



UNIVERSITÀ POLITECNICA DELLE MARCHE
FACOLTÀ DI ECONOMIA “GIORGIO FUÀ”

Corso di laurea magistrale in International Economics and Commerce
Curriculum Business organization and strategy

**DYNAMIC PRICING AND CONSUMER BEHAVIOUR:
ANALYSIS FROM A CONSUMER’S PERSPECTIVE**

Relatore:

Chiar.mo prof. Luca Marinelli

Tesi di laurea di:

Carolina Acqua Era

Anno accademico 2018/2019

Index

Introduzione	IV
Introduction	VII
Chapter 1 The main features of e-commerce	1
1.1 THE NET ECONOMY	3
1.2 CHANGES BROUGHT BY THE NETWORK	4
1.3 DEFINITION OF E-COMMERCE	7
1.4 MAIN CHARACTERISTICS OF E-COMMERCE	9
1.5 TYPES OF E-COMMERCE	15
1.6 ADVANTAGES OF E-COMMERCE	21
1.7 E-MARKETPLACE (E-MALL)	22
Chapter 2 E-commerce 2.0	27
2.1 THE E-COMMERCE OF THE FUTURE	29
2.2 MODELS OF ELECTRONIC COMMERCE	32
2.3 FROM MULTICHANNEL TO OMNICHANNEL CONSUMER	34
2.4 E-COMMERCE AND CRM	36
<i>2.4.1 Tools of interaction with online consumers: indirect contact</i>	38
2.5 MOBILE COMMERCE AS A NEW FRONTIER	39
<i>2.5.1 Mobile evolution</i>	40
2.6 FROM THE WEB MARKETING TO SOCIAL MEDIA MARKETING	42

2.7 MARKETING AUTOMATION	47
2.8 PERSUASIVE MARKETING APPLIED TO E-COMMERCE: INTRODUCTION TO DYNAMIC PRICING	49
Chapter 3 Dynamic Pricing	57
3.1 WHAT IS THE DYNAMIC PRICING?	60
3.2 DECISION MAKING PROCESS	63
3.3 BASIC POLITICS OF DYNAMIC PRICING	68
3.4 GROCERY, VIABILITY AND TRANSPORTS	70
3.5 PARADIGM'S OF PRICE MODIFICATION	73
3.6 ALGORITHMS BASED ON THE COMPETITOR'S ANALYSIS	76
3.7 ALGORITHMS THAT CONTROLS THE USER'S PROFILE	78
3.8 SEGMENTATION	80
3.9 PRICE MANUALLY ENTERED	82
3.10 COMPLEX ALGORITHMS	84
3.11 ARTIFICIAL INTELLIGENCE'S CONCEPT	87
3.12 PRICE VARIATIONS & BEHAVIOUR AT BREAKEVEN POINT ...	88
3.13 FINAL CONSIDERATIONS	91
Chapter 4 Consumer's purchasing behaviour	95
4.1 CONSUMING TO SATISFY A NEED	97
4.2 KNOW, EVALUATE, BUY AND CONSUME	102
4.3 THE CONSUMER BEYOND THE RATIONALITY	104
4.4 THE CONSUMER BETWEEN RATIONALITY AND EMOTION	108
4.5 4C'S OF DECISION MAKING	111

4.6 CUSTOMER’S JOURNEY MAP	116
4.7 TRANSFORMATION AND RESTRCUTURING OF CONSUPTION MODELS	120
4.8 A SOCIAL PERSPECTIVE OF THE RELATIONSHIP BETWEEN CONSUMER AND ELECTRONIC COMMERCE	125
4.9 PROTECTION OF THE CONSUMERS DURING THE DIGITAL AGE: THE USER’S IDENTITY	130
4.10 PURCHASING DECISIONS AND CONSUMPTION STYLES	133
4.11 IMPACT OF DYNAMIC PRICING ON CONSUMER’S BEHAVIOUR	136
Chapter 5 Consumer’s price sensitivity	155
5.1 PRICE SENSITIVITY ACCORDING TO SOME RESEARCH	156
5.2 PERCEIVED BENEFITS AND PRICE SENSITIVITY	157
5.3 INNOVATIVENESS AND PRICE SENSITIVITY	160
5.4 ONLINE CONSUMER AND PRICE SENSITIVITY	161
5.5 THE QUESTIONNAIRE	162
5.6 SURVEY’S ANALYSIS	169
Conclusion	179
References	183

INTRODUZIONE

Il presente lavoro esamina come l'innovazione digitale negli ultimi anni abbia portato a cambiamenti nei comportamenti di acquisto dei consumatori, approfondendo l'indagine esaminando la logica dell'intelligenza artificiale che governa il concetto di prezzi dinamici, elemento chiave di questo lavoro.

La presente elaborazione è divisa in quattro capitoli. Il primo ha lo scopo di fornire una panoramica dell'e-commerce. Le tecnologie presenti oggi sono alla base del cambiamento dei metodi di comunicazione utilizzati e delle relazioni create. Attraverso Internet, gli individui hanno accesso a una molteplicità di informazioni e risorse che danno origine a un vero e proprio mondo digitale parallelo in cui nascono comunità ed in cui è possibile esprimere opinioni, in cui le persone si mantengono in contatto gli uni con gli altri, e nel quale avvengono transazioni. Nel nuovo mercato globale, si svolgono le relazioni economiche e di scambio, in cui gli utenti sono ormai abituati a conversare virtualmente, superando l'interazione fisica quasi completamente obsoleta. Si può quindi affermare che l'e-commerce ha rivoluzionato i processi di vendita e di acquisto.

Ciò ha portato vantaggi sia dal punto di vista delle aziende, dando loro la possibilità di espandere la visibilità e l'estensione del mercato, sia dal punto di vista del consumatore, ora più informato e consapevole rispetto alle decisioni di acquisto.

Nel secondo capitolo, l'attenzione si focalizza nuovamente sulle dinamiche del commercio elettronico ma, questa volta, il commercio elettronico a cui ci riferiamo è ancora più avanzato, definito come e-commerce 2.0. Il consumatore è sempre più al centro delle logiche di mercato, costantemente connesso con il mondo digitale, grazie anche all'avvento del commercio mobile che consente di accedere alla rete da qualsiasi luogo e in qualsiasi momento. In questo modo il consumatore ha la possibilità di analizzare diversi siti prima di concludere una transazione. Questo nuovo processo di acquisto si chiama "customer journey", che include diversi touchpoint. La diffusione di questa innovazione digitale, come già accennato, offre grandi vantaggi alle aziende, ma, allo stesso tempo, li pone di fronte a nuove sfide. Di fatto, le aziende dovranno rispondere prontamente alle nuove richieste del mercato, adottando nuove strategie per ottenere un vantaggio competitivo rispetto ai competitor. A questo punto, è possibile analizzare come le aziende adottano strategie che, fino a qualche anno fa, prima dello sviluppo dell'e-commerce, non era possibile implementare. È da questo punto che si svolge la discussione del terzo capitolo, che analizza come applicare gli strumenti di intelligenza artificiale alla struttura dei prezzi soggetti a fluttuazioni sempre più presenti negli e-commerce: I prezzi dinamici. Questo strumento è alla base della logica con cui chi vende un bene o un servizio può applicare variazioni di prezzo basate su obiettivi diversi. Il pricing dinamico è una metodologia molto attuale, ma non ancora completamente conosciuta e di cui nella presente stesura verranno trattate le varie tecniche di

applicazione in modo generale. Il quarto capitolo analizza il ruolo del consumatore, riconosciuto come il cuore di una moltitudine di impulsi che ne influenzano le decisioni di acquisto spesso caratterizzate da non razionalità.

È vero che il consumatore ha l'opportunità di sfruttare gli enormi vantaggi legati allo sviluppo del commercio elettronico, ma, d'altra parte, è comunque esposto a rischi. L'utente è infatti costretto inconsciamente a condividere informazioni riguardanti i suoi gusti, le sue esperienze di acquisto, le sue informazioni personali che influenzano i suoi processi di scelta. L'obiettivo di questa analisi è la percezione che il consumatore ha dei prezzi dinamici, introdotti nel capitolo precedente, al fine di comprendere la consapevolezza del consumatore e il suo relativo comportamento di acquisto. Questo tema sarà affrontato alla fine del quarto capitolo, quindi ripreso nel quinto e ultimo capitolo che analizzerà la reale sensibilità del consumatore rispetto ai prezzi dinamici e ai risultati ottenuti dopo aver effettuato un sondaggio utilizzando questionari, avendo come riferimento un campione di 131 consumatori.

INTRODUCTION

The present paper examines how digital innovation in recent years has led to changes in consumer buying behaviour, deepening the investigation by examining the logic of artificial intelligence that governs the concept of dynamic pricing, a key element of this work. This paper is divided into four chapters. The first has the aim to provide an overview of e-commerce. The technologies present today are at the basis of the change in the communication methods used and the relationships created. Through Internet, individuals have access to a multiplicity of information and resources that give rise to a real parallel digital world in which communities are born where it is possible to express opinions, where people keep in touch each others, where occur transactions from the physical to the virtual environment. In the new global market, economic and exchange relations take place, in which users are now used to conversing virtually, overcoming the almost completely obsolete physical interaction. It can therefore be said that e-commerce has revolutionized sales and purchasing processes. This has brought advantages both from the point of view of the companies, giving them the possibility of expanding the visibility and extension of the market, both from the point of view of the consumer, now more informed and aware with respect to purchasing decisions.

In the second chapter, the attention is focused again on the dynamics of electronic commerce but, this time, the electronic commerce to which we refer is even more advanced, defined as e-commerce 2.0. The consumer is increasingly at the heart of market logics, constantly connected with the digital world, due to the advent of mobile commerce that makes it possible to access the network from anywhere at any time. In this way the consumer has the possibility to analyse different sites before concluding a transaction. This new purchasing process is called “customer journey”, which it includes several touchpoints. The diffusion of this digital innovation, as already mentioned, offers great advantages to companies, but, at the same time, places them in front of new challenges. In fact, companies will have to respond promptly to new market demands, adopting new strategies to gain a competitive advantage over other companies. At this point, it is possible to analyse how companies adopt strategies that, until a few years ago, before the development of e-commerce, it was not possible to implement.

It is from this point that the discussion of the third chapter takes place, which analyses how to apply artificial intelligence tools to the variable price structure: dynamic pricing. This tool is at the base of the logic with which who sells a good or service can apply price variations based on different objectives. The dynamic pricing is a very current methodology, but still not completely known. In the following chapter we will analyse the various application techniques in a general way. The next chapter analyses the role of the consumer, recognized as the heart of

a multitude of impulses that influence the purchasing decisions often characterized by non-rationality. It is true that the consumer has the opportunity to exploit the enormous advantages linked to the development of electronic commerce, but, on the other hand, he is nevertheless exposed to risks. The user is in fact unconsciously forced to share information regarding his tastes, his shopping experiences, his personal information that influences his choice processes. What is the objective of this analysis is the perception that the consumer has of dynamic prices, introduced in the previous chapter, in order to understand the consumer's awareness of the same and its relative purchasing's behaviour. This theme will be addressed at the end of this chapter, then resumed in the fifth and final chapter which will analyse the actual sensitivity of the consumer with respect to dynamic prices and the results obtained after having carried out a survey using questionnaires, having as reference a sample of 131 consumers.

CHAPTER 1

MAIN FEATURES OF E-COMMERCE

From the very beginning of the electronic commerce, when both browsers and search engines did not exist, nobody could believe that in 2007 it would come to order something from Internet, simply pressing a button.

This incredible revolution occurred in a relatively short period and it has changed drastically the lives of consumers and traders.

The first phase of e-commerce began during the years 1980's through the EDI, (Electronic Data Interchange) that consists in a system of transmission of data using private telecommunication networks.

During that period, the idea of the e-commerce that exists nowadays was very far.

In the 1990, thanks to an idea of Tim Berners- Lee and Robert Cailliau, came to life the project WWW (World Wide Web) and the publication of the first web site that was created in order to describe the project.

Since it began in 1995, global electronic has brought an enormous change in business firms, markets and in the behaviour of consumers.

During this period that is relatively short, e-commerce has itself been converted from its origin in a process for online retail sales into something that is much wider. Nowadays, the e-commerce includes unique services and capabilities that cannot be found in the physical retail. E-commerce is bound to a continue growth in the next five years, keeping the position of fastest commerce.

In 2005, e-commerce is in the middle of a new period characterised by explosive entrepreneurial activity that keeps the attention on the on-demand services, social networks and all the mobile platforms that have been created by smartphones and tablet computers. The overmentioned technologies and social behaviours are bringing extraordinary changes in the way of living, markets, business, and the society as a whole.

Not only, e-commerce is creating new job positions in all fields from marketing to management and information systems.

It is important to stress what are the main economic and business forces that drive this new type of commerce: E-commerce has generated new digital markets where prices are more transparent, markets are now global, trade is highly efficient, though obviously, not perfect.

It has also a direct effect on a firm's relationships with all the stakeholders such as: clients, competitors, partners, suppliers, as well as how firms advertise and use brands.

1.1 THE NET ECONOMY

The new digital technologies and Internet have created the virtual revolution, resizing the space and time limits that have always characterized the physical market. The potential of expansion and application of this new technology has been so important for the economy in order to qualify an appropriate denomination to the digital market. Nowadays is always more known the new economy, where this expression was used for the first time at the end of 1990 in order to indicate a new type of economy based on the usage of computer and communication facilities.

When the new economy accompanied the old one, there was the presence of two types of market: the real or physical one (Marketplace) and the virtual market (Marketspace). What are the main differences? The marketplace characterises the old economy, limited by well-defined boundaries, with visible and tangible products. This kind of commerce is based on a physical relationship between firms and final clients that purchase products or services, but not only, it is also a market that includes the presence of intermediaries and concurrence. In the marketspace, that represents the digital economy, the relations between suppliers and buyers become virtual. In this intangible market the companies transform itself in a cyber company and its stakeholders turn into cyber clients or cyber competitors. This transformation process expresses a main difference between these two markets; in the physical one, the production activity and the goods represent the main source of

creation of the firm's value. In the virtual market the bidirectional and interactive exchanges of the information are the key activities of the companies. In the new virtual scenario, the material production is accompanied by immaterial relations, based on the virtual businesses, information and communications as sources of value creation. Starting from the industrial revolution, that has marked the old economy, we are passed through the net and information revolution: the theme of information exchanges between individuals that interact each other in this virtual market assume now a relevant importance.

The new economy offers opportunities for the development of new business models characterized by innovation, by the way is not possible to consider a growth without taking into account the old economy that still represents the dominant part of the world's economic structure. The idea is to rethink and build again what already exists and integrated it with the new one.

1.2 CHANGES BROUGHT BY THE NETWORK

It has been passed more than twenty-five years when Tim Barners-Lee has made the World Wide Web accessible for everyone and, in this period, Internet has become one of the most surprising technological and social realization of the century. The claim of internet as an instrument of communication, relation and

business, has brought important changes for different social and economic actors.

Vescovi (2007) proposed a classification of the main shifts brought by the network:

- Cancellation of distances: Internet allows to reduce the distances and to bring people closer, where these people are situated in every part of the world.

The elimination of the distance is permitted by the fact that the interaction is mediated by a device that is connected to internet. This implies that the distance does not determine the cost of communication anymore.

The result of this reduction of costs has led to the development of the facility of global communication.

This offers enormous opportunities of collaboration between different entities, opening new spaces for displacement strategies.

- Disintermediation: the commercial intermediaries offer a service in which the logistic component represents one of the key elements.

The concept of disintermediation brought by the net commerce, refers to the overcoming of the intermediates' needs during the distribution process, this means that it is no more necessary to pass through the physical selling point in order to reach the final consumer.

- Huge amount of information: The network makes available an uncountable number of information. Every individual can ideally do a research concerning whatever type of argument or whatever need.

From the commercial perspective, this offers great possibilities to firms that now can move easily a large amount of information on their products or services to the potential clients, which probably, will exploit all the details given by the companies in order to enter in the purchasing process.

Of course, the customers should separate and select the information that are needed, this means that it is important to find ways that are aimed to simplify all the contents and to choose the best solution from the whole supply given by the other companies.

- Reduction of asymmetric information: The asymmetric information represents a condition by which the information is not shared in a balanced way among all the individuals that are part of the economic process: one of the individuals has more information than another one and, by this, he/she can exploit this advantage from a specific situation.

Traditionally, this frame is in favour of the sellers, which own more information with respect to the customers, but also to the conditions of the market, to the prices and to the characteristics of the goods.

Internet allows the reduction of the asymmetric information, since the users are able to find any characteristic of a specific product or service, which lead to a more transparent market.

The culling of the distances offers great opportunities of collaboration among different companies, this can bring to a development of alliances and network of organisations.

In these cases, the roles and the responsibilities of the different partners are distributed in order to focus, individually, on their own competencies, with the aim to create innovative, efficient and profitable offers. This is done in order to generate a competitive advantage.

1.3 DEFINITION OF E-COMMERCE

If we ask to people what they mean for “e-commerce” they will refer to all the purchases made online among big companies such as Amazon or Booking.

In fact, the e-commerce is represented by the simple act of purchasing or selling through the use of internet. By the way, there are many other actions that are realized online, but they don't require an economic transaction: collect information about a product, such as the price, the main characteristics and the availability. These and many other actions, even if they do not include an economic transaction, have in common the exchange of data or information by using internet.

The e-commerce, as already overmentioned, carries out transactions that refer to the trade of goods/services or the distribution of digital contents. In these

exchanges, the seller can communicate with the buyer without having a face to face interaction.

Kalakota and Whinston (1997) proposed four different prospects of e-commerce's analysis:

- Perspective of communication: it includes the amount of information necessary in order to support all the different processes made through internet (buying, selling, payments..).
- Perspective of business' process: it concerns the application of the technology for the automation of the economic transactions.
- Service's perspective: the e-commerce allows to reduce costs and simultaneously boost the speed and the quality of the service.
- Online perspective: the main objective of the e-commerce is to support the selling or the purchase of online products.

Keeping in mind these considerations, it is possible to conclude that the electronic commerce pursues different goals:

- Realise on the net a new channel of selling by which it is possible to reach a wide and diversified target, increasing the capacity to make profits.
- Communicate in a faster and in a more efficient way with potential clients in order to get their attention towards the supply.
- Offer a service that is characterised by efficiency and effectiveness that not only allows the possibility to establish constant relationships between firms

and customers, but also it permits to improve customer's loyalty to the products and to the company itself (Morelli 2005).

1.4 MAIN CHARACTERISTICS OF E-COMMERCE

The trade and, more in general, the development of the business activities through internet, have increased significantly during the last twenty years as a result of many advantages related to low costs of entry, the rapid return of the investment, the easy way of communication, interaction and access to information.

Internet, moreover, activates a “virtuous circle of innovation establishment” guided by the technology since the new devices create a lot of business opportunities that, in turn, attract more and more companies, accelerating the spreading process (Timmers, 2000).

Here are analysed some characteristics of the e-commerce that justify its widespread use.

- Availability: web-servers are normally available twenty-four hours and for the consumers it is possible to have access on them in every moment of the day, seven days a week.

The idea of a predetermined working hour is overpassed, moreover this makes easier the presence of the firms because this permits to get through all the problems related to the time zone.

The direct and continuous contact between the company and the customer, made possible by the net, guarantees to the clients a constant service.

This approach represents a relevant competitive advantage compared to the firms which work on the offline market and this contribute in a positive way to the quality of services offered by companies.

- Ubiquity: Internet, thanks also to the mobile supports, allows to operate in every part of the world, to transfer the supply in every state where the demand exists. This changes the business processes in a substantial way and brings also to a reduction and, in some cases, to the elimination of the boundaries, not only geographically, but also linguistic, cultural and temporal ones. Everyone that has access to the internet could be a potential client. The ubiquity is directly connected to another characteristic to the e-business, that is the globality.
- Globality: The competition overcomes the traditional geographical boundaries and it becomes global. The markets are now wider and the globalisation opens new business possibilities for the small-medium enterprises that, traditionally, met a lot of difficulties to extend their coverage to the international market.

The ubiquity and the globality make possible to spread the competition among companies that in the past were unknown and irrelevant on the domestic market.

- Local presence: One characteristic that seems to be in contrast with the overmentioned one, concerns the possibility to enhance, through the net, the local presence and the one to one local relations.

The most part of the companies operating on the net, not only carry out a virtual activity, but operate also in the physical channel (the so called click and mortar companies). These firms can use internet as a source of information and marketing in order to let the consumers more informed and prepared to face the purchase process.

In this sense, the presence in the cyberspace, becomes a vehicle to reinforce the presence of the company also in the physical market.

- Digitalization: The digital information could be easily preserved, transmitted, processed, transformed and manipulated in many other ways.

This offers new possibilities for new products, as the Web Tv or the smartphones. Moreover, for the products that can be replicated and digitally distributed, the production cost of a unit of an additional product is almost zero.

- Absence of space constraints: A company that uses the online channel in order to sell its product, has few restrictions concerning the extent (product

categories) and the depth (number of variants in a specific category) of the assortment compared to a physical shop.

It is clear that the extent and the depth cannot be endless, but the absence of the physical constraints amplifies the possibilities to have a wider supply. A deep assortment can satisfy, in a more complete way, the variety of needs expressed by the consumers. At the same time, it can reduce the overall amount of research costs of the products that the customers actually need.

- Multimedia and interactive services: The great advantage that characterises the communication through the digital media is represented by the co-existence and interaction of many languages.

Nowadays companies have different ways in order to promote their goods and services, provide information and realize interactions.

The potential client, moving among different web sites, has the possibility to activate a direct relationship with the company interacting with this latter in order to build his/her own shopping experience.

This can increase the users' attention and it could allow to obtain feedback that are useful in order to improve the relationships with customers.

With all the information given by the users during their researches, it is possible to know them better and to exploit them with the aim of answering in an efficient way to specific requests.

- Low-costs: the costs that are necessary in order to reach potential clients are lower than the ones present in the offline market.

The e-commerce permits to create economies of costs, thanks, for instance, to the reduction of communication costs or to those related to the management of the physical store. Lower costs reduce the access barriers, moreover they affect positively the prices paid by the final consumer.

- New business opportunities: The net is an important tool in order to obtain inputs and to boost innovation. Listen to the customers, read their comments and receive their feedback is very important for the creation of new products or services. Moreover, firms have the possibility to be present in the global market, answering to specific requests of the consumers belonging to niche market.

- Emergence of new intermediaries: The role of intermediaries in the net economy has changed its configuration. It is true that, thanks to the internet, the direct relation between firm and consumer it is easier to achieve, but it is also true that in the e-commerce this relation is mainly based on an information exchange. Therefore, it is necessary to have a greater amount of information that compensate the lack of the physical interaction.

This brought to the so called “information flood”, caused by the overall amount of information that are widespread on the net.

Next to the traditional intermediaries, there is a new figure that is known as “cyberintermediary” that owns a virtual profile specialized on the brokering information. Furthermore, this new figure can offer to consumers a specific service of selection and categorisation of all the information available on internet.

