obscure websites which sell illegally prescription drugs or in the violation of the Law, thanks to the reports that come from Antitrust, NAS other police bodies and also from AIFA". Domenico di Giorgio, who works for the *Unit of Prevention from Drugs' Falsification*, refers the existence of a Table of Impact and Collaboration between AIFA[9] and Google to search these illicit sites.

In addition, the decree provides legislative interventions and initiatives to promote awareness among the population, in order to instruct the consumer on risks associated with the use of an illegal drug or from an unsafe source .

DISTRIBUTIVE INNOVATION

- E-commerce Trends in Italy

"E-commerce, in the popular sense, can be defined as: the use of the Internet and the Web to conduct business transactions. A more technical definition would be: e-commerce involves digitally enabled commercial transactions between and among organizations and individuals"[10]. Despite the technical and legislative details, it is important, at this point, to show data around one fundamental prerequisite: the tendency of Italians to buy online and their confidence through the E-commerce which certainly represents the most important innovation in the retail distribution field and continues to expand, less dramatically in Italy respect to other European Countries or even abroad, (Vagnozzi, 2015) in fact Italy proves to be rather conservative on the e-commerce side, with the vast majority of online users who trust online shopping only a little. The Italian lover of online shopping is relatively young, with an age range between 18 and 35 years old and has an income higher than the national average. The 21% says that it buys online from less than 4 years hence a relatively short period and mainly from the brand they already know, and prefers technology , 85% of purchases, real driving force of e-commerce sales in Italy. Despite the fact that online sale of OTC drugs is not allowed yet, it is interesting to evaluate what is consumers'

[9] Agenzia Nazionale del Farmaco or Italian Agency of the Drug
[10] Pearson Education 2010, published by Prentice Hall

attitude toward internet purchases. Individuals who buy online are about 8 million, driven by savings (76%), and the ability to use the service without time limits (72 %). Current Trends show the “obsolete” role of the pharmacist; over one third of Italians use web and new media to get information about their own health[11]. The consumers, in essence, seek health directions through the Net, comment and exchange experience; if the family Doctor remains the primary source of information (56%), the Internet is used (11%) more than the pharmacist (4%) , mainly for clarification on diseases (90%), on the health structures to contact (59%) and to discuss with other users. The services are emerging on the web: other than visits and tests reservations (15%) , 3% of Italians buy drugs online [12]. In addition, for certain categories of drugs, researches carried out on the web engines, see more and more the research by active ingredient than by brand name. Tylenol[13] and Aspirin[14] still prevail on acetylsalicylic acid and paracetamol, but it has been observed that Google's "queries" with the word ibuprofen have already overcome those with Moment [15]or Spidifen[16]. Resistance factors such as the preference for visual contact with the item purchased and the possibility of a direct relationship with the seller, exercise their greatest effect when the purchase is related to the food expenditure and to health and wellness items, where *time, costs of supply*, and *reliable supplier* play a decisive role. It should be added that these areas are where the e-commerce, both for practical reasons and for strong regulatory prohibitions, has not "pushed" on the accelerator. The results [17] show a controversial attitude to buy online; However toward young people, graduates or frequent web users, a favorable propensity is growing faster and faster thanks to a more developed technological culture that should encourage the lawmakers. Nowadays the national legislation, on the basis of what is already happening at the international level, will probably mitigate the current strong prohibitions, boosting forms (hybrids and / or interactive) of online trade. The development of this sector will certainly be represented by the increasing use of eHealth systems that, involving the pharmaceutical sector, could lead to interesting synergies. But the change in the law relating to the drugs sale is not the only legal

[11] Research by Alkemy.com (digital consultancy company established in Italy)
[12] Data CENSIS 2012
[13] Brand name for paracetamol or acetaminophen
[14] Brand name for acetylsalicylic acid
[15] Brand name for ibuprofen
[16] Brand name for ibuprofen
[17] Data Eurisko

brake. Electronic commerce of these products involves processing personal consumer data, often sensitive.