- Customer orientation and service’s quality: the commercial and marketing politics of the e-commerce are based mainly on a customization process of the relation with customers. The customer orientation expressed itself through the offer of a relevant quantity of information, products and customized services. The quality of the service concerns mainly the easiness offered by the online purchasing process; information gathering, payment and delivery.
- Greater competitiveness: Competition has, traditionally, positive effects in terms of products’ supply, service and prices.

The easy access in the market, the low costs and new business opportunities offered by the web give life to a very accentuated competition among companies. This means more attention to both market and clients, set high quality levels and guarantee a greater and better service provision.

1.5 TYPES OF E-COMMERCE

Adopting a wider vision, we can consider the E-commerce as the “selling or the purchase of some products through internet”.

Depending on the fact that who is buying could be a firm or an individual, it is possible to define different types of e-commerce:

Business-to-business (B2B), describes transactions between companies, such as between a manufacturer and a wholesaler, or between a wholesaler and a retailer. Contrasting terms are business-to consumer (B2C) and business-to-government (B2G).

The volume of B2B (Business-to-Business) transactions is much higher than the volume of B2C transactions. The primary reason for this is that in a typical supply chain there will be many B2B transactions involving subcomponents or raw materials, and only one B2C transaction, the consists on the sale of the finished product to the end customer. For example, an automobile manufacturer makes several B2B transactions such as buying tires, glass for windscreens, and rubber hoses for its vehicles. The final transaction takes place when the vehicle is sold to the consumer, this represents a single (B2C) transaction.

B2B is also used in the context of communication and collaboration. Many businesses are now using social media to connect with their consumers (B2C);

however, they are now using similar tools within the company so employees can connect with one another.

When communication is taking place among employees, this can be referred to as "B2B" communication. The term "business-to-business" was originally coined to describe the electronic communications between businesses or enterprises in order to distinguish it from the communications between businesses and consumers (B2C). It eventually came to be used in marketing as well, initially describing only industrial or capital goods marketing.

Today it is widely used to describe all products and services used by enterprises. Many professional institutions and the trade publications focus much more on B2C than B2B.

Business-to-consumer (B2C, sometimes also called Business-to-Customer) describes activities of businesses serving end consumers with products and/or services. An example of a B2C transaction would be a person buying a pair of shoes from a retailer. However, the sale of the shoe from the shoemaker to the retailer would be considered a (B2B) transaction.

When most people think of B2C e-commerce, they think of Amazon, the online bookseller that launched its site in 1995 and quickly took on the nation's major retailers. In addition to online retailers, B2C has grown to include services such as online banking, travel services, online auctions, health information and real estate

sites. B2C e-commerce went through some tough times, particularly after the technology-heavy Nasdaq crumbled in 2000.

In the ensuing dotcom carnage, hundreds of e-commerce sites shut their virtual doors and some experts predicted years of struggle for online retail ventures. Since then, however, shoppers have continued to be present on the web in increasing numbers.

In fact, North American consumers adopted ecommerce so much that despite growing fears about identity theft, they spent \$172 billion shopping online in 2005, up from \$38.8 billion in 2000. By 2010, consumers are expected to spend \$329 billion each year online, according to Forrester Research.

What's more, the percentage of U.S. households shopping online is expected to grow from 39 percent this year to 48 percent in 2010. In October 2010, an extension of B2C, the so called B21, was coined (sometimes referred to as B2I).

While B2C includes all manners of a business marketing or selling to consumers, B21 is specifically targeted towards an individual. It requires specific personalization for that individual, in order to create a customized experience.

Business-to-employee (B2E) electronic commerce uses an intra business network which allows companies to provide products and/or services to their employees. Examples of B2E applications include: Online insurance policy management, corporate announcement dissemination, online supply requests, special employee offers and employee benefits reporting.

Business-to-government (B2G) is a derivative of B2B marketing and often referred to as a market definition of "public sector marketing" which encompasses marketing products and services to various government levels - including federal, state and local - through integrated marketing communications techniques such as strategic public relations, branding, advertising, and web-based communications.

Business-to-Manager or B2M is a new way of E-business.

It refers to transaction between enterprises (product sellers or any other workers) and professional managers. B2M scheme consists of finding out the information on the net and earning commission by providing services for enterprises.

Consumer-to-business (C2B) is an electronic commerce business model in which consumers (individuals) offer products and services to companies and the companies pay them. This business model is a complete reversal of traditional business model where companies offer goods and services to consumers (business-to-consumer). We can see this example in blogs or internet forums where the author offers a link back to an online shop facilitating the purchase of some product (like a book on Amazon.com), and the author might receive affiliate revenue from a successful sale. This kind of economic relationship is qualified as an inverted business type.

The advent of the C2B scheme brought to a major change: Connecting a large group of people to a bidirectional network has made this sort of commercial relationship possible.

Consumer-to-consumer (C2C) (or citizen-to-citizen) electronic commerce involves the electronically facilitated transactions between consumers through some third parties.

A common example is the online auction, in which a consumer posts an item for sale and other consumers bid to purchase it; the third party generally charges a flat fee or commission. The sites are only intermediaries, just there to match consumers. They do not have to check quality of the products being offered. Consumer-to-consumer (C2C) marketing is the creation of a product or service with the specific promotional strategy being for consumers to share that product or service with others as brand advocates based on the value of the product.

The investment into concepting and developing a top of the line product or service that consumers are actively looking for is equitable to a Business-to-consumer (B2C).

This type of e-commerce is expected to increase in the future because it cuts out the costs of using another company.

Government-to-Business (abbreviated G2B) is the online non-commercial interaction between local and central government and the commercial business sector, rather than private individuals (G2C).

Government-to-Citizen (abbreviated G2C) is the communication link between a government and private individuals or residents. Such G2C communication most

often refers to that which takes place through Information and Communication Technologies (ICTs) but can also include direct mail and media campaigns.

Government-to-employees (G2E) is the online interactions through instantaneous communication tools between government units and their employees.

G2E is one out of the four primary delivery models of e-Government.

It is an effective way to provide E-learning to the employees, bring them together and to promote knowledge sharing among them. It also gives employees the possibility of accessing information regarding compensation and benefit policies, training and learning opportunities and civil rights laws.

G2E services also include software for maintaining personnel information and records of employees. It is adopted in many countries including the United States, Hong Kong and New Zealand.

Government-to-Government (abbreviated G2G) is the online non-commercial interaction between Government organisations, departments, and authorities and other Government organisations, departments, and authorities. Its use is common in the UK.

1.6 ADVANTAGES OF E-COMMERCE

A proper e-commerce can lead to several advantages, most of these are in favour to both customers and operators.

The following elements represent the main benefits that could be given by a successful e-commerce;

- Extension of the market: the e-commerce allows to exceed the local basin applying lower prices compared to traditional channels. This could be vital for small/medium enterprises that could never open branches abroad.
- Best customer services: the e-commerce is an online market always open in order to satisfy all customer's needs, but this implies an assistance to the clients always more efficient.
- Wider catalogue and always updated: the supply given by the physical retails is obviously limited to the quantity of the stock, while the online retail has to guarantee a broader and updated catalogue.
- Lower prices: this is a typical case of the online library such as Amazon, which overpassed the normal distribution (that affects deeply the formation of the price) applying more convenient prices.
- Increase of the average receipt and the frequency to buy: On internet the purchases are greater than those made in physical retails, the e-commerce is becoming the privileged reference for some specific product categories.

- Test of the product: the targeted customers can give a liking test for the items purchased. In this way, firms can improve their competencies, exploiting all the suggestions given by the clients.
- Guided production of the demand: the overmentioned liking tests, can lead to different approaches in terms of production, permitting item personalization and a targeted distribution. Moreover, these tests allow the reduction of the overall volume of unsold items.
- Tracking of visitors and optimization of promotional channels: With a proper informatic system, it is possible to track all the visitors, answering to several questions such as; how many users have completed the purchase after visiting the web page? In this way it is possible to realize a promotional channel ad hoc, trying also to loyalize our customers.

1.7 E-MARKETPLACE (E-MALL)

Another example of e-commerce is represented by the e-marketplace, that in the common language is simply known as “marketplace”.

This term indicates an online market in which are included goods that are very different among them (belonging to different product categories) of different merchant (autonomous sellers).

These sellers are commercial intermediaries that, operating with digital platforms, shall facilitate the transactions between buyers and sellers. These last can be companies which have or not network presence (brick & mortar, click & mortar, internet pure player) and, when they are online, can operate through different business models.

The companies that already carry out an e-commerce activity, can find favourable to create their own window on a marketplace in order to increase their exposure.

Since the marketplace can be considered as an aggregator of many brands and products, it benefits of a higher visibility between the target audience.

In general, the advantages that a firm can obtain using these commercial platforms, can be attributed to the reduction of costs thanks to the use of the services supplied by the marketplace and to the possibilities of being easily found from the users.

Furthermore, it is also easier to reach new clients and partners¹.

The marketplace conducts a role of coordination and operational.

It is in charge of:

- Update the availability of goods
- Manage the orders
- Manage the payments
- Handle the deliveries and returns

¹ Donata T.V., "E-commerce e digital transformation: Nuovi scenari per imprese omnicanale e consumatori on-demand". G. Giappichelli Editore, 2018.

- Guarantee the security of transactions and communications

The marketplace has also to coordinate a variety of autonomous factors, so that everyone complies with the same rules. Obviously, in case of disputes, it is necessary to face and to solve them. In fact, if a customer wants to render a product, he/she turns directly to the marketplace in which the item has been purchased.

Although it is represented as a big virtual shopping mall, the extent and the depth of the assortment supplied is different from a marketplace to another.

There are some that offer goods or services of different kinds, that include different product categories. Some examples can be given by Amazon.com, Alibaba, Ebay, other companies offer an assortment focused on one or few categories, but very depth, by ensuring a wider range of brands and models.

Some companies that adopt this business models are the following: Zalando, Trivago, Zappos.com.

Leaving aside the extent and the depth of the assortment, the vast majority of these online markets is focused on the sale of products.

By the way, there are others with the purpose of being aggregators of services dedicated to the tourism, for example to choose Hotel and B&B, such as Booking, Expedia and Trivago. Furthermore, there exists also aggregators of services oriented to the person, household cleaning and maintenance of houses and gardens such as Hepling ang YouGenio.

Be present on a marketplace, by using it as a retailer or as a distributor, could be therefore attractive for companies through a more aggressive commercial politic concerning the pricing and not only.

CHAPTER 2

E-COMMERCE 2.0

Several years ago, in 2007, Eurisko² made available interesting data since they allow to forecast the spread of the social networks' dynamics which, shortly after, showed up. The social dimension is not unknown in the traditionally e-commerce: the instrument of "recommendations" is one of the key elements that brought to the success of many companies such as Amazon.

Eurisko³, moreover, observed another important role: the "advocacy", that represents the effect on the user's shopping behaviour given by other's suggestions. Consequently, there was a development of all the functionalities that allow the user to show his/her purchasing choices externally from the initial website, in order to share the shopping list and to activate mechanisms of viral marketing.

² Eurisko, New Media, 2007

³ Eurisko, Scenario dell'e-commerce e dell'infocommerce, Maggio 2009.

During the last years, the social dimension extended itself thanks to the introduction of social media, from the traditional platform such as Facebook and Twitter to the mobile and applications.

Today almost the total amount of individuals that surf the web use social media and, by these, it is possible to aggregate always more intensively all the people that using social media express their thoughts, communicate, share information and preferences. This scenario brought a direct consequence on the e-commerce, that is now interested in this new social era from which it can obtain feedback from users and it can also promote dynamics of collaboration and virality.

A social media marketing strategy is essential for every business development plan on the network. This strategy has to take into account several things:

- The presence of the social media will affect increasingly the indexing on the search engines.
- The animation of a business blog is a fundamental tool in order to build a relationship based on trust that is necessary in every e-commerce. Credibility, seriousness and transparency today are transmitted by updated and groomed posts that are able to transfer the soundness of a company.
- The necessity of being present on a website, on social networks, on blogs and also on mobile apps, is justified by the fact that internet is a multi-centre system, where the marketing strategies have to build attractiveness in order

to deal with an audience always more interested on the power of the brand and also on networks of recommendations.

- The social media allow a variety of purposes:
 - Branding and promotion activities of all the values associated to the company
 - Identification of the company's philosophy
 - Selling activity through promotional campaigns
 - Sharing of information and interests of the consumers
 - Operations of “community building” through the maintenance of a relational channel concerning the customer care
 - Monitoring and improvement of the online reputation

All these objectives are oriented to create the so called “engagement”- or the emotional involvement – with the potential client.

2.1 THE E-COMMERCE OF THE FUTURE

The word “e-commerce” does not give credit to the large amount of possibilities that are offered by the digital era.

Talking about the future of the electronic commerce, means indirectly, to speak about us and our future.

It means to understand how it will evolve the role of the consumer, how much an individual will rely on a specific brand, but also how much will increase the use of Internet. The e-commerce of the future will depend on our tendency to virtual relations and to the digital transactions.

Referring to the forthcoming e-commerce, means to talk of the future of Internet that will be characterised always more by multimedia, convergence between platform and languages, segmentation of niches, interactivity and engagement.

The e-commerce has to face all these aspects in order to be considered as an online shopping of first category and also an efficient shopping modality that allows consumers to be aware concerning desired purchases.

The consumers will be always more omnichannel, this means that they do not make differentiation between online and offline, moreover they pretend a uniform information and a consistent interaction with brands.

Some data of e-commerce are presented as follows:

- The purchases made on the e-commerce by Italian consumers represents 16,6 billion of euro.
- The value of the transactions through the use of smartphone and tablets represents the 22% of the total.

- The purchases are made mainly with credit cards and paypal.
- The average expenditure of the web shopper is about 950 euros in a year, but this value changes according to the type of the client: the regular customer on average spends 1280 euro during a year, while the occasional one spends on average 320 euro per year.

The value of the purchases made online reach in 2015 16,6 billion, an increase of 16% with respect to 2014.

The mobile commerce through smartphone and tablet has a value of 3.3 billion of euro, equal to 22% of the online sales (with an increase of 44% with respect to 2014). With these values we are aligned with the rest of Europe: UK 28%, France, Spain 27%, same percentage for the USA and Germany 26%.

The forecasts on purchases made from a mobile device are continually increasing, this is why companies will have to apply strategies directed along these lines, especially because the turnout from smartphone and tablet is consistent by weighing more than 50%⁴.

It continues to emerge the role of the marketplace – Amazon, Booking and Ebay- that represent more than one-third of the B2C sales.

⁴ Source: Osservatorio E-commerce b2c Netcomm-Politecnico di Milano

2.2 MODELS OF ELECTRONIC COMMERCE

The electronic commerce can assume many forms that are interesting to analyse as follows:

- **Pure e-commerce:** where the decision, the purchase and the payment are made online and where the delivery can take place to the addresses reported by the consumer or to the so called “physical pick-up”. This is the model followed by some pure players such as Amazon and Zalando and the Italian Eprice and Yoox;
- **Pay and collect:** here the decision and the purchase occur online, but the delivery of the item takes place directly to the physical selling point. Big retailers such as Decathlon use this method as an alternative to the previous one.
- **Reserve and collect:** more or less the same as the latter, but in this case the payment is made offline and it is the case of high average receipts.
- **Omnichannel models:** all the personal data of the clients are assigned to the nearest store with respect to the residence of the client: this is a model more used in the business to business market.

- **Showrooming**: where the shop and the commercial assistance make reference directly to the online shop in case of not available assortment and in case of promotions.
- **Private selling**: here the assortment and the availability of products are not wide. This model tends to call for the client to make impulsive purchases.
- **App in-store and techniques of proximity marketing**: The client can collect “bonus points” after making a purchase online, having this opportunity the consumer will be encouraged to purchase again in the future.
- **Digital signage**: modalities of communication and relation with the customers where they can express their preferences.

The variety of models requires to make the best use of all the channels keeping in mind that every consumer is different from another and everyone has a different digital approach.

2.3 FROM MULTICHANNEL TO OMNICHANNEL CONSUMER

The customer's purchasing habits have changed for years. We are always on line, we use the network to find information and to compare offers. But why nowadays are we talking about omnichannel and no more about multichannel? Through the multichannel strategy, we mean to combine the physical retail with e-commerce or other platforms. While the omnichannel strategy has the aim to integrate physical channels with the online ones because the acquisition process of the consumer is profoundly changed: the attention is no more focused on the act to buy, in fact, in the shopping experience are included the comparison and appreciation of different products and services.

As we already mentioned, the consumer of this era is different from the past. Before making a purchase, there is a process of information analysis, that makes the consumer more and more responsible. An omnichannel consumer is affected by different "touch points". The companies have to recognize, measure and exploit these points in order to obtain a competitive advantage. But what we mean for "touch points"? these are different ways of interaction with a specific product where they are used according to different combinations and preferences. We can consider the following touch points:

- Online advertising

- Specific magazines
- Social networks
- Newsletter
- Mobile app
- Forum and blogs
- Feedback
- Price comparators

How many of these touch points are used by consumers? The answer is five. We can know it thanks to a research conducted by the Italian Human Highway that took in consideration 16 touchpoints and 10 product categories.

The results have been crossed with one of the two channels in which effectively the purchase has been concluded: the online channel and the physical one. A process that takes into consideration only one or two touchpoints does not give good results as a process characterised by three or more points. Working on five touchpoints is more than enough to make the consumer aware of his/her choice. The omnichannel consumer no longer makes any distinction between online and offline. This means that there is not a difference between the physical retails and the online ones, both of them have to converge. The firm should make relevant every moment of contact with the client in order to build deep relationships based on trust. The technology nowadays represents a key point: the consumer is always more connected and

informed. This is why companies have to be ready to meet the needs of these “hyperconnected” users.

2.4 E-COMMERCE AND CRM

The culture of the relationship with the client is a recent discovery. The CRM (Customer Relationship Management) it is not more considered as a technology, but it is a consistent strategic tool of the marketing mix. It is a strength point that allows to the company to establish a direct relationship with its customers. It represents a process of acquisition, maintenance and development of consumers and clients. Nowadays it exists a system in which users contribute to the development and application of all the marketing strategies, abandoning their old role of passive actors. The social and mobile scenario has brought a wide spread of channels and data, where these latter will be gathered and subsequently used for direct marketing actions. The capacity to exploit and manage these information and data, are the real competitive advantage for the companies. Obviously, with the advent of digital technology and complex products, the systems selling approach has become different. Some companies started to insist upon new purchasing approaches, such as national contracts and master purchasing agreements, forcing

major vendors to develop key account management programs⁵. These measures created cooperation between the buyer-seller relationship.

Instead of purchasing a product or service, customers were more interested in buying a relationship with the seller. In the current scenario of hyper-competition, marketers are forced to be more concerned with customer retention and loyalty⁶.

Retaining customers perhaps offers a more sustainable competitive advantage than acquiring new ones. Indeed, marketers are realizing that it costs less to retain customers than to compete for new ones⁷. In a world characterised by the customer expectations, building cooperative and collaborative relationships with customers seems to be the most valid way to keep track of their change in expectations and appropriately influencing them⁸.

⁵ Shapiro and Moriarty, 1980

⁶ Dick and Basu, 1994 ; Reichheld, 1996

⁷ Rosenberg and Czepiel, 1984

⁸ Sheth & Sisodia, 1995

2.4.1 Tools of interaction with online consumers: indirect contact

In a competitive market such as the e-commerce, where companies struggle to reach the same target, the satisfaction of the client makes the difference. Put at the heart the client means to recognize the consumer as the heritage for the company and consider it as the focal point around which the web marketing politics have to be adjusted in order to maximize all the communication and interaction processes. First of all, consumers shall ensure if the web page is reliable or not and then the following step is to find the best price offered by all the different websites.

Nowadays, as mentioned before, users are always more informed and aware about the prices. This is the reason why companies have to inform the consumers when a price of a certain product is affected by changes (price alert). This is done also for the products that for a certain period appear to be not available, but companies can notify the presence in store of that certain item to the consumers that previously left their email (product alert). More active companies exploit this method to create a database in which the registered users will be contacted also for offers or discount from the firm.

2.5 MOBILE COMMERCE AS A NEW FRONTIER

From several years the mobile phone is considered as the new frontier of the electronic commerce, bringing many advantages to giants such as eBay, Amazon and Alibaba which have thought to be present also on the mobile in order to satisfy all the impulsive purchases and the easiness of navigation.

We have to think about the mobile commerce as a tool that allows consumers to interact with companies. Users can now buy whatever they want in an easy way and they can leave comments regarding a specific product that they have purchased. This brings to the so called “engagement”, since for the consumer now it is possible to build a relationship with the company.

The types of engagement are the following:

- Optimization of the website to the mobile navigation
- The realization of an application that provides an added value to the customer
- Active participation to social media

The optimization become essential if a huge percentage of users visualises the web pages through a smartphone or a tablet with a high bouncing rate.

Concerning the apps, they have to be efficient in order to provide to the customer an experience of enrichment, allowing the firm to maintain a relationship with the

customer and to discourage this latter in making shopping within other companies. The aim is to satisfy the client that uses always more the smartphone for his/her purchases, but not only, it is also important to pursue measures designed to boost consumers to make the “check in” attracting them with promotions, both in the case of a loyal client or a new one.

2.5.1 Mobile evolution

One of the most interesting evolution of the digital marketing is strictly connected with its “mobile dimension”. This frontier is innovating completely the way by which we use the net and we take buying decisions: from this perspective, apps represent an important, but not an exhaustive, dimension.

First of all, browsing from a smartphone, allows people to inform themselves from a mobile device before going to a physical shop. Companies should adapt their websites to a browsing made from smartphones or tablets, by using responsive

technologies or dynamic serving⁹, but they also should pay attention to specific needs that users will express:

- Speed of content download
- Insert more space between links in order to make easier the online browsing
- Simplify the structure of the webpage
- Innovate the structure in order to encourage the view of the page

The spread of smartphones and apps increases the use of e-commerce, but obviously there is a huge number of apps and websites and that is the explanation why online companies have to be more attractive than the competitors.

In fact, during 2005, Google has started to index not only the apps developed for Android, but also for the iOS world. As a consequence, today doing researches on Google through a smartphone, it is possible to see in advance within the pages turned out from the research. This for a company means to reach new potential clients. It is about a further model of the so called “content marketing online”, the capacity to offer not only to the clients, but also to those who can become these ones, a content value by which it would be possible to establish a relationship.

⁹ The technology M-site – which doubled a website- has been officially deprecated by Google for different reasons among which the probability to create fault redirects, always verifiable by Google Search Console.

It is necessary to underline how Google Analytics allows the monitoring of the traffic generated on a website, this leads to the tracking of all behaviours assumed by the consumers, making companies aware of what they actually need or wish.

Thanks to the tracking of all behaviours of a user on the mobile app, it will be possible to develop “retargeting actions” both on the web and app browsing, this is possible by activities of consumers’ recognition.

The development of an app cannot be realized if there are not clear the activities that a company wants to pursue.

Local marketing, online shops that are optimized for a mobile use and app: the fields of the m-commerce are therefore three, carried out by the progressive marketing automation.

2.6 FROM THE WEB MARKETING TO SOCIAL MEDIA MARKETING

It would be useful to highlight how much is important to own technical instruments and other competencies in order to analyse data and read the gains given by every activity with the aim to achieve the brand assertion in the long run through a careful policy of brand equity and brand awareness. This is why marketing and communication are so important, since they provide to companies many

possibilities of growth. The huge amount of information concern products and services available online and the presence of offers that are present on the marketplace and online shops tends to facilitate the consumer at the expense of the merchant, due to the easy comparison with the supply promoted by the direct competitors. The risk is that the physical shops could become only “windows” for the online shops, this risk is always more present due to the increase in use of the smartphones and other mobile devices, that represents, as mentioned before, the consumer’s fastest and easiest way to purchase. Observing this scenario, it is evident how it is important for companies to look at these new technologies and purchasing behaviours as an opportunity to grow and to be more competitive in the market. In fact, companies should;

- “Show their face”, having a presence on social media that describes in the best way the story of the firm, the values, its passions and what the company believes in.
- Using Facebook and other platforms as relational and consultancy environments in order to interact with people on the basis of their interests.
- Promote the word of mouth that will remain the best communication vehicle of a company.

Another interesting dimension is given by the management of big data. These data will be always more consistent, due to the spread of smartphones and social media. All the strategies that are carried out from the companies are aimed to gather all information in order to provide to the customers personalized shopping experiences. Companies are adopting “listening tools”, monitoring of thread and engagement of the consumers for different reasons: from the very traditional analysis of feelings and reputation, to the most reactive actions such as the customer care on social media, the activation of promotional initiatives coherent with the consumer’s behaviour and its characteristics. Nowadays it is necessary to adopt complex tools that could be interfaced with the customer relationship management of the company.

This has led to a new professional figure, that is the social media marketer, that assumes always more a strategic role within the firm’s organization.

The variety of digital “touchpoints”, from the website to social media, from the app to the digital totem in-store, have overtaken the old concept of the funnel model. The “funnel” was the model by which the consumer’s behaviour on a website could be explained. This model observed all the conversion rates and abandonment rates of every single webpages and, in particular, the bounce rates. The funnel model appeared to be as process in which users would be passed through it and, by this, they could become clients or commercial contacts. Thanks to this model, some systems of retargeting have been developed, that are still valid today. From a certain

point, this model has been considered not efficient anymore: the spread of social media and smartphones through which a company can be discovered, have made the funnel more rigid and static, unable to understand the consumer's attitude and the variety of contexts in which the buying decision are made. From that moment, it is more correct to talk about the "customer journey". This change has brought to adopt tools that follow the user recognizing all the behaviours assumed, such as the research for certain products or for certain brands.

Nowadays there are the so called "attribution models" that help the companies to understand how different channels can produce different influences concerning the user's decisions. The limit within this approach is strictly connected to the technology of consumer's recognition: the cookies. Its application bothers the users, moreover the tool that notify the presence of cookies is the well-known pop-up, that is for sure not a communication vehicle that can be appreciated by the visitors.

What it should be clear, is that the firm has always to pursue a constant dialogue with its target in order to get out of bothering them, promote loyalty and to boost the word of mouth.

For these two lasts concepts, social media represent a relevant and essential tool.

We are witnessing to a progressive growth of digital platform, but how it will be characterised the future of this digital context?

- The competition between shops will be given by different variables such as: brand recognition, creativity and the customer relationship management. These variables will characterise the key factors in order to reach success.
- The electronic commerce will assist to the entry of the offline retails, whose communication on the web will be based on a strong pre-existing brand equity. This will lead to an increase of the competition among different companies that will have to respond with a proper business strategy.

This state of affairs will promote the enlargement of the social dimension but also of the user generated content. All the shops will have to react rapidly to all the eventual negative comments that the users can leave within forum or social networks: this is a complex challenge that the firms are facing nowadays but dealing with this context is essential to improve business strategies.

2.7 MARKETING AUTOMATION

Marketing automation is the use of software to automate marketing processes such as customer segmentation, customer data integration, and campaign management. The use of marketing automation makes processes, that would have otherwise been performed manually, much more efficient.

Marketing automation is a software but also tactics that allow companies to buy and sell like Amazon – that is, to nurture prospects with highly personalized, useful content that helps to convert customers and transform them into delighted customers. This type of marketing automation typically generates significant new revenue for companies, provides an excellent return on the investment required.¹⁰

The key to efficient automated processes is also the usage of business intelligence. Business intelligence and automation solutions transcend the customer lifecycle by working behind the scenes in order to improve customer experience. While marketing automation, and CRM (Customer Relationship Management) software are very powerful for penetration and retention of existing customers, business intelligence software receives current sales information. “Smart companies in the 21st century use business intelligence (BI) solutions to gain a clearer picture of their internal operations, customers, supply chain, and financial performance.

¹⁰ Hubspot 2015

They also derive significant ROI by using BI to devise better tactics and plans, respond more effectively to emergencies, and capitalize more quickly on new opportunities. In short, they are using BI to become intelligent about the way they do business.”¹¹

The marketing automation could be useful for:

- Development and implementation of email marketing campaigns
- Automize repetitive actions
- Creation of a database of actual and potential clients
- Development of automated campaigns aimed to increase in sales

It is important to underline the importance of all data acquired in order to build a database of reliable contacts in the era of marketing automation.

All the emails sent in case of registration on the website and in case of shopping cart abandonment are getting more and more part of marketing automation strategies carried out by online companies.

The marketing automation allows always more to switch from the phase of lead generation, conducted by social media and web marketing, to the progressive phases of lead nurturing¹² thanks also to the link between external environments to the website.

¹¹ Eckerson, 2003

¹² *Lead nurturing, means to take care of customers and establish a relationship with potential clients.*

We will hear always more about the marketing automation, maybe this field will be able to fill the gap that still exists between business to business and business to consumers companies in using the net and its technologies.

2.8 PERSUASIVE MARKETING APPLIED TO E-COMMERCE: INTRODUCTION TO DYNAMIC PRICING

The persuasive marketing can offer interesting opportunities for those who want to implement online selling.

In the relationships with clients, the more technology is present, the more is important to enhance the human being.

In the digital marketing the more are instruments of automation - from the advertising dimension of retargeting to the editorial one and linked to the website - the more are important the aspects of communication – of content – since there are always risks for companies of not generate conversion.

The daily experience demonstrates how much the retargeting, for example, suffers of repetitiveness errors of the messages and it could become inappropriate and invasive.

The persuasive marketing, could be implemented in several ways:

- Building landing pages of promotional campaigns that allow to transmit the element of shortage - connected to the limited availability of products or to a limited time left – in order to encourage an impulsive purchase.
- Offering, as it is done by private sales¹³, at the moment of subscription, special offers and benefits to the new users.
- Making people aware of the sense of “urgency”. This is the typical case of the platforms by which it is possible to book hotels, houses and b&b. It is provided the indication of how many people have already booked a specific accommodation, and it is indicated the number of rooms or houses left.
- Transmitting always the so called “social proof”, that could be provided by feedback, comments, testimonial from which benefit a brand, a product or a service.
- Underlining all the touchpoints through which the client could refer to in case of problems.

¹³ The websites of private sales such as Vente Privée, Saldi privati, Amazon Buyvip and Privalia have built their model on persuasive marketing and previously they underlined also the value of exclusiveness: it was necessary to be invited in order to take part to the available sales.

- Adopting software that are able to manage the internal search engine¹⁴ that allows to receive suggestion after doing questions.
- Entering references concerning certifications or security seal such as Netcomm¹⁵ association.
- Using images and “stories” that are able to explain the experience that the consumer is going to live: many tests explain how convert better the landing pages that show, for example, a specific item of clothing that is worn by a model.
- Personalizing as much as possible the choices on the basis of synchronization of the web activity with other data such as an external CRM and the historical data of the user¹⁶.

¹⁴ The internal search engine to a website is one of the elements often underestimated from the owners of the e-commerce. The users is arrived on a specific website through many ways. But if he has to do a more precise research, in addition to a clear and explicative navigation menu, it will have the necessity of tools in order to guide him. Also the results page will be verified, personalized and optimized. Especially when the results are not available anymore.

¹⁵ In order to show the Netcomm seal, the site has to fill a questionnaire that will be screened by a legal structure. Basically, it is necessary to comply with the principles of transparency, making evident some information such as: identification data, vat number, emails or telephone contacts, terms of sales, methods pf payment, deliver and billing, systems adopted for the security of data and transactions, privacy policy.

¹⁶ Knowing the purchases already made from a user, i twill be possible to show, for example, while surfing on a website, some related products.

- Undertaking initiatives of free reward, in order to create the so called “wow effect”: Financial Times offers a free subscription to its own newspaper with the aim to create this effect.

One of the characteristics that is less considered and more herald of develops in the world of digital marketing and the electronic commerce is given by all the techniques that enable the variation of the prices – the so called dynamic pricing¹⁷- in order not only to result more competitive towards the consumers, but also to optimize the online activities with the aim to achieve the desired objectives.

Several e-commerce adopt the dynamic pricing within their selling systems.

A price discrimination it is verified when a company requires different prices to different consumers for the same good.

In order to apply this, the firm should be able to identify different types of consumer and it has to induce them to pay different prices.

It is known how business men, or people that have a certain urgency of buying a plane ticket, are willing to pay a higher price with respect to those who can plan with calm their travels.

To implement a dynamic pricing strategy, it is necessary to target the users, cluster them in specific groups with similar characteristics. In this case the necessity to

¹⁷ Have you ever booked an air travel? Have you ever wondered why different days have different prices? This is a technique of dynamic pricing, well known among the employees of the sector.

plan the travels in a short period is the common characteristic to exploit. Knowing this, the airline companies apply higher prices when the date of departure is getting closer.

By crossing available data (gender, age, average expenditure, wish list, purchases, country of origin, interests, ...) it is possible to identify well defined groups and exploit them in order to adopt dynamic pricing politics.

There are tools – one is known as Trendscout – that allow to import within a control panel all the competitors that have to be monitored and the price comparators that should be observed with the aim to have in a single interface the evolution of the prices that the competitors apply for specific goods, as well as the price fluctuations of the considered good.

This is possible in a context that is characterised by transparency such as the electronic commerce that permits to increase the competitiveness within the market: Amazon and the biggest marketplace make use of these software in order to appear always more convenient towards the clients by aligning their offer with respect to the lowest price.

The transparency of the information enables also to avail of web analytics and big data techniques – data coming from the behaviours of the consumers on the web, in aggregate way and also in unbundled manner, depending on the digital marketing activities on social media, on the search engines and in all the different forms of advertising made online – and analysing all the metrics given by the insights with

the aim to forecast future revenues and also of the margins that can be achieved after the variation of the prices.

Obviously we are talking about algorithms that are able to predict the consumer's behaviours, these algorithms are based on "machine learning"¹⁸ techniques and they can forecast a wide range on which operate, from the price fluctuations to the activation of promotional campaigns up to the recommendation of the products within the website; some marketing instruments are made to gather – among them the newsletters – some others are aimed to spread – such as social media and promotions – this difference must not be forgotten.

The constant evolution of these algorithms, and especially their spread within the electronic commerce's world, will permit to machines to make the work of optimization. But there is something that cannot be carried out by algorithms: the customer care, the brand enhancement and the storytelling, that represent all the activities that can be faced through the techniques of persuasive marketing.

¹⁸ The machine learning represents one of the fundamental area of the artificial intelligence and it deals with the realization of systems and algorithms that rely on observations such as data for the summary of new knowledge. The learning can take place by catching characteristics of interests resulting from examples, structures of data or sensors, with the aim to value the relations between the observed variables. One of the main objectives of research concerning the machine learning is to learn how to recognize automatically complex models and to take smart decisions based on data.

All the different forms of automation will be ineffective if they will be communicated by a poor graphic. Moreover, the storytelling must be finalised in a coherent way in every initiative of communication.

CHAPTER 3

DYNAMIC PRICING

A phenomenon that recently has appeared is the “dynamic pricing”, a technique born in the USA through which many big companies that pursue online marketing activities cause strategic price variations on air travels, hotels, holiday packages and other products or services. This is done on the basis of algorithms that keep track of the demand and supply, the prices applied by the competitors, the consumer’s online behaviours, the ones made by social media users, who can notice that the prices can fluctuate also consistently if, during the browsing, they unconsciously provide to other parties some personal data such as: geographical position, speech language, date of birth, gender and civil status, profession.

These information, are gathered and elaborated through “cookies” and other web analytics technologies and subsequently used in order to determine the user’s interests or how much every consumer is individually willing to pay for a vacancy or other items or services provided by the net, with the result that the price of a specific offer previously found can change suddenly. It can also happen that a user,

considered very interested to a certain plane ticket, could observe a higher price with respect to the one already seen in the past, this variation can be also about the 30% more compared to another user that in the meantime is having a look to the same ticket on the same website¹⁹. The dynamic pricing, a strategy of floating price based on the change of objective variables that governs the demand and supply on the market, could be confused with the “personalised pricing”, a system that consists in the definition of the prices in accordance with the data collected concerning a specific user. In order to explain the dynamic pricing to his students, the Professor Werner J. Reinartz²⁰ used an immediate and perfect example, telling about a cloudy day in Manhattan with the 60% rain probability and the sidewalks full of people.

The umbrella salesmen placed on the corners of the street showed their products and by paying only 5 dollars it was possible to purchase this umbrella, however there were few careful people that seeing the clouds in the sky wanted to buy it.

When the rain started to fall, the price of the umbrellas increased up to 15 dollars. This increase in price was accompanied by a growth of the number of people that

¹⁹ www.federprivacy.it/informazione/flash-news/1731-turismo-digitale-a-rischio-privacy-e-fiducia-utenti-del-web.html

²⁰ R. Werner, “Customizing Prices in Online markets, Symphonya”, *Emerging Issues in Management* (www.unimib.it/symphonya), n 1,2002, pp.55-56

seeing the rain were willing to pay that amount of money in order to repair themselves, even though the mark-up of 150%.

This case is a typical example of dynamic pricing. It would have been different if one of those salesmen was located near the exit of the most prestigious hair salon of the city and he would have applied a price of 25 dollars only for the clients of the salon, or if the salesman would have been applied a higher cost to a specific person only seeing an expensive watch on his wrist. These latter examples refer to the so called “personalised pricing”. Introduced and applied by the airplane companies, since the 70’s the dynamic pricing is a very wide subject and, by now, takes the attention of different industrial sectors: from the entertainment that have applied the dynamic pricing since the 2008 on tickets price and merchandising, to the healthcare that, started from the 2006, assist to the application of the first software able to compute a specific dynamic pricing for the health structures. The e-commerce market since the 2010 is growing very rapidly, thanks to the spread of the dynamic pricing logics that are able to stimulate the demand when it is low with more aggressive prices, and it is able to maximize profits when the demand is higher.

Some years ago, consumers were not aware about these changes in price, today it is possible to avoid this risk, since the younger users are more able than the previous generations in using the technology, allowing them to take advantages from it when they want purchase something. A big giant such as Amazon, which owns the 20%

of the retail market of the world, has made its customers aware about the always more frequent fluctuation of prices. At the base of this spread of the dynamic pricing, there is the development of technologies, based on algorithms of artificial intelligence, that could become a fundamental tool in order to boost the efficacy of the dynamic pricing's logics. Today the experience collected in forty years of dynamic pricing and the diffusion of the artificial intelligence can help to manage very complex selling conditions. To figure out when it is useful or not to apply these logics it is not trivial, as well as learn to handle the most evolved forms of pricing it is not easy at all.

3.1 WHAT IS DYNAMIC PRICING?

“Nowadays people know the price of everything and the value of nothing”, stated Oscar Wilde in his romance “*The portrait of Dorian Grey*”.

Probably, if he had the possibility, he should reconsider this phrase.

Purchasing goods or services online, consumers have learned that the price of some specific products can change depending on the marketplace in which the research has been made.

More expert users have learned that, cleaning the history browser before buying something, can help to drive down the price of the desired item.

To reset the research cookies make it more difficult the analysis of the purchasing habits, interests, needs and it can limit some procedures of data spread that sometimes do not occur in accordance with the law.

However, there are still many companies that trade online which have not implemented dynamic pricing's techniques that allow to increase the customers portfolio and revenues, in the case in which these companies operate in market characterised by an elastic demand that could promote the application of the dynamic pricing.

It is not simple to take the decision to start applying this type of strategy and to find the right tools that could support this choice.

Considering this, which are the characteristics to consider in order to decide whether the dynamic pricing should be applied? Which are the variables that create an impact on the demand? How is it possible to build a dynamic pricing algorithm to sell a good?

Applying mathematics, statistics and artificial intelligence to the determination of prices can consistently change the way of data interpretation, these methods are aimed also to build the pricing offer.

It is necessary to make some distinctions in order to identify all the different types of dynamic pricing's application.

How these types of applications are differentiated? Generally, it is possible to trace them in three modalities according to the variables taken in consideration.

- **Item for sale:** the variables that drive the change in price are the demand, the moment of acquiring, price of competitors and stock levels.
- **Acquisition profile:** the main variables that drive the change in price are the language used during the browsing, the geographical localization of the buyer, the device used and all the other characteristics that can be linked to the user, such as: age, gender, past purchases...
- **A combination of the abovementioned variables:** in addition to the modalities by which the price discrimination is normally applied, it is possible to distinguish different tools that are aimed to support the price discrimination:
 - Algorithm based on historical sales;
 - Algorithm used to compare the competitor's price;
 - Algorithm that tracks the user's profile;
 - Table of variables tariffs, chosen and applied without a real computation logic;
 - Combination among two or more instruments abovementioned;

Another discriminant is given by the frequency in which the price fluctuates, it can change according to:

- The variation of some conditions that have an impact on the demand;

- The achievement of the sales target;
- Timeline.

3.2 DECISION MAKING PROCESS

Build customer loyalty, gain new clients and increase the profitability of a company are common goals of all the profit-oriented firms.

The dynamic pricing is a practice that is included in these commercial challenges.

In order to evaluate if the customers are willing to accept or not the dynamic pricing's logic, it would be useful to analyse the behaviour during the stage of acquisition.

It is essential to understand what happens after the purchase of a good or a service. Engel, Kollat and Blackwell in 1969 have theorized²¹ the path that drives a consumer to buy a product or service. This path has been represented through a series of sequential and independent stages by which the individual gather, consider and use a set of information that are necessary on order to make a decision.

²¹ R.D. Blackwell, P.W. Miniard, J.F. Engel, *Consumer Behavior*, Harcourt College Publishers, London, 2001.

- **Perceptive system:** the capacity to collect incoming information and to make a first elaboration.
- **A motivating system:** the willingness that pushes an individual to move.
- **Evaluative system:** refers to the way by which the information on products are used in order to evaluate the value offered by them.
- **Decision making process:** organized succession of steps through which the consumer comes to a final decision.

The last of these phases, the decision-making process, is normally divided in four main steps:

- 1) **Recognition of the need:** the decision-making process starts when an individual recognises to have a need. This need could be generated by an internal or external impulse. Who is in charge of marketing within a company, should be able to understand (and afterward to stimulate, to orient and to amplify) **the factors and all the situations that generate in the consumer the sensation of need.**
- 2) **Research of information:** if the impulse is immediate and the desired product is at hand, it is possible that the purchase will take place immediately, without having further information about it. In the opposite case, the consumer could forget about the impulse and try to achieve more information. **There is no guarantee that an interested consumer is**

willing to gather information. The amount of details searched by the individual depends on the entity of the impulse, the amount of initial information, and the easiness to find other details using different sources.

- 3) **Evaluation of alternative options:** The consumer uses all the information in order to restrict its field of choice to a limited number of alternative products (solutions, services) that can satisfy the need. There exist many evaluation processes, all share by the same method. **Every consumer is inclined to consider a specific product as a group of attributes and the highest level of attention is reserved to the attribute directly linked to its needs;** at this moment the buyer can assign different degrees of importance to any attribute in accordance to its own necessities and wishes.
- 4) **Buying decision:** the user will purchase the favourite product among all, but between the intention to buy and the final decision to buy, the influence of unexpected situations can play a determinant role. It is important to underline the influence given by the behaviour of other consumers and **the price, considered as the decision-making lever.**

In order to understand better the way by which a consumer approaches to a purchase, it is necessary to divide the selling products in two main categories:

- Multiple products (an access pass to the cinema for a movie, where it is possible to value the time, the quality of the sounds and video, the comfort of the seat and the evaluation of the direct competitors);

- Single products (an entry ticket for a specific event on a single and unrepeatable day).

Always speaking about a specific sector, the entertainment, and the same good (ticket), we are in front of two goods for which the decision-making process is totally different.

In the first case, the price can determine a difference between two goods that are more or less similar (two cinemas that propose the same movie, at the same time, offering the same comfort), moreover it can determine the choice between the two cinemas.

In the second case, the price can be the lever that is able to establish whether to go or not to the stadium and the one that can satisfy or not the realization of the need.

It would be useful to make another distinction: the one between the perishable goods or not. Both of the example abovementioned refer to perishable goods since they are characterised by a limited number and by a reduced validity (when the show starts, it immediately loose the economic value).

In order to better understand how the dynamic pricing's logic works, it is necessary to make a step backwards and start from the reasoning made on the decisions that are at the basis of the pricing's choice, all considerations that could be reconducted to the widest concept of Revenue Management.

Speaking about the Revenue Management, we mean all the control and programming methodologies of the managerial decisions linked to the management of the demand that have the aim to maximize and optimize all the revenues²².

We are referring to two specific categories²³:

- **The price:** It is about all the choices that are related to the exposed tariffs, to the prices of individual offers. Are included also all the decisions that refer to the changes that have to be made on prices, the rebates at the end of the lifecycle of a product, and so on.
- **Quantity:** It is about the decisions concerning the acceptance or the rejection of a takeover offer, from the collocation of outputs in accordance with the segments of the market, to the strategic choices such as the one made in the case of withdrawal from the market of a product, in order to sell it at a later time.

The Revenue Management could be considered as a “quantity based” or “price-based” activity, depending in whether the firm considers its distributive capacity or the price as a main tool for the management of the demand.

²² A. Capocchi, *La redditività aziendale: le logiche del revenue management*, Franco Angeli, Milano, 2008.

²³ G.J van Ryzin, K.T. Talluri, *The theory and practice of revenue management*, Springer, Berlin, 2004.

The positions of strengths between supply and demand and the consequent process of price determination, represent the core of basic operations in order to include the pricing within the commercial strategy.

The Revenue Management does not offer different strategies from the ones already known, but it indicates the modalities by which the decisions should be taken, influenced by an approach that is technologically more advanced and extremely detailed.