- IT Platform for E- pharmacy

The pharmacy has undergone many changes over the years, due to both the change in demand from the consumers, and to the succession of laws and decrees that have helped to change its nature. The biggest transformation has started from the moment in which the pharmacy has been no longer considered the only retailer. A certain category of items, OTC pharmaceuticals, may be sold through four different channels: the pharmacy, the GDO, the drugstore or Parafarmacia, and the *Web-Pharmacy*. The pharmacist, therefore, has to develop and to innovate in order to meet the competition. According to an economic and business vision, innovation is the process that allows the pharmacy (enterprise), through a set of activities, to propose a new assortment or new business processes. The change can be created in different ways: by the growth of know-how in the retailing sector, or the pursuit of improvement on the basis of the stimuli obtained by customers or competitors. R&D absorb a lot of resources but allow to reach rapid competitive advantages. The pharmaceutical retail sector, reinterpreted in an online distribution vision, can also symbolize renewal in the improvement of the point of sale without destroying the already existing physical pharmacies (traditional distribution channel).

In order to build an effective e-pharmacy platform, organizational competences and human resources are important as well as the hardware, the software and the IT infrastructure. The site design process can be characterized by the following stages: system analysis, system design, building the system, testing the system, and implementation (Turban, King, & Lang , 2010). During the system analysis, the business objectives must be known. The core components in the system and their relationships to one another must be recognized. The system design comprises a data flow diagram added to physical components. Once the website has been designed, the modules must be tested one by one and then as a whole. The implementation phase, includes a continuing maintenance over the site life to keep it efficient, to correct mistakes and to recover, update, and adjust other site features. Keeping apart informatics-specific details, to show a first appearance of a web pharmacy platform will be used a virtuous example from United States, i.e. Drugstore.com, one of the first *legal* pharmaceutical e-commerce sites born in the USA and in the rest of the world. That website appeared on the Internet scenes in the late 1999, soon after the introduction of Soma.com (which now exists with the name CVS.com) and PlanetRx.com; These three sites were widely regarded as among the most credible and reputable in the industry and Wall Street awarded billion-dollar valuations to companies like drugstore.com at the beginning of 1999 (Crawford, February 2003). Nevertheless, the situation in the USA is completely different, the website mentioned above can also sell prescription medicines; the long lasting presence of Internet pharmacies has permitted the proliferation of several types of online drugstores. The variation exists with respect to the quality and level of service provided. There are four major types of online pharmacies that sell prescriptions and other products to consumers on the retail level: traditional chain pharmacies with a web presence; independent community pharmacies with a web presence; stand-alone, exclusive pharmacy sites; and “rogue” pharmacy sites. (Crawford, February 2003) There exists, then, sites that sell only nonprescription products, veterinary pharmacy sites, and Internet pharmacy sites that are associated with pharmacy benefit management companies and require prior approval of a third-party. These last ones are probably better matched with our future online pharmacies but the following description is not intended to show the differences of scopes between the two categories but just to give an immediate illustration of a successful virtual storefront pharmacy (look at Illustration 1). Drugstore.com has incorporated a level of automation that ensures a reliable customer experience and consistent marketing results. Online pharmacies, as any other e-commerce website, should create a good customer experience, in which buyers are quickly connected with the products they need and are seduced by appealing offers. Achieving those goals requires well-designed promotions and highly effective search engine technology so that Google users, for example, will click through the site. When a new item is added to the assortment, search engines should "know" about the pharmaceutical article, searching for comparable products must generate advertisements for the site, the product must be optimally tagged and categorized in order to match demand with supply, and the item must be folded into existing or new promotions so that it can come up when the buyers need it, in other words they should find it immediately otherwise they leave. During the visit, the user could discover other or new products that may interest him, it is basically important to predict the buying behavior

Illustration 1: Drugstore.com Homepage

Website user can navigate by category

Seasonal promotion space

Offer of the day reflecting vendor sponsored promotion

Trending discounted items generated automatically using a “bestsellers policy”

Mobile Apps Advertisement by Walgreens

category deals

“product spotlight” i.e. high rotation daily promotions

Virtual encyclopedia of health and beauty care dedicated to vitamins & supplements, hair tips etc..