3.3 BASIC POLITICS OF DYNAMIC PRICING

The concept of dynamic pricing is not a recent discovery. In fact, discounts and promotions characterised the market since the beginning and the consumer is already subjected to these events.

The consumer is widely aware that:

- **In specific conditions** (timing, day, period of year, etc) the price can decrease or increase, for example in a supermarket the prices of those goods subjected to fast deterioration are discounted for example at the end of the day;

- **Buying a product combined with another one could bring benefits:** a classical example could be given by the 3x2 offers;
- **Joining to fidelity programs of stores:** consumers have access to a series of advantages and discounts reserved to the members: that is the case of the fidelity cards of the supermarkets or other stores.

The price of goods or services results to be already “dynamic”, what distinguish these politics from the variation of a price determined by the use of an algorithm, is the different level of results’ optimization and the possibility of a market analysis always updated.

For example, a merchant that struggles to sell a product, could try to stimulate the demand applying a lower price, computing the maximum share of discount to implement considering the price list value and maintaining a minimum margin in order to reach the break-even point.

This way to operate does not allow, without having supportive algorithms, to consider in a precise manner several factors:

- How the sales evolve;
- Which is the best price to apply in every moment of the selling;
- How the competitors behave;
- What is the consumer’s point of view about price and product.

Monitoring constantly these aspects permits to make the difference between a merchant that recoups costs and the one who is able to optimize the returns of his

own activity. This does not mean that who decides to rely on dynamic pricing's algorithms has to abandon periodic discounts, fidelity cards, last minute offers. Often the right combination of all these solutions is crucial in order to have a good reputation, revenues and a good number of clients. Choosing to adopt a dynamic pricing's strategy it is possible to reduce the promotions, maintaining fixed prices for a certain consumer's category. Less effective policies should be removed, such as the ones that consist in the increase and decrease of prices without understanding which are the factors that affect the fluctuation of the demand.

3.4 GROCERY, VIABILITY AND TRANSPORTS

The consumer, as we have already seen, is familiar with the change in price. It is not so immediate to associate the idea of dynamic pricing to a physical store, because this method is normally connected to the online commerce and also because of structural limits. We know that the vast majority of online sellers use algorithms and always more advanced technologies in order to establish the price that should be implemented on products, identifying, by this way, consumers with different inclinations to the purchase and also with a different sensitivity to the price variations.

If on the web the prices can change every minute, for the brick-and-mortar store the main problem has been linked to the presence of labels that indicate a specific price. This consideration could result as an obviousness because we are used to find the price of every product written on the tag.

The case of tags and the shown prices is a very recent custom, contrary to popular belief.

For the main part of their history, the prices have been determined from the negotiation between buyer and seller and often these prices were set by merchants according to an estimate of the expenditure capacity, the potential client and the availability of the product.

The idea to fix a unique price for all the buyers born in the middle of 19th century and it is a result of the development of the large distribution: firms such as Tiffany & Co., F.W. Woolworth supported a politic of fixed price to overcome the huge number of articles in store²⁴.

A method like this is allowing to some supermarket chains to test the dynamic pricing.

At a distance of more than one century from these events, the analogic labels are leaving their place to the ESL (Electronic Shelves Labels). It is used in order to satisfy the needs of the organised large-scale distribution and the retail to manage huge

²⁴ P. Kotler, K.L. Keller, Marketing Management, Pearson Prentice Hall, Upper Saddle River, 2007.

amount of products, but that allows also to apply dynamic pricing's strategies with the aim to be more competitive within the online market.

The e-commerce market, thanks to the technological development of the last years, is always more able to know in a timely manner the customer's needs and to understand the buying habits and to restore in real time the prices in accordance to the demand and availability.

There are many brands of the organised large-scale distribution that are focusing on dynamic pricing's strategies, from Tesco to Walmart and Mark&Spencer.

For the early adopter such as the airline companies, the variables on which the price varies are mainly the number of places still available and the remaining time to the departure.

Given the flexibility of the large distribution, it is hard to establish a unique approach in terms of dynamic pricing, but the perishable nature of the food submits the retailers to similar logics of the airplane companies, in the sense that the missing revenues resulting from the absence of the expired food sale are missed forever. In this case, the inventory levels can be used as a variable able to determine the price variation.

The dynamic pricing is a very common method nowadays, especially in the transports sector. The artificial intelligence is applied on the pricing strategies of the airline companies such as the logics by which the Uber app changes the cost of the same ride depending on the demand.

Another example is given by the increase in price of the public transport during the rush hours. Some big cities such as Beijing, Chicago and San Francisco are struggling to introduce the so called “Congestion Charge” in order to discourage the use of cars during the days with more traffic and also these tariffs are determined by using the dynamic pricing method. In San Diego, for example, some new roads use a system of dynamic toll through which the fee varies depending on the levels of traffic congestion. The drivers pay up to 8 dollars for using these roads in moments of heavy traffic, while they pay only one dollar if the traffic is moving smoothly. After a year from the application of the dynamic pricing, the average time of twenty miles journey it is passed from 40 to 30 minutes. In the future, therefore, the drivers could decide when to travel and at what price.

3.5 PARADIGM’S OF PRICE MODIFICATION

The dynamic pricing is a very broad concept. This consists of any strategy designed to change the price of an asset. It is useful to make some distinctions to identify macro-categories.

First of all, it is good to establish what the main object of price discrimination is: if the differentiation is based on the type of goods sold, on the profile of the customer intending to browser or on a combination of these two elements.

Once the object of discrimination is established, it is necessary to distinguish the instrument through which a variable price structure will be defined.

Among these we can find an algorithm that analyses sales history, one that compares the prices of competitors, or the user profile.

In addition to algorithms, it is also possible to imagine a more analogical instrument such as a price grid inserted manually without a calculation or support logic.

Finally, a last discriminating factor is the frequency with which it is intended to change the price. For example, we may find ourselves faced with situations in which the price is modified based on the sales results of the product.

Another case involves price changes based on the life cycle of the individual product (ex: a food product subject to a short term that will see its price decrease through increasing discounts). Another option is linked to the timed modification of the price (eg: an airline ticket whose price will change every evening at 11pm on the basis of the recalculation of the variables that have an impact on the demand such as the number of tickets available, the days left to departure date, the price of a competing company).

A first fundamental distinction, as anticipated, is the definition of the object of price discrimination. In fact, it is possible to set up a strategy of dynamic tariffs that focus

on the good offered for sale, or on the profile of the potential customer, or on the combination of these two variables. When a good is for sale, one of the most important decisions concerns the definition of the price, which will depend on its value. But how to quantify exactly that value? This will depend more on the cost of production, but not only: quality, competitive prices, place, market conditions, sales trends and brand positioning are some of the other considerations underlying the pricing activity. Moreover, to the aggregate result of these factors, a fundamental consideration must be added on the deviation (positive or negative) that depends on the existing demand for that good.

The other important lever to modify the price is the profile of the potential customer, which can be taken into consideration alone or in combination with the product lever of which we have spoken. Discriminating the price on the basis of the purchaser means establishing that the same good can have a different value in the eyes of two different people due to tastes or needs. For example, a potential customer who searches several times for the same product on the internet could be a person who really needs it or one who strongly wants to complete the purchase and therefore could potentially be willing to pay more than another user who occasionally searched for the same product. How to quantify this difference in value? The answer, provided only if we have adequate past values, is given by a mathematical model. It is therefore easy to understand that the information scenario assumes a fundamental role, in order to set up a suitable pricing strategy.

3.6 ALGORITHMS BASED ON THE COMPETITOR'S ANALYSIS

This second type of algorithm allows to have a dynamic price based not on the event itself, but on the prices applied by companies competing on the same product or similar ones. Realizing a dynamic pricing policy with these algorithms is possible, thanks to the detection of the prices charged by the competitors acquired through a mechanism called "scraping" which consists in reading the code that composes the web pages involved in the analysis extracting useful information.

The relative advantages and disadvantages are listed below:

- Concerning the advantages, these algorithms guarantee the application of a competitive price.

The drawbacks are:

- They are very complex from the computational aspect.
- Scraping is a complicated activity and requires changes, even substantial ones, whenever the web pages under control change format.
- A maximization and optimization analysis impossible.

Once the problem of the computational load, which is a purely technical and economic obstacle, has been overcome, the choice of this method depends very much on the market in which it operates. If a product is the same as the one sold by

the competitors, it would not be possible to rely only on an algorithm that analyses the sales history. The price, however sensible, may not be competitive due to the simple fact that a competitor could apply a slightly lower price and thus be more competitive. On the web, "zapping" between the pages that offer the same product is very simple for a potential buyer, even if in the final choice there will be other factors besides the price (including the strength of the retailer's brand and the reviews of other users).

If instead a "unique" product is sold, then the analysis on the past data could be enough and the analysis on the competitors could be used as one of the many variables of the algorithm or as a support of the ex-post analysis of the sales result. If algorithms based on competitor analysis are used, the scraping programs will be the pivot of the pricing engine and the more frequently they will be activated, the more updates on competitors' prices will be received. If the algorithms were programmed to promptly intercept any change in a competitor and adjust their rates accordingly following a precise rule, we would be faced with the so-called "Reactive Pricing", a dynamic pricing strategy that involves a reaction by the seller to any change in sales conditions. The choice regarding the frequency of information updates detected by the algorithm depends only on how often competitors make their prices vary.

3.7 ALGORITHMS THAT CONTROL THE USER'S PROFILE

Another category of dynamic pricing's algorithms is the one based on the analysis of the potential buyer. These algorithms take into consideration, for example, how many times the user has searched online for a specific asset in the last week, if he has checked the same product on different sites, which purchases he has previously made, up to understanding the potential interests starting from the personal data provided to social networks.

The user called "evolved" knows that, to avoid making sense of the work of these algorithms, it is often enough to delete the history from the browser before proceeding with the purchase. That said, these algorithms are still widely used and often with excellent results, since the average user does not use useful precautions to mask the buyer's identity (activating the private browsing mode, changing IP, using different devices to check prices, etc.).

The most common examples of using this kind of algorithms see a rise in the price of some products, based on purchases made in the past. A customer who has purchased a smartphone of a specific model, for example, will be able to verify the increase in the price of the compatible covers with that model.

Even the device through which the purchase has been done can affect the price of the product: for example, surfing the internet from high quality laptops could

generate an increase in the prices of the products displayed by an e-commerce portal that uses these logics assuming that the user is willing to pay more for a given product and therefore not very elastic to price changes. Obviously, such policies will not be able to exclude false positives: for example, the algorithm could indicate as a well-off customer a user who is actually using another person's device. The quantity and quality of data, as we have seen, has a fundamental importance. Often these algorithms are ethically questionable as they base much of their success on a real spying activity of the potential buyer. Furthermore, these practices fall within the field of profiling, a field regulated by laws that vary according to the country in which one operates. Recently, the Antitrust Authority has fined some portals that operate as online comparators and travel agencies for some practices considered illegal, including the application of a price supplement in relation to the payment card used for the purchase of flights, this is a activity known as "credit card surcharge". Another example is the case of Cambridge Analytica, the company that would have exploited the personal data of over 50 million Facebook users in order to "target" and maximize the scope of the political propaganda of different election campaigns. The scandal, which has had global visibility, should give attention to these practices, which, as demonstrated in this case, are not only aimed at changing the prices of goods for sale, but also at influencing people's choices.

3.8 SEGMENTATION

The distinction of customer groups, a concept commonly known as segmentation, is much more acceptable under the same ethical profile: a useful practice when profiling information is available which makes it possible to distinguish different consumers.

We therefore deal with the theme of "population segmentation" or "cluster analysis", that consists in the grouping of homogeneous elements with respect to one or more characteristics present in a set of data. The operational flow of a segmentation analysis generally starts from the retrieval of the input data. Once the data has been collected and analysed in an adequate quantity, it is possible to proceed with the identification of the segments, based on characteristics that are important for a specific type of consumer.

Another step is to give each segment some properties that will help in setting pricing policies. There are several types of algorithms, called "clustering". How to choose the method to use?

- Depending on the type of variables you work with:
 - Quantitative: that represents precise numbers (for example the 20 - 45 years segment completes 1.3 purchases per year);

- Qualitative, consists in non-countable categories, for example the nationality of the buyer;
- Depending on the speed of the algorithm required;
- Depending on the expected quality of the solution.

The goal is to arrive at the end of this operation, displacing a limited number of segments (clusters). The most used algorithm in this context is the "k-means". This algorithm works by defining the desired number of clusters as input.

Obviously, the human eye is fundamental in the analysis of the results of this type of algorithm. The idea of entrusting the process to a machine and not caring about it at all, risks leading to negative effects because so much computing power, if not properly guided, risk to be an end in itself.

We have seen how the analysis of segmentation is, in fact, a tool to support the decision. In the case of dynamic pricing, the result of these analyses can be used as an additional input to increase the quality of the result.

The great added value of these algorithms lies in the infinity of the fields in which it can be applied. This analysis is particularly useful when the data to be taken into consideration are many (data base or big data) and therefore some automation can help in speed of execution and in precision.

At this point there is only one consideration, what will be the statistical distribution of our customers? Mathematics also offers alternative solutions in this case. The considered clients will behave with a normal (or Gauss) distribution, that is often

used to describe variables that tend to concentrate symmetrically around a single average value.

3.9 PRICES MANUALLY ENTERED

The previous cases analysed were based on the use of more or less sophisticated algorithms that performed mathematical models and /or real-time comparison of data read on the web. Another approach, certainly less scientific, consists in the possibility of changing prices manually.

Obviously, this approach is the most widespread today, because it does not require special technological efforts, but "only" Revenue Management skills and competences. The quality of the results of the strategies carried forward without the support of algorithms depends very much on the ability of those who deal with pricing, but also in the presence of optimal results, pros and cons will persist.

Concerning the advantages:

- It is a solution that can also be applied by non-advanced technologies.
- It is a solution that the Americans would call "quick and dirty" which could quickly give enough positive feedback to convince

those who chose it to invest in a more structured and expensive solution.

Regarding the backwards:

- There is no type of optimization of the pricing activity.
- Real-time price change logics or even more daily price updates are inapplicable.

By virtue of these considerations, we defend the choice of adopting a more scientific approach that allows an analysis of punctual data in a very short time. A hybrid solution, or a combined scientific and manual approach, can make sense where price changes are not required very frequently.

In this case, among the tasks of those dealing with manual analysis there will be the validation of the pre-sending of prices: if the output resulting from the algorithm is considered valid, then it will be put on sale, otherwise it will have to be retouched according to the considerations of the pricing manager.

These possible manual modifications could be recorded so that, through machine learning logics, even these variations can become knowledge material for the algorithms, in order to make less adjustments by hand.

3.10 COMPLEX ALGORITHMS

In all the approaches seen so far, the possible ways to create an algorithm are essentially two, one simple and a complex one. If we have a small amount of data and a modest number of variables, we can adopt the first way and therefore a spreadsheet that performs a mathematical model or a software that performs systems of rules or at least quick and punctual calculations.

When the problem to be solved is based on an important amount of data and the variables to be used are many, a simple spreadsheet may not be enough, in this case complex algorithms must be used.

The utopia of an algorithm that can receive input data, perhaps even properly structured, and can return reasonable results without the user knowing how they were calculated, is an interesting concept because it would allow anyone to use artificial intelligence, without having specific knowledge.

Artificial intelligence includes a series of different approaches that are divided as follows:

- Deterministic algorithms: they provide an approach that allows, once the inputs are known, to identify with certainty which outputs will be generated in the final process.

- Indeterministic algorithms: the execution of the algorithm contains at least one passage that it is not known a priori, this means that it is not specified how the algorithm has arrived at certain conclusions and, therefore, how the algorithm takes decisions.

Furthermore, the algorithms can be divided based on the type of input they receive:

- Fixed inputs: input data are fixed values;
- Stochastic inputs: the input data in this case are probabilities.

In everyday life it happens to have to deal continuously with objects, services and products that exploit the potential of algorithms. The fields of application of the latter are many as these algorithms by their nature are generic and can be used with any input.

In most cases, however, these algorithms have a deterministic basis and therefore, as mentioned before, we are unable to say exactly how the choices are made.

As far as indeterministic algorithms are concerned, they do not refer only to artificial intelligence, but there is also another category, more purely mathematical, of the so-called "numerical methods"²⁵, which allows to solve very complex problems in an approximate way.

25

In this case indeterminism is given, for example, by the possible parallel calculation used to speed up the times. Performing multiple operations at the same time the sequence of steps changes from execution to execution.

The indeterministic approach therefore has interesting aspects that justify its wide application, such as the opportunity to use large amounts of data (the so-called big data), in less time and the possibility of use even by the less experienced, thanks to the specific software support in which it is possible to insert a set of inputs and objectives to arrive at a result.

Deterministic algorithms, if used in reasonable way and supported by human know-how, are generally to be preferred, as each phase is possible to know what is happening, being able to adjust and / or justify the result.

Speaking of dynamic pricing, it is better to prefer a hybrid approach in which:

- All steps of the algorithm are deterministic;
- The calculation of the weights of the variables instead, which generally is composed by a large amount of data, lends itself to an indeterministic calculation.

In this way, it is possible to take advantages from both methods: it is known exactly what the algorithms is carrying out, while the effectiveness of the calculation can always be verified ex-post.

3.11 ARTIFICIAL'S INTELLIGENCE CONCEPT

Artificial intelligence is a very vast subject. The immensity of algorithms and applications requires a series of classifications. The most used is the one that provides the subdivision based on the line of thought that guides its work. The algorithms can be divided in four behaviour classes:

- Algorithms that thinks as humans do;
- Algorithms that act as humans do;
- Algorithms that think with reason;
- Algorithms that act with reason.

“Think as humans do” can be done in two ways: by imitating the ways of reasoning or by replicating the functioning of the brain.

Instead when we talk about algorithms that behave like humans, we try to create algorithms that reproduce human behaviours.

The other approach that envisages "algorithms that think rationally" only proposes to create automatism that perform mathematically correct tasks, without entering into human nature. So, theorems and logic will be the only actors of this context.

The last approach is the one of "algorithms that act rationally", that is an approach that involves the use of mathematics and logic, in order to achieve objectives that may vary over time. As for the dynamic price, these are the most suitable

algorithms. The customer will set goals (of sales or turnover) that the algorithm, with its logic, will try to pursue. In cases like this the customer can change the objectives in progress or consider some events that can change the scenario.

At this point the algorithm will need to know how to read any changes and recalibrate itself accordingly.

Some examples of artificial intelligence's algorithms are:

- Machine learning techniques;
- Data Mining.

3.12 PRICE VARIATIONS AND BEHAVIOUR AT THE BREAKEVEN POINT

The frequency of price changes is a very important issue, but it does not depend only on the optimization of the payback or only on the number of products sold, but also on the operational needs of those who sell and even within the limits of information technology. There is no update frequency that is good for everyone, in general, the more the updates are made frequently, the better it is, but there are realities in which continuous price adjustments would not help. For example, in the case of the ticketing of events with high demand, typically there is a peak in sales

in the hours immediately following the launch of the event and then a drastic decrease in purchases, based on the remaining availability which usually consists of few tickets of the highest value and that respond to a substantially inelastic demand.

In general, the type of product and the sales requirements make the difference and those who design the algorithm will have to find a good compromise between optimization and specific requirements.

Another important issue on which it would be good to focus on, is the behaviour to adopt if the sales impose the consideration of the breakeven point, that is the situation in which the production costs are balanced by the revenues.

The possible policies are essentially three. Once the breakeven is reached it is possible to:

- Ignore the breakeven and continue to apply the pricing policy used previously;
- Set the price at a static value;
- Bring down the price, either statically or dynamically, as the minimum target has been reached.

All this concerns the post-breakeven phase. With regard to the previous one, the price policy needed for a in-depth study because it will have to guide demand in order to sell a number of swift products in the shortest possible time to re-enter

costs or to meet minimum targets. To achieve this goal, a compromise must be found between the starting price and the fluctuations.

How to proceed if the breakeven has not been reached? Increasing the price continuously can be counterproductive and the supporting information of this complex decision comes mainly from the analysis of past sales.

Obviously, this argument is only valid if it is possible to receive the sales data with an adequate frequency in order to promptly detect the distance from the breakeven and change the policy adopted.

It should also be noted that the breakeven point must be considered unique for each event, but at the same time aggregated within a reasonable time interval. This means that two separate analyses will be performed:

- Related to the single event;
- Related to all the events.

Therefore, the breakeven for some events could be reached, but could also be compensated by the results of other events. As mentioned, some types of sales may not impose breakeven as a constraint, but even in these cases, it is good to establish goals in terms of sales and / or revenues to keep an eye on whether algorithm performance is higher, lower or in line to expectations.

3.13 FINAL CONSIDERATIONS

The question that now arises is: what will happen in the future? How will the algorithms evolve? This is a rather generic question, since everything depends on the reference market. However, it is possible to evaluate some developments:

- Innovation of the AI;
- Improvement of the calculation's power;
- Previous experiences.

As for artificial intelligence, innovations consist in improving existing algorithms or creating new ones. While for computing power, innovation will shorten the processing time and therefore allow more data to be processed with more accurate results.

The impact of experience is perhaps the most important factor at all.

If the evolution of artificial intelligence and computing power can be fundamental tools to improve performance, what really matters is the setting of the algorithm that does not necessarily have to have a basis of artificial intelligence.

So, for example, knowing that the analysis of the past data or the relationship between the price exposed and the fluctuations of the competitors have brought positive effects, this represents a starting point to improve the setting of price discrimination. Thus, we enter the topic of optimization, or rather the improvement

of what has been already done in mathematical terms (for example the determination of the price curve), but also of the approach to choose (decide whether to analyse past data or not).

The optimization can be based on the simple observation of past behaviours or on the application of a more rigorous methodology. To optimize it is important to have the necessary information in order to understand what was or what was not considered (for example, Was the weather a variable? What was the weight compared to the others?).

This optimization procedure should also be applied in cases where an algorithm is already working well, simply because the market is constantly changing and therefore variables that are not important now could become so in the future and viceversa. The second method, the more rigorous methodology, pursues the same goal, based on a more structured control procedure.

The optimization procedures (manual or not) simply represent periodic refinements. Returning to a topic already addressed, or the difference between deterministic and non-deterministic algorithms, both techniques can be improved in the future, considering that deterministic algorithms are generally preferable to others because they allow us to know exactly how the algorithm has determined a certain price. This conviction, however, could be denied, because several experiments are in progress, in which some algorithms will be able to create new ones.

All this seems too far away, but if these methods will be actually implemented, it would become "normal" to rely on algorithms created by machines that, like today, they would continue not to be "intelligent", but only well planned to solve problems automatically. In this way we would pass from machines that execute algorithms conceived by man, to machines that invent algorithms and then execute them.

At this point the question is: How is it possible to trust the quality of these algorithms? In some fields of application we could even ask ourselves questions of an ethical nature on the behaviour of these algorithms.

Today, those who use this technology often demand explanations of the behaviour of algorithms, but those who develop them should be able to give them clearly, having absolute control over production systems.

This reflection makes sense when we talk about pricing, but it is worth remembering that there are other fields of application where algorithms affect more complex aspects of price definition. Technology and ethics will have to mix together to bring effective and acceptable solutions to the market.

CHAPTER 4

CONSUMER'S PURCHASING BEHAVIOUR

For a long time, business economics studies and consumer behaviour research have been based on the assumption that the consumer defines his own decisions and plans his actions in order to maximize their utility.

This concept, known as the theory of consumer behaviour, finds its foundations in a plurality of contributions formulated over time by various authors, in particular Francis Ysidro Edgeworth, Pareto, Herman Gossen and Tullio Bagiotti.

The consumer decision-making process takes the form of representing consumer preferences as utility functions, also defined as indifference curves, since the different combinations of goods represented on the same curve give the consumer the same utility. From the intersection of these curves with the line representing the budget constraint, ie the different combinations of goods that the consumer can buy given the available monetary resources, the purchase choice take place.

According to Edgeworth, each actor acts exclusively to satisfy his own interests and that egoistic behaviour makes it possible to identify a possible correspondence

between the equilibrium of exchange in competitive markets and the general equilibrium conditions of the economy²⁶.

Some supporters of Keynesian theories propose to include the effects of past consumption experiences and buying habits in defining the consumption function. In the same direction, Day proposes a general model for the study of purchasing behaviours based on the evaluation of the purchaser's previous experiences, while other authors such as Gorman²⁷ and Pollak²⁸ introduce the theme of the variation of individual tastes as a determining element in the purchase choices.

These concepts seem to question the role of rationality in purchasing or consumption choices, or at least, considerably reduce the applicability of an absolute rationality as a fundamental driver in the definition of decision-making processes and consumer buying behaviour.

This evolution in the studies of consumer rationality makes it necessary to question the validity of the traditional approach according to which the consumer is aware of all existing consumption combinations, is able to correctly evaluate the utility deriving from each alternative the knowledge necessary to define the behaviours to be implemented with reference to each of the existing alternatives²⁹.

²⁶ Edgeworth, F.Y., *Mathematical psychics: An essay on the application of mathematics to the morale science*. Kegan Paul, Londra, 1881

²⁷ Gorman, W.M., "Tastes, habits and choices", *International economic review*.

²⁸ Pollak, R.A., "Habit formation and dynamic demand functions" *Journal of political economy*.

²⁹ Schiffman, L.G., Kanuk, L.L., *Purchasing behaviour*, Pearson, Londra, 2007.

In other words, it is necessary to recognize that consumers rarely have the information, skills and time resources necessary to adequately assess the multiple alternatives available in order to make a rational decision and that, in most cases, purchasing decisions and consumption behaviours are influenced by elements of non-rationality, due, for example, to the relational component and social values.

This clarification pushes to recognize that consumers are influenced by the search for satisfaction to a need rather than by the identification of optimal choices³⁰.

This requires, therefore, shift the focus of observation from the ex-ante conditions that should influence purchasing patterns and consumption behaviours to the needs that consumers intend to satisfy through their choices and their behaviours.

4.1 CONSUMING TO SATISFY A NEED

Taking into account what was introduced in the previous paragraph, it is possible to broaden the vision on purchasing models and consumer behaviour by inserting another element of reflection: the need.

³⁰ Simon, H.A., *Models of bounded rationality: Empirically grounded economic reason*. MIT Press, Cambridge 1997.

It is possible to say that need is a condition of dissatisfaction due to a perceived lack compared to an unfulfilled desire. In neoclassical economic theory the need is considered an element rooted in human nature in function of a series of preferences matured independently by the consumer in order to be able to maximize the utility achieved in the context of a purchasing process and / or consumption behaviour.

In recent years, the role of needs in determining consumer buying patterns and behavioural styles has been reconsidered, hypothesizing that they are subjectively constructed by the consumer as a result of the influence produced by a series of variables attributable to the context of belonging, to the dynamics relationships and perceived values.

In this sense, marketing as a complex of social and managerial activities aimed at understanding, satisfying and influencing consumer needs in order to generate an economic advantage for the company, offers the starting point for rethinking the relationship between need and consumption, product-service. If in a neoclassical sense it seems correct to say that the purchase of a good / service and its use are determined by the existence of a need, today more and more often the possibility is recognized that it is the good / service, or marketing policies implemented by the company, to condition consumer processes, pushing consumers to realize new desires.

It is possible to state that the need has the following characteristics³¹:

- *Unlimited*: as the needs are manifold and tend to increase over time;
- *Satisfaction*: where it is possible to identify an inverse correlation between the satisfaction of a need and its perceived intensity;
- *Comparability*: given the possibility for the consumer to compare the intensity level of the different perceived needs;
- *Subjectivity*: as each individual has specific needs;
- *Resurgence*: because the needs, even if satisfied, tend to manifest themselves over time.

These characteristics of need are essentially shared when the consumer thinks of any consumption process experienced during one's life. Another important issue concerns the purpose of the needs which, as varied and constantly evolving, make it impossible to define a precise objective classification of the needs that the consumer intends to satisfy.

This makes it necessary to rethink widely to used models such as Maslow's pyramid of needs. This model is based on the possible definition of a "hierarchy of needs" where the satisfaction of the needs considered elementary (those placed at the base of the pyramid) is a necessary condition for the emergence of higher order needs (those at the top of the pyramid).

³¹ Pini,G., *Il nuovo marketing del prodotto turistico. Analisi, strategia ed emozioni*. FrancoAngeli, Milano 2013.

More specifically, according to Maslow, physiological needs such as hunger, thirst and sleep as determined for the survival of the individual are the first that the consumer tries to satisfy with the available resources. After having satisfied these, security needs arise in the individual to be understood both in physical and psychological terms. Subsequently, the need for belonging takes over, manifested in the need to be part of a group. Once in a group, the individual perceives the need to be esteemed, or that his qualities are recognized, and, finally, satisfied all other needs arises that of self-realization, to be understood as a need perceived by the individual to realize his own aspirations and to play a role in the society in which he lives.

Maslow's pyramid of needs is undoubtedly one of the most used conceptual tools for the study and description of the *phenomena* at the base of consumption behaviours and purchase models: this model appears today not perfectly aligned to the social and market dynamics also for effect. The activity of the modern consumer who, following a multiplicity of impulses to which he is subjected every day and from the variety of possibilities offered by computer technology, seems to have lost any form of rational decision-making.

Need is increasingly understood as a subjective interpretation of social dynamics and trends. In this perspective, it becomes possible to explain the reasons for the growth of some productive sectors such as information technology and luxury goods whose products appear capable of offering a solution to the needs of

belonging and self-fulfilment that have become prevalent compared to the needs considered essential in the pyramid of Maslow. It is useful to analyse a new pyramid called COSMA where the levels of Maslow's pyramid are interpreted again following the changes produced in lifestyles and consumption by the spread of information technologies. In summary, this pyramid modifies the needs contained in the Maslow model, affirming that the elementary needs are due to the need of the individual to orient himself among the multiple impulses that he lives every day (sensory orientation). Subsequently, the need to interact with others (sociality), to give evidence to one's own ideas (mediality) and to show one's social status (self-celebration) is manifested. This pyramid offers a general principle of hierarchy that most characterizes the society that today represents us, but it seems to explain only in part the ways in which consumers decide how to use the available resources among the various existing alternatives³².

³² Del Giudice, M. Caputo, F. Evangelista, F. “How are decision systems changing? The contribution of social media to the management of decisional liquefaction, *Journal of decision systems*, 2016.

4.2 KNOW, EVALUATE, BUY AND CONSUME

The subject of consumer purchasing behaviour and decisions is one of the phenomena linked to the principle of causality. Tracing briefly some models on the subject of studying consumer behaviours and purchasing decisions, it emerges, in fact, that consumer behaviour is determined as a function of his personality in relation to the dynamics defined by the environment in which he is inserted.

Through this perspective it is possible to define the consumer behaviour through a sequence of episodes. These episodes could be summarized as follows:

- To know; to be understood as the set of acts carried out by the consumer to acquire the information necessary for a correct evaluation of the good / service in terms of quality / price ratio, compliance with needs, availability on the market, ...
- Evaluate: where the consumer realizes (consciously or unconsciously) a comparison between the good / service object of attention and his previous buying / consumption experiences. In this phase, the focus is on the experiences known to the consumer and the evaluation is mainly done by assimilation where the same tries to derive from known elements (brands, advertising, similar products already tested) useful information to evaluate the purchase of a specific product or service.

- Purchase: in the event that the evaluations conducted by the consumer have generated a positive outcome, proceed with the acquisition of the good / service and therefore to sustain the economic sacrifice required to obtain the availability of that good or service.
- Consuming: where the path of analysis of consumer behaviour is lost as the object of attention manifests its utility.

These models do not seem to be able to provide useful guidelines on the important elements and critical issues to be taken into consideration to ensure a stable relationship between buyer and seller where the latter seems to be increasingly aware of the relevance of the irrational variables that influence behaviour of purchasing and defining models and approaches capable of inducing specific behaviours regardless the decision-making path of the buyer.

In order to provide possible elements for reflection in order to rethink this market configuration in the interest of a consumer increasingly subject to impulses induced by the seller, it is necessary to rethink the analysis models of market relations starting from the consumer as the central element of any policy of the market.

4.3 THE CONSUMER BEYOND THE RATIONALITY

For a long time purchasing and consumption behaviours have been considered as tangible evidence of a linear causality process where the consumer reacted to specific and well-defined impulses formulated by the market by choosing in a range of possible alternatives.

This representation today is no longer able to grasp the specificities of the dynamics in place due to the behavioural evolution of the consumer and to the changing market conditions. The consequence is that the multiple actors of the market find themselves operating in conditions of perennial uncertainty where the time needed to validate a strategic choice sometimes exceed the normal duration of a need expressed by a consumer and/or a market trend.

The consumer is no longer considered a mere actor, recipient of predetermined proposals, but is seems as an active part of the process of defining market offers to which he collaborates by providing information and addresses based on his own experience.

This orientation produced in a relatively short period of time a profound disruption in studies on purchasing behaviour and consumption patterns, making it necessary to rethink the founding pillars of entire studies. The central elements of market

dynamics have been progressively challenged up to the point of redefining the reasons behind them.

In particular, we have moved from considering market relations as rational processes focused on the exchange of goods to looking at market dynamics in terms of relational processes where the parties exchange resources, information and knowledge to meet individual needs³³. The object of exchange has passed from being the central element of the transaction to becoming a vehicle through which it is possible to transfer information and knowledge for the satisfaction of multiple needs³⁴.

The same concept of need has gradually blurred its borders from being considered the manifestation of a condition of lack or dissatisfaction to becoming the realization of expectations and market visions³⁵.

The outcome of the described changes has resulted in a rethinking of the models of study and management of behaviours and purchasing processes that look at the consumer, no longer simply considered as a buyer, but in the broadest sense of user.

³³ Vargo, S.L., Maglio, P.P., Akaka, M.A., "ON value and value co-creation: A service systems and service logic perspective", *European management journal*, Vol 26, No.3, 2008.

³⁴ Vargo, S.L., Lusch, R.F., "From goods to service(s): Divergences an convergence of logics", *Industrial marketing management* Vol 37, No 3, 2008.

³⁵ Wilson, A., Zeithaml, V.A., Bitner, M.J., Gremler, D.D., *Services and marketing: integrating customer focus across the firm*. McGraw Hill, New York, 2012.

In this direction, contributions and models have increased to highlight the advantages of greater involvement of market players in the definition and implementation of market strategies. Multiple studies have been conducted to trace possible guidelines aimed at supporting economic organizations in defining relational pathways with their own market oriented to bidirectional relationships where each user is required to implement differentiated techniques and processes.

The consequence has been the proliferation of personalized proposals by the organizations and a greater awareness on the part of the consumer about the power held towards the producer. Market players have gradually been able to choose from a variety of increasingly complex proposals, while organizations have found themselves having to deal with the multiple complications imposed by a production-oriented logic of flexibility where the advantages of planning progressively blur.

We can talk about an evolution of the consumer subjugated to the market rules for long times, while today has the possibility to influence the behaviours of the organizations relying on their own knowledge and on their own resources to better satisfy their needs.

Actually, the most careful observers have noticed that the progressive increase in consumer power has not always been translated into a greater possibility of satisfying needs. The possibility for consumers to express their needs and to see

their requests accepted has often resulted in companies not able to respond promptly and economically to the growth in market demand.

On the other hand, consumers have gained a growing awareness of their needs thanks to the knowledge and evaluation of the variegated solutions proposed by the market organizations, manifesting at the same time conditions of growing dissatisfaction every time their expectations were not completely satisfied.

A vicious circle has been activated in which companies try to adapt their offers based on the wishes placed by the consumer. This tendency is not sustainable in the medium to long term and requires the identification of new instruments capable of ensuring the conditions of constant equilibrium in which companies' proposals can find a place on the market, satisfying the needs of consumers before they start a new "cycle". A fundamental role is played by information technologies and the multiple digital tools available to organizations to acquire information about the styles of consumption (and life) of the market in order to formulate proposals able to satisfy the needs of consumers before the latter have become aware of it or (in some cases) generating market needs that can then be suitably satisfied through the implementation of planned strategies³⁶.

This evolution opens up to a new debate on the subject of consumer protection, which, involved in the various opportunities offered by the digital world, can use to

³⁶ Constantinides, E., Fountain, S.J, "Web 2.0: Conceptual foundations and marketing issues", Journal of direct, data and digital marketing practice, Vol 9, 2008.

favour the emergence of needs, consumer behaviour and purchase models. Aware of this, we need to ask ourselves how we can promote consumer awareness so that it is possible to exploit the opportunities offered by the digital world without becoming a victim³⁷.

4.4 THE CONSUMER BETWEEN RATIONALITY AND EMOTION

The emergence and multiplication of personalized offers, initially formulated to better meet consumer needs, acting on its more active participation in the definition of strategies and corporate behaviour risks becoming a difficult management process. Emotionality as a set of values, psychological and cognitive conditioning acts on the consumer's unconscious and defines decisions and actions.

Emotionality must be understood as the set of dynamics that, based on the subjectivity of the individual consumer, define their decisional and behavioural traits due to the meaning attributed to market phenomena³⁸.

³⁷ Lucchi, N., *Digital media & intellectual property: management of rights and consumer protection in a comparative analysis*: Springer Science & Business media, New York, 2006.

³⁸ Westbrook, R.A., Oliver, R.R., "The dimensionality of consumption emotion patterns and consumer satisfaction" *Journal of consumer research*, Vol 18, No 1, 1991.

Therefore, a *continuum* takes shape where at one extreme there is rationality, through which decisions are the result of objective evaluations, on the other there is emotionality, where decisions and actions are the result of what is known and the result of how it was interpreted subjectively.

It is conceivable that the individual consumer chooses a spiral path alternating moments of rationality with moments of emotion in the face of interpretations and evaluations that start from subjective representations and then progressively to objective approach representations following the inclusion of a greater number of information.

The spiral model summarizes the dynamism of consumer behaviour and decisions and the identification of possible reference dimensions opens the possibility of arriving at a classification of the phases that the consumer goes through during the decision-making and purchase process.

The phases are the following four:

- *Phase 1*; Individual assessment based on previous experience. In this phase the individual has little information other than those derived from previous buying and consumption experiences. In this phase, the dimension of rationality prevails.
- *Phase 2*; Individual assessment is based on prevailing emotions. In this phase the individual is influenced by the emotions that he considers

prevalent in a certain period of his life³⁹. The perception and representation of possible purchase alternatives are still strongly influenced by the subjective dimension in terms of the ways in which the emotional aspect and the individual unconscious translate into apparently rational evaluations⁴⁰.

In this phase we are witnessing an attempt by the consumer to justify an emotional impulse through the artificial construction of rational motivations.

- *Phase 3*; Collective evaluation influenced by prevailing trends. In this phase the consumer passes from being individual to becoming part of an articulated entity that influences decisions and behaviours through the definition of fashions and trends that, acting on the need to belong, trace common paths for a greater management of the relationships of market.
- *Phase 4*; Collective assessment influenced by the shared evaluation of convenience. The last phase described concerns of the consumer who is part of an articulated community where decisions are shared in the light of

³⁹ The reference to the concept of emotions is to be understood in the broadest possible meaning of the term, that is, as a complex of psychological and cognitive elements that relate to the aspirations of the individual and to the way in which he sees and perceives the world.

⁴⁰ Consider in this regard the establishment in which, even knowing that a particular purchase is not necessary or is not aligned with the available budget, continuous motivations are created to justify its completion.

shared assessments regarding the individual and collective convenience of the product or service. In this phase the rational dimension is again prevalent, since from the collaboration between several consumers and from the sharing of information descends for the consumer the possibility to evaluate in a reasonable way its own needs and the various proposals offered by the market.

The described phases must not be considered exhaustive as each of them can be articulated in different scenarios and the indicated sequence could undergo variations with respect to the specific condition in which the consumer finds himself at a given moment or due to the influences of the market.

4.5 4 C's of decision making

It is possible to represent the matrix of consumer behaviour in terms of decision-making through the 4 C curve. This conceptual model well summarizes the

decision-making process experienced by the consumer every time he has to evaluate a buying behaviour⁴¹.

This model is based on the identification of two variables concerning the level of perceived chaos due to the decision maker's inability to identify an organizational model for available information and available information referring to the total data processed with reference to a specific decisional condition allows to decline the following 4 phases⁴²:

- **Chaos**, where the information available is almost non-existent, therefore the consumer does not perceive the problem, nor does he feels the weight of the decision-making process;
- **Complexity**, in which the consumer, as a result of the decision-making processes and of the experienced purchasing models, begins to acquire new information on the basis of which a first awareness arises about the need to be satisfied and the problem to be solved. In this phase the acquisition of new information generates uncertainty in the consumer until it develops an interpretative scheme;

⁴¹ Saviano, M., Capuano, F., "Le scelte manageriali tra sistemi, conoscenza e vitalità", in *Management senza confini. Gli studi di management: tradizione e paradigmi emergenti, XXXV Convegno annuale AIDEA*, Salerno, ottobre 2012.

⁴² Barile, S., *Management sistemico vitale*, Giappichelli, Torino, 2009.

- **Complication**, where the application of the identified interpretative scheme, if correct, allows to reduce the level of entropy due to the information available. In this phase the new information acquired allows to evaluate the validity of the identified interpretative scheme and its ability to provide information about the way in which to satisfy the perceived need;
- **Certainty**, where as a result of the validation of the interpretative scheme the consumer develops a behavioural model to be implemented each time he will find himself in the same situation or in similar situations in order to be able to reach the desired solution quickly and with the minimum use of resources.

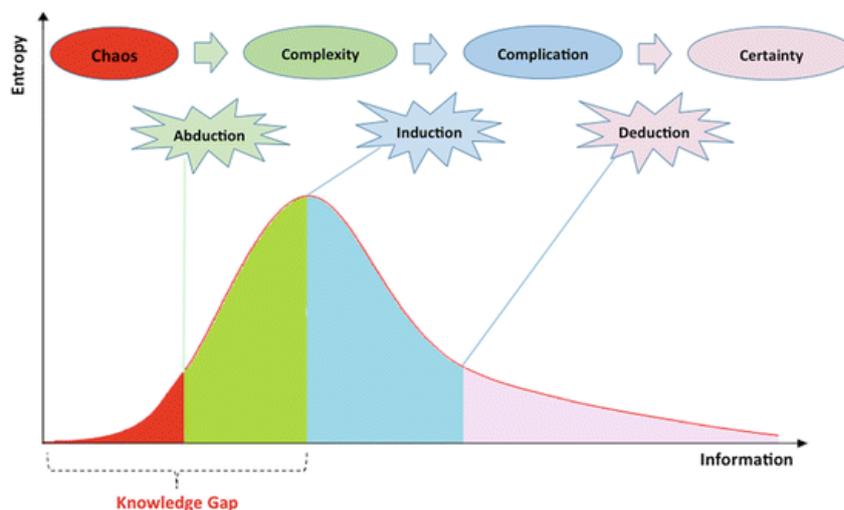


Figure 4.1 4C Curve⁴³.

⁴³ Source: Basile S., Saviano M, L., *Complexity and Substainability in Management: Insights from a Systems Perspective*, 2017.

The path that involves the four phases described takes place through the definition of three fundamental processes:

- Abduction, where there is an awareness of the existence of a problem to be solved and / or a need to be satisfied by activating in the consumer the instinct to acquire new information useful for a better understanding of the situation experienced;
- Induction, in which the consumer comes to the formulation of an interpretation scheme potentially able to provide an organization with the information available in order to be able to arrive at the concrete solution of the perceived problem or the realization of the need;
- Deduction, where the validation of the interpretative scheme formulated inductively due to the acquisition of new information allows the consumer to develop behavioural models suitable to guarantee the satisfaction of the perceived need.

The 4C curve model has the unquestionable advantage of clearly and comprehensively exemplifying the consumer's decision-making process and the ways in which it reaches the definition of its own behavioural models⁴⁴. At the same time, this model lends itself well to clarifying the relationship between emotionality and rationality, as it highlights how the initiation of a decision-making process is

⁴⁴ Barile, S, *Contributions to Theoretical and Practical Advances in management. A Viable System Approach (VSA)*, Vol II, Aracne, Roma, 2013.

inspired by conditions of almost total absence of information where the need to be satisfied and the problem to be solved are intuited from the consumer⁴⁵.

In this phase emotionality plays a key role in defining consumer behaviour and therefore the intensity with which it approaches the problem in an attempt to define a possible solution. Only subsequently, and due to the acquisition of new information, there are the conditions of rationality that push the consumer to evaluate the "convenience" of one solution with respect to another or, in other words, the validity of an interpretation scheme with respect to an alternative representation⁴⁶. The speed of acquisition and processing of information available to the consumer increases as a result of the introduction and dissemination of tools offered by information technologies⁴⁷. In this regard, in fact, it is necessary to

⁴⁵ Tronvoll, B., Barile, S., Caputo, F., "A systems approach to understanding the philosophical foundation of marketing studies", in Barile, S., Pellicano, M., Polese, F. *Social Dynamics in a Systems Perspective*. Springer, Cham, 2018.

⁴⁶ Saviano, M., Barile, S., Caputo, F., "re-affirming the need for systems thinking in social sciences: A viable systems view of smart city", in Vrontis, S., Weber, T., Tssoukatos E. *Global and national business theories and practice: bringing the past with the future*. EuroMed Press, Cyprus, 2017.