SMART SOCIAL COMMERCE

A clear distinction between what is called social commerce and what is defined as smart social commerce (Vagnozzi, Smart Social Commerce, 2011), should be done. The first refers to the employment, relatively forced, of a space within the chain, without any connection with dynamic value. It is possible that at any given time the social commerce facilitates the flow of value along the chain, but the static nature of the phenomenon makes it obsolete soon. This phenomenon becomes even more evident in today's economy that has observed the replacement of the value with what we can define the network values. A given node can temporarily assume importance, but it is destined sooner or later to pass it in favor of new and emerging network configurations. The smart social commerce, instead, runs along the network. This can be compared to fiber that favors the transmission of signals in the network. It does not impede, but favors the dynamic formation of new emerging combinations. It is neither static nor defined, but it changes according to the necessity of the network. In fact it allows the nodes to get in contact and facilitates the exchange and growth. It is not, therefore, an individual heritage, it belongs to the collectivity. It is the smart social commerce to be shared and by virtue of this sharing, enterprise and individual can grow. When the smart social commerce is crystallized, inevitably decays and becomes a social commerce.. For example, the banking institution can act as a mediator for the credit market. As such, it provides a service for facilitating access to credit by both parties, exploiting its unique experience and professionalism. But when this position becomes obsolete and crystallizes, not following the needs and trends of the market anymore, the banking institution ends up being disintermediated and then we observe the rise of peer-to-peer credit platforms.

- Social commerce trends in US[18]

But let’s step a little bit back to social commerce and its trends in the US market. The US market, here, is taken as benchmark and framework for the discussion on the sustainability of the social commerce in the health sector. The social commerce is a tendency in which sellers are connected to online social networks and most importantly, these sellers are individuals and not companies. One way of thinking about social commerce is to consider a merger between online shopping and

[18] Data generated and elabrated by Invesp; www.Invesp.com

social networking (Tedeschi, 2006).The main engine of social commerce is the interaction with the user and then his involvement.

US Social Commerce Sale Between 2012 to 2015 (in Billions)

Year	Social Commerce Sales (in Billions)
2012	3
2013	5
2014	9
2015	14

- social commerce sales are forecasted to represent 5% of online retail revenue in 2015
- positive product reviews online can bump up a product's price by 9.5%, while negative reviews have an 11% chance of changing a person's intent to purchase

Most Popular Social Commerce Features That Are Integrated On Leading E-Commerce Sites

Social Commerce Feature	Others	Top 25 Companies
Facebook Like Button	58%	86%
Pinterest Pin It Button	61%	82%
Twitter Tweet Button	60%	86%
Google+ Button	42%	39%
Ratings & Reviews	73%	82%
Product recommendations	84%	82%
Social shopping applications	8%	86%
Social Login	15%	82%

Average Order Value By Social Referrer

Social Referrer	Average Order Value
Polyvore	$66.75
Instagram	$65.00
Pinterest	$58.95
Facebook	$55.00
Reddit	$52.96

Vimeo	$50.75
Twitter	$46.29
LinkedIn	$44.24
Google+	$40.00
YouTube	$37.63

- 33% of consumers have acted on a promotion on a brand's social media page
- 85% of orders from social media sites come from Facebook.

Percentage Of Social Orders Originating From Facebook (By Industry)