⁴⁷ Trispas, M., Gavetti, G., "Capabilities, cognition and inertia: Evidence from digital imaging", *Strategic management Journal*, vol. 21, No. 10-11, 2000; Leeflang, P. S., Verhoef, P.C., Dahlstrom, P., Freundt, T., "Challenges and solutions for marketing in a digital era", *European management journal*, Vol. 32, No 1, 2014; Solomon, M.R., Dahl, D.W., Zaichkowsky, J.L., Polegato, R., *Consumer behaviour: Buying, having and being*. Pearson, Londra, 2014; Di fatta, D., Caputo, F., Evangelista, F., Dominici, G., "Small world theory and the World Wide Web: Linking small world properties and website centrality", *International Journal of Markets and Business Systems*, Vol 2, No. 2, 2016.

specify that the ease of access to information and the possibility of using tools to support the definition of new interpretative schemes has the advantage of drastically restricting the development time of the decision-making process. The consumer has the opportunity to go through the phases of chaos, complexity and complication more quickly, finding himself, therefore, in the condition of having more time and more energy to experiment with new decision-making processes and to investigate the existence of different needs with the consequence of living a perennial condition of dissatisfaction⁴⁸.

4.6 CUSTOMER'S JOURNEY MAP

A customer journey map is represented by a diagram or several diagrams that depict the stages customers go through when interacting with a firm, from purchasing products online to accessing customer service on the phone to make compliances on social media.

To create effective maps concerning customers' journeys, these maps must be rooted in data-driven research and must visually represent all the phases that

⁴⁸ Lysonski, S., Durvasula, S., "Consumer decision making styles in retailing: evolution of mindsets and phsycological impacts", *Journal of Consumer Marketing*, Vol. 30, No.1, 2013.

customers experience based on a variety of dimensions, including customer emotions, goals and touch points.

Companies often have to create different customer journey maps based on a 360-degree view of how customers engage with the firm. For example, one journey map may begin with a customer using Twitter and, by using this, comment about a company, product or brand, then using the phone to reach a customer service line, and then using the company website. Creating a customer journey map can provide useful information for all levels in a department, from a sales rep who needs to figure out the best ways to interact with potential customers to managers looking for insight on which outlets customers use most. It can identify gaps in the customer experience, including:

- Gaps between devices, it occurs when a user moves from a device to another one;
- Gaps between channels, when the experience of surfing from a social media to a website could result a better choice.

The main benefit of a customer journey map is that it provides useful information on how customers move through the sales funnel. Maximizing the efficiency of that path means more sales at a faster pace. Moreover, understanding the customer journey is vital for sales and marketing to understand the customer experience.

There are four main parts of a customer journey map: inquiry, comparison, purchase and installation. Each stage is vital for sales and marketing departments.

The customer journey begins when a customer asks about a product or service. At that point, they become a prospect. The comparison stage is where customers use readily available information about different products in any given market to compare features, pricing, customer service ratings, etc.

The purchase stage takes place when the user becomes a customer. The last phase as shown in the following picture is represented by the installation/customer loyalty.



Figure 4.2 The four stages of a customer journey.⁴⁹

⁴⁹ Source: (<https://searchcustomerexperience.techtarget.com/definition/customer-journey-map>)

There are important requirements to map customer journeys effectively. Focus on customer perspective. The journey map needs to focus on how a customer experience interaction, not how the company perceives those experiences.

Account for customer segments. Account for the fact that different customer segments experience products, brands and services differently.

Research your maps. Use tools such as customer analytics to develop your maps to best reflect your constituencies and their likely behaviour.

Ensure that maps reflect all touch points. Maps must reflect all potential communication points through which customers want to connect with companies: email, text, websites, social media platforms and so on. Maps must also reflect different sequences for these maps, in which customers take different paths.

When designing a customer journey map, there's no set protocol, but there are guidelines for it, including that it should be visually appealing, comprehensive and understandable. Typical customer journey maps include infographics, diagrams and timelines. Multimedia has also been used for customer journey maps, including videos and storyboards.

The information included on the map should have both statistical and anecdotal insight and should be customer-facing.

4.7 TRANSFORMATION AND RESTRUCTURING OF CONSUMPTION MODELS

Having highlighted the need for an observation perspective aimed at considering the non-rational aspects that influence consumer decisions and actions in the changed socio-economic scenario, it becomes useful to focus attention on the role that environmental and social dynamics have in influencing the purchasing decisions and consumer behaviour⁵⁰.

In this perspective, it should be remembered that two authors such as Firat and Dholakia⁵¹ have pointed out that consumption is a social phenomenon and finds its expression in the modalities and intensity of the relations between the individual and the community to which it belongs. Recognizing the validity of this assumption means recognizing the need to shift attention from the individual to the "group" as a community united by the same traditions and habits⁵² in order to define consumption dynamics.

⁵⁰ Moe, W.W., Trusov, M., "The value of social dynamics in online products ratings forum", *Journal of Marketing Research*, Vol 48, No. 3, 2011.

⁵¹ Firat, A.F., Dholakia, N., "Consumption choices at the macro level" *Journal of Macromarketing*, Vol.2, No. 2, 1982.

⁵² "The Clan is an association of close relatives, originally residing on the same spot and observing their own traditions." Thurnwald, R., *Economics in primitive communities*. Routledge, Londra, 2018.

Purchasing decisions and consumer behaviour find their roots in the perception of consumption felt with reference to a state of lack and /or necessity⁵³.

This feeling acquires meaning in the consumer's perspective following the acquisition of information due to the exercise of daily activities and takes the form of formalizing a need⁵⁴.

The need referred to "arises" in the mind of the consumer and its definition is inevitably conditioned by the partial knowledge that the same has on the market, the methods of satisfaction existing and the aspects /values that determine the perception of the world by the consumer⁵⁵.

After formalizing the need, initially only vaguely perceived, the consumer initiates a series of actions and behaviours aimed at satisfying it by identifying a possible process (interpretative scheme) and verifying the same (deductive phase). This activity, depending on the social nature of consumption, inevitably suffers from direct and indirect influences coming from the community in which the consumer is part, generating potential changes in the initial perception of the need that modify purchasing patterns and consumer behaviour.

Environment-induced changes can be traced to three macro categories:

⁵³ Eastman, J.K., Eastman, K.L., "Perceptions of status consumption and the economy", *Journal of Business & Economic Research*, Vol. 9, No. 7, 2011.

⁵⁴ Ross, I., "An information processing theory of consumer choice", *Journal of Marketing*, Vol. 43, No. 3.

⁵⁵ Graziano, M., *La mente del consumatore. Introduzione al neuromarketing*. Aracne, Roma, 2010.

Adjustment, where, due to the interaction with the context of which the consumer is part, while acknowledging the validity of the process identified for the satisfaction of his need (interpretative scheme), he is pushed to modify its implementation. The reference in this case is to the hypothesis in which the consumer, following the identification of a good / service for the satisfaction of his need, is pushed to modify the traditional approach of acquiring it (eg: neighbourhood shop) to “adapt” the prevailing trends in the community of which it is a member (eg: purchase in specialized megastores or through e-commerce).

Transformation, where the consumer, due to the interaction with the community, calls into question the individual interpretation scheme formulated for the satisfaction of the perceived need “transforming” his own decisions and behaviour following the indications received from the environment.

Consider the case in which a need is formalized (eg dressing) and the satisfaction process identified (eg: buying a dress) the consumer decides to resort to a different mode of satisfaction (eg: tailored suit) as it is more responsive to the trends in a given period with reference to a specific community.

Restructuring, where the collective dimension prevails over the individual dimension as the consumer individual, due to the interaction with the community, tends to modify not only the satisfaction mode of the individual’s perceived need, but the need itself. In this configuration it is possible to distinguish two types of restructuring:

Physiological restructuring: where the consumer decides to change his own need because he unconsciously perceives that the same is considered to be outdated by the community in which he belongs (eg: purchase of a product deemed obsolete by the community).

Pathological restructuring, where the consumer matures only because of the influence of the community in which he belongs (eg: purchase of a product due to fashion).

Through the macro-categories mentioned above, the division between the condition of resilience and conditionality emerges once again. The individual and collective dimensions come together, determining specific actions and decisions on the part of the consumer without being aware of them⁵⁶.

In order to clarify this point, it is possible to imagine that the community acts as a conditioning system in the definition of the purchase models and consumption behaviour of the individual and that this conditionality can have different degrees of intensity depending on the psycho-cognitive characteristics of the individual and the specificity of the perceived need⁵⁷.

It is possible to hypothesize that the conditioning on the part of the community acquires value when there is a consumer with a strong identity, which therefore

⁵⁶ Parmiggiani, P., *Consumo e identità nella società contemporanea*. FrancoAngeli, Milano, 1997; Franchi, M., *Il senso del consumo*. Pearson Italia Spa, Milano, 2007.

⁵⁷ Setiffi, F., *Il consumo come spazio di riconoscimento sociale*. FrancoAngeli, Milano, 2013.

incorporates what comes from the community exclusively to choose the best way to satisfy their needs (adjustment) or to avoid behaviour that may not produce the desired utility (physiological restructuring).

On the other hand, the role of the collective can be of an imposing nature if, in the presence of an individual consumer with not well defined identifying traits, the indications coming from the environment provoke a passive change of purchase models and consumption behaviours (transformation) or the emergence of needs that do not respond to deficiencies rooted in the identity of the consumer (pathological restructuring). Attention to these processes is now increasingly evident with reference to the so-called “digital era” where the possibility for organizations to acquire information on critical elements more quickly in the definition of purchase models and consumption patterns of the individual makes it possible the definition of meta-mode which, inspired by the unconscious components of individual consumption, make it possible to standardize the decisions and behaviours of a multiplicity of consumers by making them believe that they are benefiting from personalized offers. Once again, therefore, the theme of consumption in the digital age opens up to ethical issues with regard to specific reflections must be developed.

4.8 A SOCIAL PERSPECTIVE OF THE RELATIONSHIP BETWEEN THE CONSUMER AND ELECTRONIC COMMERCE

We will now focus on the dynamics induced by the spread of information technologies and the emergence and consolidation of the so-called digital era⁵⁸. The phenomenon of consumption has profoundly changed with the onset of the digital age and there have been many evidences that can be traced back to the birth of electronic commerce⁵⁹.

In this regard, a brief examination of the contributions offered by the literature allows us to highlight that due to the effect of the dissemination of electronic commerce:

- Consumers have developed a greater awareness of their needs and potentially existing tools to satisfy them;

⁵⁸ Jenkis, H., *Fan, blogger e videogamers. L'emergere delle culture partecipative nell'era digitale*. FrancoAngeli, Milano, 2008; Sansone, M., "Modelli emergenti di interazione tra imprese e consumatori nell'era digitale: il caso di Second Life" in *VII Congresso Internazionale "Marketing Trends"*, Venezia, 2008; Pastore, A., "Market Driven Management nell'economia digitale". *Mercati e competitività*. Vol. 1, No. 2009; Confente, I., *Il Word of mouth. L'evoluzione del comportamento del consumatore nell'era digitale*, Giuffrè, Milano, 2012.

⁵⁹ Rutelli, P., *L'impresa intangibile. Marketing, Comunicazione e internet*. FrancoAngeli, Milano, 2004; Granieri, G., *La società digitale*. Laterza, Roma-Roma, 2011; Ornati, M., *oltre il CRM. La Customer experience nell'era digitale. Strategie, best practices, scenari del settore moda e lusso: La customer experience nell'era digitale*. FrancoAngeli, Milano, 2011.

- There has been a progressive reduction in the incidence of rational dimensions on the determination of consumption decision-making processes;
- The consumer has moved from being a passive subject to becoming a participating actor in the design and provision of value propositions;
- Economic organizations have multiplied their proposals;
- The boundaries of spatial and temporal dimensions in consumption have progressively dissolved;
- The times in which the market perceives the needs to be satisfied and designs potential solutions have been drastically reduced.

The aspects highlighted represent only a small part of the potentially ascribable consequences of the emergence and diffusion of the digital age and electronic commerce as domains whose extension seems to be pervading the life of each of us with a speed that until a few years ago was unthinkable if we consider that the value of online purchases by Italian consumers reached a record value of € 23.6 billion in 2017, registering an increase of 17% compared to 2016⁶⁰.

Analysing the available data on the purchase behaviour of the so-called digital consumers, it emerges that in Italy 78% of digital buyers make at least one purchase a month through electronic platforms, of which about 28% is called an intensive

⁶⁰ Perego, A., *L'eCommerce B2C in Italia: le prime evidenze per il 2018*. Osservatorio Ecommerce b2c- Netcomm, Roma, 2018.

buyer as they make at least one purchase per week and 72% is defined habitual buyer as it makes an average purchase a month⁶¹.

The study conducted by Idealo magazine on 1000 Italian digital buyers and published in 2018, shows that digital consumers declare to choose electronic commerce as it allows an easier comparison of prices (75% of respondents), an easier comparison of products (41%) and to more easily acquire information on the purchasing and consumption experiences of other users (40%)⁶².

The sectors most interested in the spread of electronic commerce are those related to culture and entertainment (65%), electronics (65%) and fashion (64%)⁶³ while the digital consumer profile shows a prevalence of men (61, 3%) and a greater concentration of digital purchases for consumers aged between 35 and 44 (26.9%)⁶⁴.

The emergence and spread of digital commerce then find a further element of particular importance in the change in the methods of acquisition and use of information. In this regard, the report on the consumption of information prepared

⁶¹ Elaborazione dati su Idealo. *L'e-commerce in Italia: le nuove abitudini di acquisto online*. https://www.idealomagazine.it/wp-content/uploads/sites/32/2018/03/2018_ebook_ecommerce_idealomagazine_scarica_gratis_IT.pdf, 2018.

⁶² Idealo. *L'e-commerce in Italia: Le nuove abitudini di acquisto online*. https://www.idealomagazine.it/wp-content/uploads/sites/32/2018/03/2018_ebook_ecommerce_idealomagazine_scarica_gratis_IT.pdf, 2018.

⁶³ *Ibidem*.

⁶⁴ *Ibidem*.

by the Authority for guarantees in communication shows that “in view of the growing diffusion of mobile devices among the public and the multiplication of opportunities for use, change the consumption patterns of the media and information. While the possibility of accessing multiple media (in multiple ways and moments) raises the possibility of exposure to information, on the other, the emergence of consumption habits such as simultaneity in the use of media and fragmentation (of audience, time and content) can encourage superficial and inattentive consumption of news, and increase the risk of disinformation”⁶⁵.

A closer look at the risk of growing superficiality and increasingly widespread disinformation due to the multiplication of excess information technologies is also evident when analysing the profiling of digital purchases⁶⁶.

Although 75% of those interviewed in the survey conducted by Idealo magazine, in fact, declare to choose the digital channel as it allows an easier comparison of sales prices, revealing full compliance with the criteria of rational evaluations in the process consumer decision-making, this data seems to conflict with the type of purchases mainly made online, that is, products concerning the culture and entertainment, electronics and fashion sectors.

⁶⁵ Autorità per le garanzie nella comunicazione, *Rapporto sul consumo di informazione*. Servizio economico-statistico, Roma, 2018.

⁶⁶ Schneider, G., Perry, J., *Commercio elettronico*. Apogeo Editore, Roma, 2000.

This consideration makes it possible to highlight that while the digital buyer justifies his own decisions and behaviour through the identification of rational motivations, the evidence of the facts leads him to believe that digital consumption is mainly influenced by hedonistic and experiential reasons.

In other words, we are witnessing the concrete contrast between the conditions of resilience and conditionality with the peculiarity that the consumer tries to justify his behaviours by providing reasons that seem to be attributable to resilience conditions where, instead, configurations of full conditionality occur⁶⁷.

Despite market surveys and studies conducted on digital consumer profiling, they seem to demonstrate a return to consumer rationality in the digital age, such data cannot and should not be considered exhaustive as they do not consider a partial perspective of the consumer who, unconsciously aware of its growing conditionality, it tries to justify choices and behaviours by recalling models inspired by the rationality it has learned during its life⁶⁸.

In other words, we find ourselves living an informative and existential “paradox” where the individual consumer as the entity most directly concerned and involved in the processes of evolution of electronic commerce is potentially unaware of the

⁶⁷ Morelli, M., *Il commercio elettronico: dall'immagine al profitto*. FrancoAngeli, Milano, 2005; Santacroce, B., Ficola, S., *Il commercio elettronico*. Maggioli, Santarcangelo di Romagna, 2014.

⁶⁸ Watson, R.T., Pitt, L.F., Berthon, P., Zinkham, G.M., “U-commerce: expanding the universe of marketing”. *Journal of the Academy of Marketing Science*, Vol. 30, No. 4, 2002; Eisingerich, A.B., Kretschmer, T., “In e-commerce, more is more”, *Harvard Business Review*, Vol. 86, No. 3, 2008.

motivations that influence his choices not being, therefore, able to provide useful information for the assessment of the dynamics and risks of the digital age⁶⁹.

At this point, the need to develop appropriate tools aimed at offering the digital consumer the information, knowledge and skills necessary to be able to appropriately carry out their decision-making and consumption processes subtracting from those configurations of conditionality that make the consumer becomes evident “slave” of a tool as a technological driver whose correct use could, instead, offer multiple advantages⁷⁰.

4.9 PROTECTION OF THE CONSUMER DURING THE DIGITAL AGE: THE USER’S IDENTITY

On the subject of consumer identity due to the multiplicity of dimensions that define both ontology and evolutionary dynamics, it is one of the most delicate areas of

⁶⁹ Ratneshwar, S., Mick, D.G., Inside consumption: Consumer motives, goals, and desires. Psychology Press, Londra, 2005; Kokolakis, S., “Privacy attitudes and privacy behaviour: A review of current research on the privacy paradox phenomenon”, *Computers & Security*, Vol. 64, 2017.

⁷⁰ Rayport, J.F., Jaworski, B.J., Introduction to e-commerce. McGraw-Hill/Irwin, New York, 2002; Chiu, C.M., Wang, E.T., Fang, H.Y., “Understanding customers’ repeat purchase intentions in B2C e-commerce: the roles of utilitarian value, hedonic value and perceived risk”, *Information Systems Journal*, Vol. 24, No. 1, 2014.

discussion in studies on purchasing models and its consumption behaviour⁷¹. Recognizing its articulation and the related impossibility of arriving at a comprehensive definition that is able to describe its multiple dimensions and their evolution over time, what could be interesting to researchers and market operators in the study of consumer behaviour is the definition of the ways in which the identity of the consumer plays a fundamental role in the processes of protecting the same in the digital age⁷².

Identity represents the “intimate nature” of the individual consumer and for this reason his dynamics are difficult to understand but, at the same time, he lends themselves to minor influences coming from the environment in which the consumer lives⁷³. By agreeing that the identity of the individual consumer defines the hierarchy of needs subjectively perceived contributing to the definition and allocation of available resources according to the importance attributed to each

⁷¹ Fabris, G., *Il nuovo consumatore: verso il postmoderno*. FrancoAngeli, Milano, 2003; Fabris, G., *La società post-crescita. Consumi e stili di vita*. Egea, Milano, 2010.

⁷² Hoffman, D.L., Novak, T.P., Peralta, M., “Building consumer trust online”, *Communication of the ACM*, Vol.42, No.4, 1999; Howells, G., Weatherill, S., *Consumer protection law*. Routledge, Londra, 2017.

⁷³ Trevisani, D., *Psicologia di marketing e comunicazione: pulsioni di acquisto, leve persuasive, nuove strategie di comunicazione e management*. FrancoAngeli, Milano, 2001.

need, it becomes fundamental to hypothesize mechanisms able to allow the consumer to formulate his own scale of needs in ways inspired by rationality⁷⁴.

In this direction, the diffusion of consumption styles and behavioural models that are often misleading in which possession takes on importance as an existential trait should be sponsored as little as possible so that they do not become an integral part of the framework on which the identity of the consumer is based⁷⁵.

The orientation towards possession and the continuous push towards a consumerist society, made possible thanks to the tactical use of the means of communication, require to be properly regulated⁷⁶.

What is intended to be proposed, is not to limit the possibility of promoting lifestyles or consumption patterns, but rather to recognize the impact that these, if later misleading, can have on the psycho-cognitive balance of the consumer and on the definition of his identity. In this direction, it is the responsibility of the Guarantor Authorities as well as of the Consumer Association to prevent the proposal of communication messages by companies from having a useful

⁷⁴ De Luca, P., "Il consumo critico: una ricerca esplorativa sulla dimensione sociale del comportamento del consumatore", in *5th International Congress Marketing Trends*, Marketing Trend Association, Paris-Venice, 2006.

⁷⁵ Miller, t., *Cultural citizenship: Cosmopolitanism, consumerism, and television in neoliberal age*. Temple University Press, Filadelfia, Pennsylvania, Stati Uniti, 2007.

⁷⁶ Wirt, F.M., *Politics, products and markets: Exploring political consumerism past and present*. Routledge, Londra, 2017.

information function to influence the definition of the identity of the consumer, pushing it to “live to consume” rather than “consume to live”.

4.10 PURCHASING DECISIONS AND CONSUMPTION STYLES

Purchasing decisions and consumption styles are the most tangible evidence in consumer decision-making processes. They offer concrete indications about the identity of the consumer and allow the development of hypotheses of interpretation regarding the role and relevance of political, social and economic influences in determining market trends⁷⁷.

From the purchasing decisions and the styles of consumption of the individual derive a plurality of feedbacks that influence the configurations and the balances among the multiple areas that define the ways in which the consumer makes his

⁷⁷ Lysonski, S., Durvasula, S., Zotos, Y., “Consumer decision-making styles: a multicountry investigation”. *European Journal of Marketing*. Vol.30, No.12, 1996; Statt, D.A., *Understanding the consumer: a psychological approach*. Macmillan International Higher education, New York, 1997; Peter, J.P., Olson, J.C., Grunert, K.G., *Consumer behaviour and marketing strategy*. McGraw-hill, Londra, 1999; Hausman, A., “A multi-method investigation of consumer motivations in impulse buying behaviour”. *Journal of consumer marketing*, Vol. 17, No. 5, 2000; Bauer H.H., Sauer, N.E., Becker, C., “Investigating the relationship between product involvement and consumer decision-making styles”, *Journal of Consumer Behaviour*, Vol.5, No. 4, 2006; Szmigin, I., Carrigan, M., McEachern, M.G., “The conscious consumer: taking a flexible approach to ethical behaviour”, *International Journal of Consumer Studies*, Vol. 33, No. 2, 2009.

purchasing decisions. Given the relevance of the impact that purchasing decisions and consumption styles have on the overall balance of the market, it becomes useful to try to imagine how they can indirectly promote the emergence of consumer protection conditions. The reference in this regard is the promotion of purchasing decisions and consumption models that are inspired by a deep knowledge of the principles of sustainability as a conceptual framework interested in ensuring the conditions so that the satisfaction of the needs of current generations does not compromise the possibility for future generations to satisfy their needs⁷⁸.

Promoting purchasing decisions and consumption models inspired by sustainability means directing the strategies and actions of the plurality of actors that make up the

⁷⁸ McDonald, S., Oates, C.J., “Sustainability: Consumer perception and marketing strategies”, *Business Strategy and Environment*, Vol. 15, No. 3, 2006; Choi, S., “Environmental and economic dimensions of sustainability and price effects on consumer responses”, *Journal of business ethics*, Vol. 104, No. 2, 2011; Sassatelli, R., “Consumer culture, sustainability and a new vision of consumer sovereignty”, *Sociologia ruralis*, Vol. 55, No. 4, 2015; Barile, S., Saviano, M., Iandolo, F., Caputo, F., “La dinamica della sostenibilità tra vortici e correnti: un modello a Tripla Elica”, in Borgonovi, E., Ailello, G., *Sviluppo sostenibilità e competitività delle aziende: il contributo degli economisti aziendali*, in *Atti del Convegno Nazionale dell’Accademia Italiana di Economia Aziendale*, 2016. Il Mulino, Bologna, 2017; Caputo, F., Carrubbo, L., Sarno, D., “The influence of cognitive dimensions on the consumer- SME relationship: A sustainability-Oriented view”.

Sustainability, Vol. 10, No. 9, 2018; Iandolo, F., Barile, S., Saviano, M., Caputo, F., Calbrese, M., “Lettura in chiave sistemica della dinamica evolutiva del concetto di sostenibilità”, Barile, S., (a cura di); *Evoluzionismo sistemico: il fascino della precarietà. Atti di convegno*, Aracne, Roma, 2018; Iandolo, F., Caputo, F., *La creazione di valore tra economia, impresa e sostenibilità*. Nuove Culture, Roma, 2018.

market towards the purpose of collective interest. Indeed, discussing sustainability associated with consumption means ensuring the satisfaction of essential needs to ensure the survival of all by promoting inclusion, the removal of social, economic and cultural barriers and promoting information sharing to promote balanced development⁷⁹. In order for sustainability to be a real inspirational driver in purchasing decisions and consumer styles, it is necessary, however, that individuals fully understand its logic, making it the conceptual bases in order to be able to accurately assess the difference between market propositions inspired by sustainability and market propositions that, instead, use sustainability as a potential marketing tool. Also in this case, the Consumer Associations are called upon to play a fundamental role in ensuring the protection of the consumer individual in the digital age through the preparation of training courses, information and tools aimed at supporting their assessments and the timely understanding of the dynamics of market.

⁷⁹ Del Giudice, M., Khan, Z., De Silva, M., Scutto, V., Caputo, F., Carayannis, E., “The microlevel actions undertaken by owner-managers in improving the sustainability practices of cultural and creative small and medium enterprises: A United Kingdom-Italy comparison”, *Journal of Organizational Behaviour*, Vol. 38, No. 9, 2017; Saviano, M., Nenci, L., Caputo, F., “The financial gap for women in the MENA region: a systemic perspective”, *Gender in Management: An International Journal*, Vol 32, No. 4, 2017; Caputo, F., Buhnova, B., Wallezky, L., “Investigating the role of smartness for sustainability: Insights from the Smart Grid domain”, *Sustainability Science*, Vol 13, No. 5, 2018.

4.11 IMPACT OF DYNAMIC PRICING ON CONSUMER'S BEHAVIOUR

While hotels come up with various discount strategies to attract consumers, especially during a recession, both hotels and consumers seem to favour dynamic pricing. Yet there are not enough studies available to reveal that dynamic pricing would positively impact consumers. Studies also indicated that price discounts give consumers not only monetary benefits but also positive responses. The purpose of this study was to investigate how uniform pricing and dynamic pricing influence consumers behaviour, in the presence of low involvement and high involvement consumers. The results of study suggested that high involvement consumers responded more positively to dynamic pricing than uniform pricing. Moreover, younger and female consumers are more likely to be involved in obtaining a discount, and high involvement consumers showed more positive feelings, and were more likely to make repeat purchases from a discount as compared to low involvement consumers. Since the economic downturn has heavily affected the hotel industry, hotels have made various discount strategies available in order to attract consumers. It is a well-known practice that during tough economic times hotels drop prices to stimulate demand against competitors⁸⁰ and to create the best cash flow possible in the short turn⁸¹. Among different pricing strategies, however,

⁸⁰ (Enz, Canina and Lomanno, 2009).

⁸¹ (Kimes, 2009).

companies tend to favour dynamic pricing, and consumers seem to accept it. From a company's perspective, appropriately applied dynamic pricing will increase revenues and profits⁸². The success of this tool relies on the ability to segment consumers into different groups with different levels of willingness to pay⁸³. In particular, the airline industries have increasingly employed dynamic pricing since their inventories are perishable, demand can be segmented, the products or services are sold well in advance, and demand fluctuates substantially⁸⁴.

Despite the increased interest in dynamic pricing, limited studies are available to reveal that consumers would react positively toward it.

From consumers' perspective, they seem to accept the application of dynamic pricing where they are charged different prices for the same service or product⁸⁵ since dynamic pricing enables consumers to make a choice over the price. Dynamic pricing has been used as a tool to provide price promotion; for example, consumers receive discounted rates if they accept restrictions, or if they make reservations in advance⁸⁶. In addition, studies have showed that consumers react differently toward price discounts of the same products or services⁸⁷. The concept of consumer

⁸² (Sahay, 2007).

⁸³ (Dimicco, Maes and Greenwald, 2003).

⁸⁴ (Kimes, 1989).

⁸⁵ (Choi and Mattila, 2009; Kimes, 2002).

⁸⁶ (Kimes, 2002).

⁸⁷ (Campo and Yague, 2007; Kimes, 2002).

involvement plays a significant role. Baker, Cronin, and Hopkins (2009) noted that involvement can be used to segment consumers into low, moderate, and high involvement groups which encourages different promotional strategies. Thus, the different involvement a consumer attributes to a discount may not be independent from a consumer's preference on pricing strategies. Also, the involvement level may influence a consumer's behaviour, such as high involvement consumers demonstrating more positive feelings from obtaining a discount. Despite the popularity of dynamic pricing in the hotel and airplane industries, there have been limited studies that examine the impact of dynamic pricing on consumer emotions and behaviours. So, the purpose of this study is to examine how discount strategies, dynamic and uniform, influence consumers' perspectives; particularly, their emotions and behaviours in the hotel industry in the presence of high and low involvement consumers. In the current study, dynamic and uniform pricing strategies are compared in order to identify which discount strategy consumers prefer.

Emotions and behaviours of consumers investigated how consumers respond to dynamic and uniform discount situations.

Sahay (2007) noted that most companies use comparatively simple strategies to determine prices: uniform pricing, competitive pricing, or cost-plus pricing. In uniform pricing, companies let prices remain uniform over time, regardless of the

changes in the environment⁸⁸. In competitive pricing, companies set prices based on their competitors' prices⁸⁹ while companies with cost-plus pricing calculate the cost of a good or service and then add a profit margin⁹⁰.

Uniform pricing lets companies have a fixed price over time, regardless of the changes in the environment and in the inventory level⁹¹, while competitive pricing allows companies to adjust their prices with regard to competitors' prices⁹². Traditionally, uniform prices would be set in the summer and be applied for the next entire year in a hotel; for example, hotels set a price in August or September for the following year. Uniform pricing requires hotels to commit to prices upfront, so those hotels may not have the ability to react to individual consumers⁹³. Thus, uniform pricing has been evaluated as unrealistic since the hospitality business today is so dynamic that it needs to be adjusted to changes⁹⁴.

Drozdenko and Jensen (2005) advocated that if a company fixes discounts, the products commercialized under a discounted price may be perceived as low quality. On the other hand, consumers might prefer the simplicity of a known, fixed price

⁸⁸ (Farahmand and Chatterjee, 2008).

⁸⁹ (Enz et al., 2009; Sahay, 2007).

⁹⁰ (Sahay, 2007).

⁹¹ (Farahmand and Chatterjee, 2008).

⁹² (Enz et al., 2009; Sahay, 2007).

⁹³ (Aviv and Pazgal, 2005).

⁹⁴ (Serlen, 2004).

that is not subjected to any changes. Some hotels choose uniform pricing through distribution channels to avoid potential consumer confusion caused by price changes⁹⁵.

Among different pricing strategies, however, both companies and consumers seem to favour dynamic pricing⁹⁶.

This tool became popular in many industries; in fact, this strategy is recognized as profitable for airlines companies and it is also practiced in other industries, such as hotels, cruises, and rental cars⁹⁷. Not only does dynamic pricing offer greater profits but it also can be used to reallocate demand to more appropriate times and manage a limited supply base⁹⁸.

The concept of dynamic pricing helps a firm to sell the right inventory unit to the right consumer at the right time and at the right price⁹⁹.

Having two prices, compared to having one price, will generate more revenue when fixed and variable costs and the number of consumers remain the same. Beyond the point where the costs have been covered, the potential profits increase as the number of price points increase¹⁰⁰. Hotels can increase profits through a larger volume of

⁹⁵ (Choi and Mattila, 2009; Yeaswich, 2004).

⁹⁶ (Dimicco et al., 2003; Kimes, 1989; Sahay, 2007).

⁹⁷ (Kimes, 1989; 2002; Duman and Mattila, 2003; Sahay, 2007).

⁹⁸ (Sahay, 2007).

⁹⁹ (Kimes, 2002).

¹⁰⁰ (Sahay, 2007).

sales. If costs are controlled, then aggressive pricing can elicit positive results; on the other hand, if low prices fail to cover costs such as maintenance, the long run benefit may be decreased¹⁰¹. Thus, rate reductions must be targeted and differentiated. Since discounts are specifically designed for those who are more price-sensitive, companies do not want to see that consumers willing to pay higher prices take an advantage of discounted prices¹⁰².

The largest concern with dynamic pricing is whether consumers accept dynamic pricing as being fair¹⁰³.

Consumers' perspectives of the fairness of dynamic pricing depend on the amount of information disclosed to consumers¹⁰⁴.

Kimes (2002) suggested that a consumer may view a situation as unfair when he or she pays more for a similar service and cannot perceive a difference in the service. If consumers perceive dynamic pricing as unfair, the increased revenues resulting from dynamic pricing may only be short term. However, dynamic pricing should be fairly accepted when information on the different pricing options are available, including: substantial discounts are given in return for cancellation restrictions; reasonable restrictions are imposed in exchange for a discounted rate and different

¹⁰¹ (Enz et al., 2009).

¹⁰² (Philips, 1981).

¹⁰³ (Kimes, 2002; Sahay, 2007).

¹⁰⁴ (Choi and Mattila, 2009; Kimes, 2002).

prices are charged for products perceived to be different¹⁰⁵. From a consumer's perspective, dynamic pricing enables a consumer to make a choice over the price, so he or she can receive special benefits from accepting restrictions or making reservations in advance. Aviv and Pazgal (2005) studied the optimal pricing of fashion goods, in the presence of strategic and myopic consumers and found that the announced uniform-discount strategies perform essentially the same as contingent pricing policies in the case of myopic consumers. Moreover, Sahay (2007) noted that consumers are more likely to accept dynamic pricing when they are more involved in the pricing process. This finding advocates that consumers enjoy the participation and involvement of the pricing process, so they would respond more to a dynamic pricing than a simple pricing since dynamic pricing requires consumers to be more involved in the pricing processes. Based on the literature discussed above, consumers' reactions toward two different types of pricing, dynamic and uniform pricing, may vary according to the level of involvement in obtaining a discount.

The concept of consumer involvement has been widely researched. Zaichkowsky (1985) provided comprehensive concepts of involvement in consumer behaviour.

¹⁰⁵ (Kimes, 2002).

Consumers can be involved with advertisements¹⁰⁶, products, and purchase decisions¹⁰⁷.

When consumers appear to be involved in advertising, they are personally affected by it; therefore, are motivated to respond to the advertisements.

When consumers appear to be involved in products, they are interested in product information based on their needs and values. Thus, when consumers are concerned with receiving a discount, they appear to be involved in obtaining a discount; therefore, consumers will be motivated to make a careful search for deals. While significant impacts are resulted from involvement on advertising¹⁰⁸ and information processing¹⁰⁹, involvement with purchases has not been studied in great detail in the hospitality industry. The concept of consumer involvement with purchases leads to be measured based on intensity of efforts spent in obtaining a specific activity. High involvement consumers are defined as those who spend more time, effort, and money to search for better deals.

Previous literature suggests that involvement could be measured by the time spent in product search, the energy spent, the number of alternatives examined, and the

¹⁰⁶ (Murry, Lastovicka and Singh, 1992).

¹⁰⁷ (Zaichkowsky, 1985).

¹⁰⁸ (Gill, Grossbart and Laczniak, 1988; Murry et al., 1992).

¹⁰⁹ (Celsi and Olson, 1988; Park and Hastak, 1994).

extent of the decision process¹¹⁰. Stone (1984) defined behavioural involvement as time and intensity of effort expended in pursuing a particular activity.

Other behavioural alternates for involvement are argued in a leisure context, such as frequency of participation, money spent, miles travelled, ability or skill, ownership of equipment and number of memberships¹¹¹. Conversely, low involvement consumers are considered passive toward price deals¹¹².

Low involvement consumers may obtain discount deals when they accidentally encounter them. Some literature indicated that consumers' information search behaviours and purchase decisions could be influenced by demographics, such as a traveller's age and gender¹¹³

In particular, Duman and Mattila (2003) studied roles of demographic variables influencing cruise travellers' discounts acceptance and usage behaviours, indicated that younger and female travellers and those with prior experience with cruise vacations were significant predictors of discount usage. Discount receiving behaviours with cruise vacations might be linked with hotel experiences.

Thus, the current study examines the role of gender and age in influencing consumers' level of involvement in obtaining a discount, and proposes two

¹¹⁰ (Engel and Blackwell, 1982; Schindler, 1998; Stone, 1984).

¹¹¹ (Kim, Scott and Crompton, 1997).

¹¹² (Farahmand and Chatterjee, 2008).

¹¹³ (Duman and ; Fodness and Murray, 1997; Van Raaij and Francken, 1984).

hypotheses as follows: H1: Female consumers are more likely to be involved in obtaining a hotel discount than male consumers, H2: Younger consumers are more likely to be involved in obtaining a hotel discount than older consumers. In addition, Campo and Yague (2007) analysed how a purchase at a discount price affects the consumer's perception of price as a function of his or her personal characteristics; they found that individuals with different characteristics perceive the price differently.

Consumers perceive price differently according to individual characteristics¹¹⁴ different people in different situations would lead to various levels of involvement¹¹⁵. Frequent consumers who are highly involved with the organization may perceive little need for price discounts and these loyal, committed consumers are likely to enjoy a positive perception of regular prices for the service offered¹¹⁶. However, as abovementioned, consumers are much more accepting of dynamic pricing when they are more involved in the pricing process. Their participation represents an acceptance of the practice; for example, an auction always has a higher degree of acceptance¹¹⁷.

¹¹⁴ (Campo and Yague, 2007).

¹¹⁵ (Houston and Rothschild, 1978).

¹¹⁶ (Beatty, Homer and Kahle, 1988).

¹¹⁷ (Sahay, 2007).

In contrast, uniform pricing strategies perform essentially the same as dynamic pricing policies in the case of low-involved consumers¹¹⁸.

Thus, higher levels of involvement lead to greater levels of consumer loyalty and a lower need for scarce marketing resources. Hence, involvement plays a significant role in the purchase decision; in most cases the relationships are stronger for consumers with higher involvement¹¹⁹. In addition, the degree of involvement that the price promotion is able to generate can cause a large consumer response to a price promotion¹²⁰.

According to Schindler (1992)'s study, consumers can become far more involved in a price promotion than any simple consideration of the discount would seem to warrant. From the previous literature, the following hypothesis is proposed: H3: Consumers highly involved in obtaining a hotel discount respond more positively to dynamic pricing than uniform pricing. Traditionally, literature suggests that consumers are interested in price promotions primarily because of the amount of money saved.

Kelly's (1967) theory suggested that the perception of consumers that received a discount not received by everyone else will enhance the "smart-shopper feelings" which result from this discount. Thus, a consumer's willingness to take restrictions

¹¹⁸ (Aviv and Pazgal, 2008).

¹¹⁹ (Baker et al., 2009; Varki and Wong, 2003).

¹²⁰ (Schindler, 1992).

in order to get a discounted rate should lead to a greater achievement and excitement as a form of dynamic pricing. Similarly, consumers will tell more about their purchase and make repeat purchases if they attribute more to the discount's cause¹²¹. Reynolds and Arnold (2000) pointed out that consumers tend to spread positive word-of-mouth and make repeat purchases when they feel they have a good relationship with the service provider. Therefore, the following hypotheses are proposed in this study: H4: Consumers highly involved in obtaining a hotel discount experience more positive feelings from a discount, compared to low involvement consumers.

H5: Consumers highly involved in obtaining a hotel discount are more likely to tell others, compared to low involvement consumers. H6: Consumers highly involved in obtaining a hotel discount are more likely to make repeat purchases, compared to low involvement consumers. Based on the above discussion, those consumers who are highly involved in obtaining a discount may respond more positively to dynamic pricing than uniform pricing, while experiencing more positive feelings from a discount, be more likely to tell others, and make repeat purchases. The current study categorizes consumers into two groups, based on their level of involvement in obtaining a discount. The two within-subjects variables (high

¹²¹ (Schindler, 1998).

involvement and low involvement) and the between-subjects variable (uniform discount and dynamic discount) were fully crossed.

Both high and low involvement consumers encounter two types of pricing situations, and different reactions may be expected. From the previous studies, consumers who were highly involved in coupon usage resulted in more emotional and behavioural consequence¹²², but those consequences could be both negative and positive¹²³.

Since the current study deals with the impact of discounts, the results are expected to be positive; thus, the study focuses on only positive consequences from obtaining a discount. The term “uniform pricing” is narrowly specified as the hotel industry offering a fixed, discounted price. On the other hand, dynamic pricing allows consumers to receive specific benefits if they accept certain restrictions, such as making reservations in advance, a no refund/change policy, or minimum days of stay. An experimental study was conducted to examine the impact of pricing strategies on consumers’ emotion and behaviour with consumers’ different levels of involvement. The experimental method relied on Hoch (1988)’s study, which states that respondents tend to use their own feelings and reactions as a guide to evaluating the feelings and reactions of others¹²⁴. ANOVA was used for testing

¹²² (Schindler, 1998).

¹²³ (Louro, Pieters and Zeelenberg, 2005).

¹²⁴ (Schindler, 1998).

Hypotheses 1 and 2; the groups of gender and age were compared to the mean of two different consumer involvements. Yet a t-test was employed for testing Hypothesis 3 because only high involvement consumers were taken into consideration to compare the means of emotional and behavioural responses between dynamic and uniform pricing. For testing Hypotheses 4, 5, and 6, ANOVA was employed since the data consisted of two different price strategies and two different consumer involvements to compare the means of emotional and behavioural responses.

The proposed research study would utilize a quantitative research method to collect data directly from respondents by measuring their involvement, emotion and behaviour intentions. To measure how a respondent reacts differently upon receiving a different discount, five questions were served as dependant variables to each participant regarding how a respondent feels as the protagonist of the scenario and how a respondent responds after having received the discount: good feelings; pride; gratitude; tell others; and, repeat purchase. Questions concerning good feelings, pride, and gratitude were grouped together to explore emotional responses. In terms of behavioural responses, the likelihood of telling people about the discount and the likelihood of repeat purchase were measured. Each question was answered using a 7 points' Likert scale. The scale for the first question, which asks about the participant's good feelings, was anchored at 1 (felt ok, but not especially

good) and 7 (felt really good). The scales for the other four questions are anchored at 1 (no) and 7 (yes).

To measure a consumer's involvement of price promotion, Zaichkowsky (1985)'s Personal Involvement Inventory (PII) was employed. PII offers a comprehensive collection of measurement scales from many different areas of marketing, it was used to classify respondents into three groups on the basis of their involvement scores, ranged from 20 to 140. Each respondent was asked to judge a scenario given 7 points scale according to how they perceive of obtaining a hotel discount. Items are scored (7) being the highest involvement to (1) being the lowest involvement. Some items were scored reverse to make sure respondents read each question carefully. The results of demographic profile indicate that the age group of the respondents was evenly distributed between the younger and older group; 45 % belonged to the group of ages below 30 and 55% to the group of ages 30 years or older.

Hypothesis 1 was supported that female respondents are more likely to be involved in obtaining a discount. ANOVA results of age distribution indicated a significant interaction of involvement with age. The results indicated that the mean of "younger than 30 years old" was higher than the older group.

Therefore, Hypothesis 2 was supported that younger respondents are significantly more involved in obtaining a hotel discount. Zaichkowsky's PII was used to classify respondents into three groups on the basis of their involvement scores¹²⁵.

From 120 involvement scores, which ranged from 20 to 140, the top forty responses were classified as high involvement consumers and the bottom forty as low involvement consumers, with the middle forty excluded. Based on the distribution of scores in the range of 20 to 140, involvement scores between 20 and 104 were categorized as low involvement and scores between 127 and 140 were categorized as high involvement. To examine consumers who are highly involved in obtaining a discount respond more positively to dynamic pricing than uniform pricing, only forty responses from those classified as high involvement consumers in the sample were included. Therefore, the number of responses amounted to 80 with 40 from the dynamic pricing group and 40 from the uniform pricing group. Then, five dependent variables were measured to see how high involvement consumers reported to dynamic and uniform pricing. Dependent variables concerning good feelings, pride, and gratitude were grouped together to explore emotional responses. Dynamic and uniform pricing strategies served as independent variables and emotional and behavioural response scores served as dependent variables. In the

¹²⁵ (Zaichkowsky, 1985; Varki and Wong, 2003).

presence of highly involved consumers, the mean of dynamic pricing for emotional scores was higher than the mean of uniform pricing.

In addition, the mean of dynamic pricing for “tell others” was higher than the mean of uniform. Similarly, the mean of dynamic pricing for repeat purchase scores was noticeably higher compared to the mean of uniform pricing.

Therefore, Hypothesis 3 was supported. With regard to Hypothesis 4, the two levels of consumers’ involvement in obtaining a discount served as independent variables and emotional response served as dependent variable. To evaluate their positive feelings toward a discount, respondents were asked three questions: good feelings, pride and gratitude. The results indicated a significant effect that consumers highly involved in obtaining a hotel discount experienced more positive feelings. Positive emotion measures were considerably affected by its involvement. The obtained results revealed that the mean of emotional scores for high involvement consumers were higher than the one for low involvement consumers.

Thus, Hypothesis 4 was supported: consumers highly involved in obtaining a discount show more positive feelings from a discount. Likewise, the mean of repeat purchase scores for high involvement consumers were higher than the one for low involvement consumers. Therefore, the results of ANOVA supported Hypotheses 5 and 6 that consumers highly involved in obtaining a discount are more likely to tell others and to make repeat purchases. A positive interaction between the levels of involvement and the likelihood of telling others and repeat purchases was found.