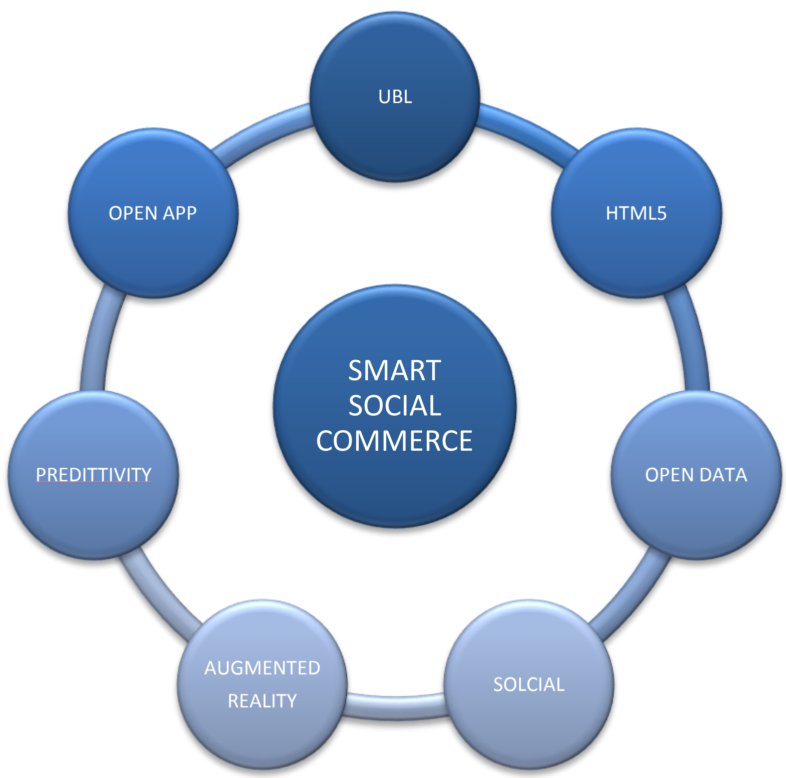
Industry	Percentage Of Orders
Photography	98%
Sports & Recreation	94%
Pet Supplies	94%
Dropshipping	93%
Jewelry & Watches	92%
Clothing & Apparel	87%
Food & Beverage	86%
Home & Garden	83%
Web Design	81%
Health & Beauty	**81%**
Music & Movies	80%

Top US E-Retailers By Percentage Of Traffic From Social Networks

US E-Retailer	Percentage Of Traffic From Social Network
Zappos	10.16%
Fab.com	25%
Nomorerack.com	35%
Victoria's Secret	8.5%
Nordstrom	8.33%
Nike	8.4%
ShoeDazzle.com	10.5%
Foot Locker	5.72%
Wayfair	7.13%
Cafepress.com	9%

SMART E-PHARMACY PROPOSITION

The social commerce and the smart social commerce, for a more long-term vision, is indeed the revolution needed for the pharmaceuticals online sale, according to the normative and statistical trends in Italy, specifically, but also in Europe and USA. The table " percentage of social orders originating from Facebook (by industry)" in the previous paragraph, shows an remarkable 81% in the Health & Beauty sector. Nevertheless, in Italy the process just began and it will require a lot of time to first regulate (alignment with Europe) and then to implement the necessary changes in the entire pharmaceutical retailing system. It is more likely to forecast the diffusion of the smart social commerce applied to the health sector in the US where the online pharmaceutical sales are the reality and not the exception. In this context it is also possible to suppose an hypothetical functioning of the smart e-pharmacy of the future, which take into account the following synthetic structure:



The logic behind it, is represented by a two-levels architecture: 1. Multichannel and 2. Mobile ready while the implementation of a web pharmacy like that needs a very strong interaction between physical shop, virtual shop, mobile devices, digital signage and Social. To briefly explain the model, some points should be explained: *UBL* refers to the semantics necessary to decode the requests while *HTML5* is important to remotely manage the information. The *open data* regards for example opening and closing time of the physical shops, automatic machines available on the territory etc... and *social* may consider three levels: between pharmacists, between pharmacists and clients and between clients. Finally the *augmented reality* is useful for the geo-localization of the drugs or other products directly on the shelf, barcodes, navigation through the spherical photos of the shop etc.. . To conclude, the pharmacy of the future seems to be an integrated system able to answer to the challenges raised by the technology and the normative alignment needed in Europe, in order to provide information and solution to the new type of client, already trained to be social and to be a regular e-commerce buyer. Many other improvements are still needed, but the tools are already available, therefore it is now time to implement them effectively.

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