Given today's economic situation, firms are encouraged to use pricing strategies effectively to influence consumers, and online environment enables firms to dynamically manage prices. However, pricing decisions should be made with a careful understanding of their impact on consumers' responses¹²⁶ because pricing mistakes can harm firms much more heavily in a downturn than in an upturn. Moreover, literature suggested that individuals with different characteristics perceive the price differently¹²⁷ and individual consumers show different reactions to price of the same product in different situations, channels, and occasions of use¹²⁸. While past literature indicated that demographics, such as traveller's age, income, education, gender, and the number and composition of the traveling group, influence consumers' information search behaviours and purchase decisions¹²⁹, the current study also examined the role of gender and age in influencing consumers' level of involvement in obtaining a discount. The results of ANOVA indicated that female and younger consumers are more involved in obtaining a discount. The fundamental purpose of this study is to investigate how consumers' emotion and behaviour are influenced by uniform pricing and dynamic pricing, in the presence of high involvement consumers. The results of the study indicate that consumers

¹²⁶ (Choi and Mattila, 2009).

¹²⁷ (Campo and Yague, 2007).

¹²⁸ (Kimes, 2002).

¹²⁹ (Duman and Mattila, 2003).

highly involved in obtaining a discount respond more positively to dynamic pricing than uniform pricing. Moreover, price promotion has not only monetary benefits but also emotional achievements beyond the economic value of the money saved¹³⁰. Researchers note that price promotions have an ability to bring out strong feelings such as pride and anger when feelings are considered important in human motivation¹³¹. Moreover, purchase intentions will increase when consumers perceive themselves paying a good price for the benefits obtained¹³².

¹³⁰ (Schindler, 1989).

¹³¹ (Bandura 1977; Schindler, 1989).

¹³² (Ingenbleek, 2007; Noonan and Mount, 2007).

CHAPTER 5

CONSUMER'S SENSITIVITY TO PRICE

Price sensitivity is one of the key factors that affects companies pricing choices as well as its profits. Nowadays, as we have already mentioned in the previous chapters, consumers are well informed about product or service alternatives, product benefits, features, qualities and prices through advertising, family members, social networks, public information sources, and newspapers. Given all these methods in order to find information about a certain product, consumers will be able to find what they are looking for at a good price. Actually, consumers are sensitive to the prices because they want to get maximum benefits of using their money and time. Price sensitivity is an individual difference variable describing how individual consumers show their reactions to changes in price levels. Moreover, it represents the awareness of the consumers to what they perceive about the cost they are willing to pay in order to buy a specific product or service. Each customer will have a certain price acceptability range and different customers have different limits in their perceptions of what price is within their ranges.

Customer perceptions of price and their responses to price indicate whether a market is very price sensitive or not. Basically, this is explained through the market elasticity. If the changes in price have a proportionately greater impact on demand for a product, this can be defined as elastic demand. On the other hand, inelastic demand narrates the situation where changes in price have a little effect on the demand. The concept of price elasticity illustrates the aggregate response of a market segment to price levels. Pricing strategies and buyers' responses to prices have received a great attention ¹³³, but most of these researches have focused on the aggregate response of the market, the price elasticity, and not on individual consumer response¹³⁴.

5.1 PRICE SENSITIVITY ACCORDING TO SOME RESEARCH

Price sensitivity refers to the extent to which individuals perceive and respond to changes or differences in prices for products or services¹³⁵. Price research has typically focused on routine decisions in response to changes in price¹³⁶ and price

¹³³ Monro, 1990; Nagle, 1987.

¹³⁴ Gatignon, 1984; Kanetkar et al., 1992.

¹³⁵ Monroe, 1973.

¹³⁶ Bucklin, Gupta & Han, 1995.

format¹³⁷. More than fifteen years ago, Rao (1984) reviewed the pricing research in marketing and found that it typically focused on groceries in general. This focus has largely remained unchanged, with little work conducted with regard to goods or services purchased outside the grocery store. In some recent studies, some researchers have examined price sensitivity as independent variable with regard to services¹³⁸ and prescription drugs¹³⁹. Higher perceived price shows greater monetary loss for customers, which leads to lower purchase intentions¹⁴⁰.

5.2 PERCEIVED BENEFITS AND PRICE SENSITIVITY

Most of the literature suggests that consumers' assessment of the value of a good or service is based on their perceptions about what they actually receive and what are their expectations.¹⁴¹ Therefore, perceived value, is usually defined in the literature as the ratio of the perceived benefits of the goods or services to the perceived sacrifice in acquiring them¹⁴². This is positively influenced by benefits

¹³⁷ Dhar & Hoch, 1996.

¹³⁸ Lee & Ng, 2001.

¹³⁹ Gonul, Carter, Petrova & Srinivasan, 2001.

¹⁴⁰ Hee & Darren, 2006.

¹⁴¹ Monroe 1990; Zeithaml 1998.

¹⁴² Monroe, 1990.

and negatively influenced by price¹⁴³. Consumers might perceive the benefits of a good or service from different angles, such as functional, social, emotional, and conditional¹⁴⁴. For instance, functional benefits come from the instrumental usefulness of the good or its ability for delivering functional, utilitarian, or physical role. According to Tuha Munnukka, a customer's price sensitivity can be significantly explained by a customer's level of satisfaction. He added that intensive and low-end users are more sensitive to price fluctuations while moderate users are less sensitive. Moreover, a customer's price sensitivity can be significantly explained by a customer's price perception. Perception is the process by which people translate sensory impressions by selecting, organizing, and interpreting all the information in order to form a unified view of the world around them.

When customers are satisfied with the products or services, they buy the product again and again, becoming loyal to the company as well as its brand. Loyal customers are fundamental for a company that will be able to build brand equity and to survive in the market by holding a good portion of market share. Loyal customers are considered price insensitive to the price changes while non-loyal customers are sensitive in making decision about a brand¹⁴⁵. Some other literatures also support that loyal consumers are price insensitive and non-loyal consumers are

¹⁴³ Dodds, Monroe and Grewal, 1991; Monroe, 1990; Woodruff, 1997; Zeithaml, 1988.

¹⁴⁴ Sheth, Newman and Gross, 1991; Sweeney and Soutar, 2001.

¹⁴⁵ Kanghyun and Thanh, 2011.

sensitive to the price changes when they make decision to purchase¹⁴⁶. In the loyal segment, some consumers aim to purchase the same brand repeatedly because of its nonmonetary features, whereas others do the same in response to the attractive promotional offers. As an example, Ailawadi, Neslin, and Gedenk (2001) illustrate that the loyal consumers pursue specific brands because of their unique values and features. Krishna (1994) and Sun, Neslin, and Srinivasan (2003) show that loyal consumers are more likely to accelerate purchase timing decision than disloyal. Their findings suggest that loyal consumers might show value-conscious as well as deal-prone loyal behaviours. Consumers in the non-loyal segment frequently switch brands as a result of either the desire for variety¹⁴⁷ or the chase for promotional benefits¹⁴⁸.

¹⁴⁶ Brown, 1974; Webster, 1965; Krisnamurthi and Raj, 1991; Massy and Frank, 1965; Wernerfelt, 1991.

¹⁴⁷ McAlister and Pessemer, 1982; Seetharaman and Chintagunta, 1998.

¹⁴⁸ Brown 1974; Schneider and Currim, 1991.

5.3 INNOVATIVENESS AND PRICE SENSITIVITY

Price sensitivity may also be varied to the innovativeness of the products.

Innovators play a crucial role in the diffusion of the products¹⁴⁹.

Innovators typically influence the later buyers as opinion leaders¹⁵⁰, moreover, they represent the earliest buyers of new products. Their role in the diffusion process is important because they provide revenue and feedback to firms who launch new goods; they influence the diffusion of the new product to later buyers through the word of mouth; and their rejection of a new product may spell its market withdrawal¹⁵¹. A great deal of research has been devoted to describing and explaining innovative behaviour¹⁵² and several empirical generalizations have been proposed. Goldsmith and Flynn (1995) provide a brief summary of these findings. Innovativeness is domain specific; that is, consumers tend to be innovators for specific product categories. Innovators are thought to be not only opinion leaders, but also more competent about new products, more involved in the product category and have greater media exposure. Price becomes less sensitive for hedonic products or services that are consumed in hedonic occasion. In addition, high income leads

¹⁴⁹ Foxall, 1984.

¹⁵⁰ Gatignon and Robertson, 1991.

¹⁵¹ Foxall, 1984; Gatignon and Robertson, 1991; Kotler, 1994.

¹⁵² Rogers, 1983.

to less price sensitivity for hedonic goods or services, compared to functional goods or services¹⁵³. The more hedonic the perceived product or consumption occasion for, the less the price sensitivity. Research suggests that consumers are likely to respond differently to price changes in different product categories¹⁵⁴.

5.4 ONLINE CONSUMER AND PRICE SENSITIVITY

Nowadays consumers are online based buyers due to the faster spread of the online market all over the world. It is more convenient for the online buyers to compare the products offered by the various online sellers. It leads to the reduction of the search cost for customers, facilitated partially by internet shop bots, such as google.com, narrows price variation among the online vendors and ultimately increases the competition¹⁵⁵. Many online vendors offer unexpected low prices to attract their customers assuming that customers would buy products from the vendor who offers the lowest price¹⁵⁶. Pricing is a critical decision for any business, and especially so for online retailers.

¹⁵³ Wakefield, and Inman, 2003.

¹⁵⁴ Gardner, 1971; Monroe, 1973.

¹⁵⁵ Bakos, 1997.

¹⁵⁶ Baker et al., 2011.

As we have already mentioned in the previous chapters, e-commerce platforms have to respond promptly to what is requested by the market. But how to change the prices according to the competitors? We have analysed the great help that the artificial intelligence offers nowadays, this leads to the application for many companies of the dynamic pricing, already described in chapter 3. Nowadays the online sellers are wide spread all over the web, the offer of any product has increased in a consistent way during the last years and the consumers are facing with many online sellers, making it difficult to choose which is a good product at the best price. Since the “cyberconsumer” is always connected, as underlined in chapter 2, he can notice different price for the same product depending on the day. Now the question is, how this price fluctuation is perceived by the consumer? Or, even better, which is the perception about the dynamic pricing from the consumer’s perspective? Another research has been carried out, this time a questionnaire has been used as a survey tool.

5.5 THE QUESTIONNAIRE

The survey tool used to demonstrate what is the actual sensitivity of the consumer and his awareness concerning dynamic prices consists in a questionnaire since it was considered the best method in order to obtain clear answers from my reference

sample: the consumers. The questionnaire is based on 10 questions and 131 answers, a number considered wide enough in order to achieve a statistical significance. The ten questions follow a logical order, from basic consumer information such as gender, age and profession, continuing with questions related to online buying behaviour. The questionnaire is in Italian, since it has been addressed to an Italian audience, moreover it has been submitted through Google Survey.

The questionnaire is divided in three sections: the first one starts with a brief introduction of the survey in order to give to the consumer an idea of what kind of information are requested.

Sezione 1 di 3



Dynamic Pricing

Sono una studentessa laureanda in International Economics and Commerce e sto elaborando una tesi sulla prospettiva del consumatore in tema di prezzi dinamici sempre più utilizzati nei siti e-commerce. Il questionario non richiede più di 5 minuti per la compilazione ed è anonimo, dunque sentiti libero di rispondere come meglio credi. Esso riguarda la tua opinione sui prezzi dinamici e sulle tue abitudini di acquisto.

What is abovementioned is translated as follows: “I’m a student of international economics and commerce and I’m elaborating a thesis about the consumer’s perspective concerning the theme of dynamic prices, always more applied by e-commerce platforms. The questionnaire does not require more than 5 minutes for

its completing and it guarantees the anonymity, so you can answer as you see fit.

This regards your opinion on dynamic pricing and your purchasing habits”.

The first three questions are general information about the consumer, such as the gender, the age and the profession.



Sesso: *

M

F

Età: *

20/30 anni

30/40 anni

Maggiore di 40 anni

Professione: *

Studente

Lavoratore

Altro

Altro...

I choose to ask these questions since I have to understand the main gender, age range and profession to which I refer. The age is from 20 to over 40 years old, since I consider this range of age the most representative for my analysis.

Concerning the profession, I included also the students, since they do not have a fixed income coming from a job, their propensity to online purchases could be different from a worker that perceives a salary.

Since the dynamic pricing is a methodology applied on e-commerce platforms, I wanted to ask to my audience which is the related familiarity with the e-commerce's platform, using a linear scale from 1 to 5, where 1 means none familiarity and 5 high familiarity with e-commerce platforms.

Su una scala da 1 a 5, dove 1 è nessuna familiarità e 5 è elevata familiarità, *
qual'è il tuo livello di familiarità con le piattaforme e-commerce?

	1	2	3	4	5	
Nessuna familiarità	<input type="radio"/>	Elevata familiarità				

The following question asks the frequency with which online purchases occur, the possible answers are: every week, every month, every 6 months, every year. I chose this order simply because if I had left as a first answer “every year”, probably the majority of respondents would have answered “every year”, without having a clear frequency of online purchases made by consumers.

Con quale frequenza effettui acquisti online: *

- Ogni settimana
- Ogni mese
- Ogni sei mesi
- Ogni anno

The survey moves on asking which is the product that it is purchased the more frequently, I gave the possibility to select more than one choice since the consumer could buy more than one of the following product category such as: travels, services, physical goods and other. This latter option could give the possibility to the respondent to indicate another category not included in the possible answers.

⋮

Quale tra le seguenti classi merceologiche acquisti maggiormente online (è possibile selezionare più di una risposta): *

- Viaggi
- Servizi
- Beni fisici
- Altro
- Altro...

The following question asks “if they exist, which are the main barriers that you meet purchasing online”, in order to assess whether the consumers are prevented

from purchasing online, because of some specific constraints: lack of technological skills, lack of security in the payment methodologies, inability to observe/test the product physically. I added another option that refers to those consumers that do not encounter problems in purchasing online.

Se presenti, quali sono le principali barriere che incontri nell'acquistare online: *

- Acquisto online con facilità
- Mancanza di competenze tecniche/informatiche
- Mancanza di sicurezza nei metodi di pagamento
- Non poter osservare/testare dal vivo il prodotto

The questionnaire moves on with the second section that introduces what it is meant with “dynamic pricing” providing a brief description of this strategy implemented by online retailers, asking which is the consumers’ awareness about this practice.

Sezione 2

Considerando la seguente definizione: La determinazione dei prezzi dinamici, definita anche determinazione del prezzo in tempo reale, rappresenta un approccio per impostare il costo per un prodotto o un servizio altamente flessibile. L'obiettivo dei prezzi dinamici è quello di consentire ad un'attività che vende un beni/servizi su Internet di adeguare i prezzi in tempo reale in risposta alle richieste di mercato.

⋮

Hai mai sentito parlare di prezzi dinamici? *

- Sì
- No

The questionnaire ends with the last section, asking how the dynamic pricing is perceived by the consumers, including some options that can separate the consumers based on their attitude towards dynamic pricing, this leads to the creation of three macro categories of consumers namely the ones who perceive the dynamic pricing as an unfair practice, the ones who are indifferent and the ones who obtain benefits from it.

Sezione 3

Descrizione (facoltativa)

⋮

Tenendo presente la definizione precedentemente citata, come percepisci il prezzo dinamico? *

- Pratica scorretta
- Questa pratica ti è indifferente
- Pensi di trarne vantaggio nel momento in cui il prezzo è a tuo favore

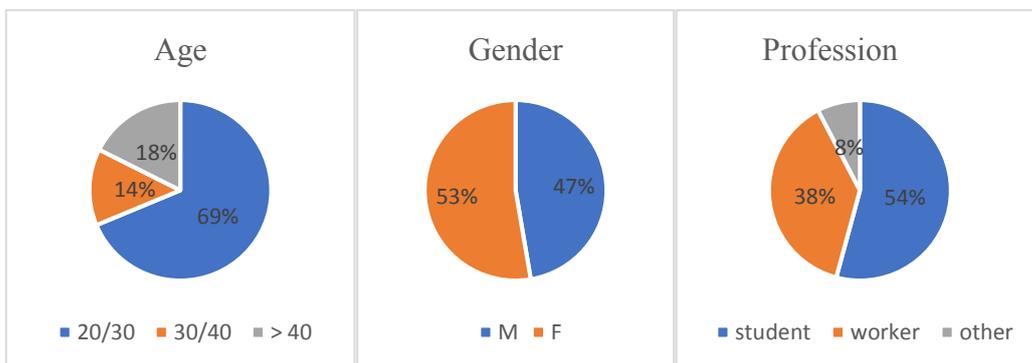
Hai mai acquistato un bene o servizio essendo consapevole dell'esistenza dei prezzi dinamici? Perché? Giustifica la tua risposta nella voce "Altro" *

- Sì
- No
- Altro...

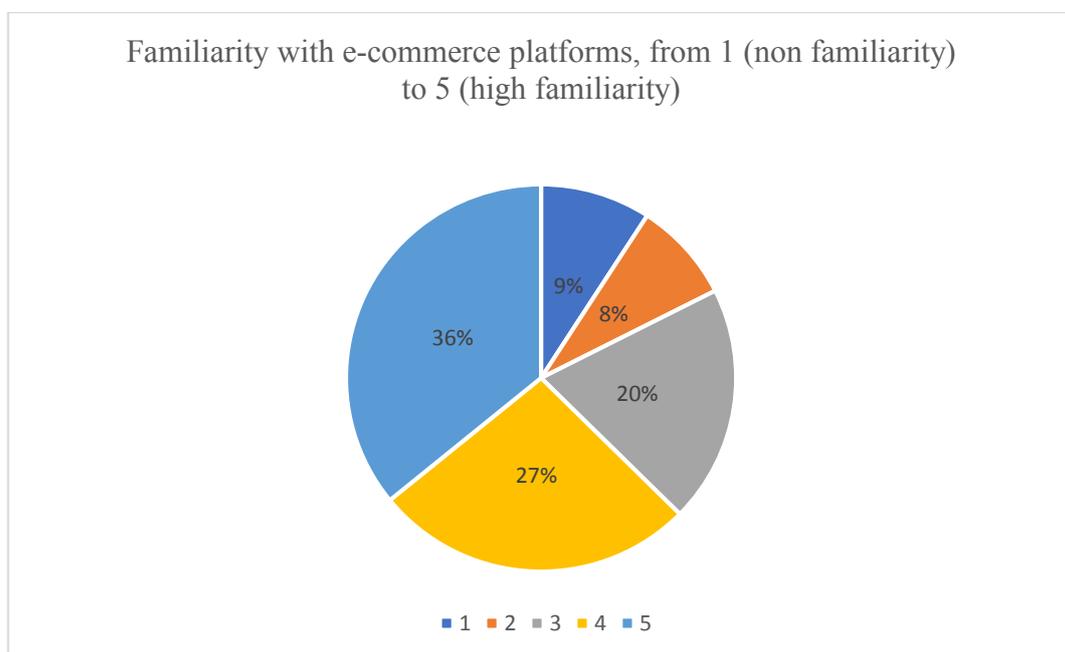
The last question of the survey is aimed to understand the propensity of the consumer to buy products subjected to dynamic pricing. The respondents had to justify their answer in order to understand how this strategy actually affects their final purchasing decisions.

5.6 SURVEY'S RESULTS

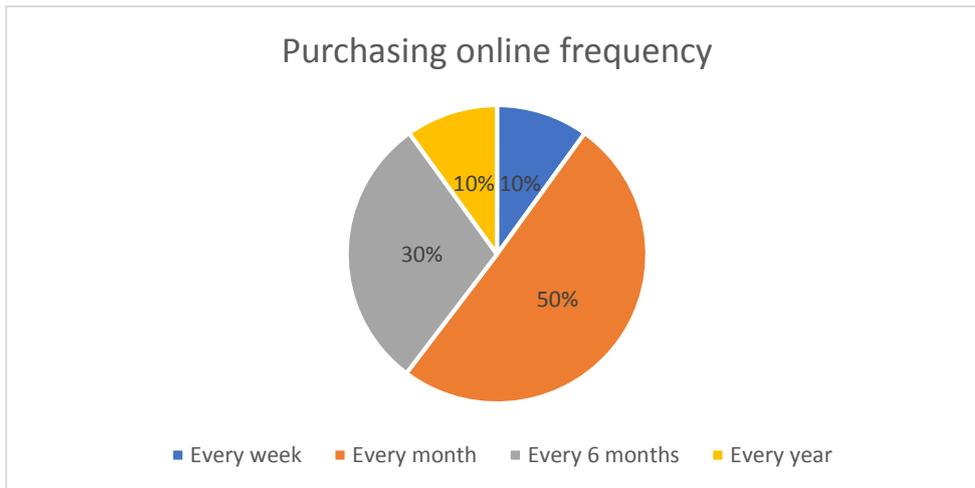
From the results that emerged from the questionnaire I obtained a distribution of the age that mainly represents the 20/30 years old consumers, evenly balanced among the two genders. The majority of respondents are students, but there is also a high percentage of workers too.



The following result describes the familiarity with the online platforms, from the graph it is possible to notice how the distribution is mainly concentrated among the respondents that have a good familiarity with the e-commerce platforms.

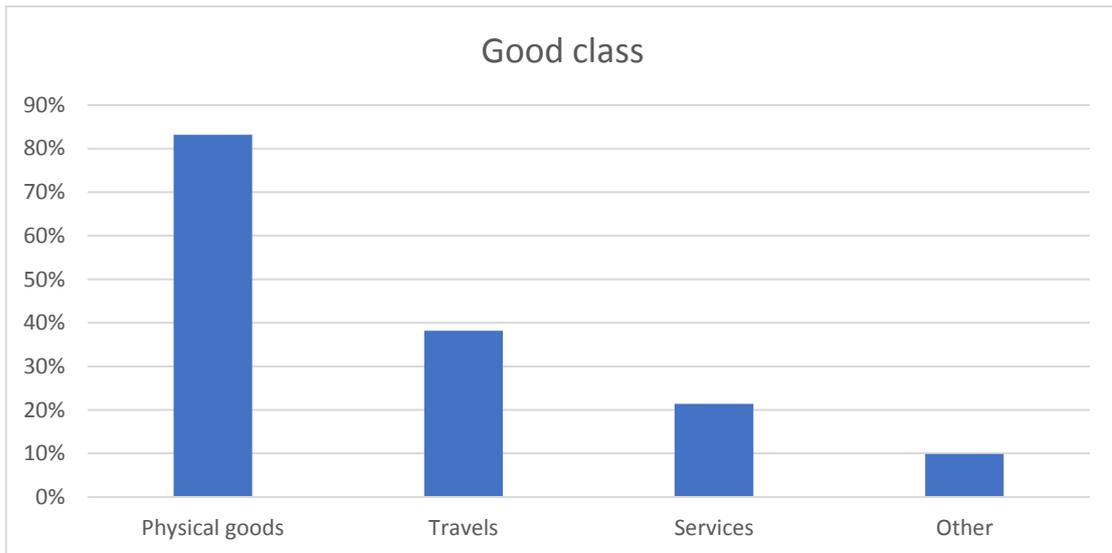


Concerning the frequency through which the purchases are made online, the following graph explains what emerged from the respondent's answers:



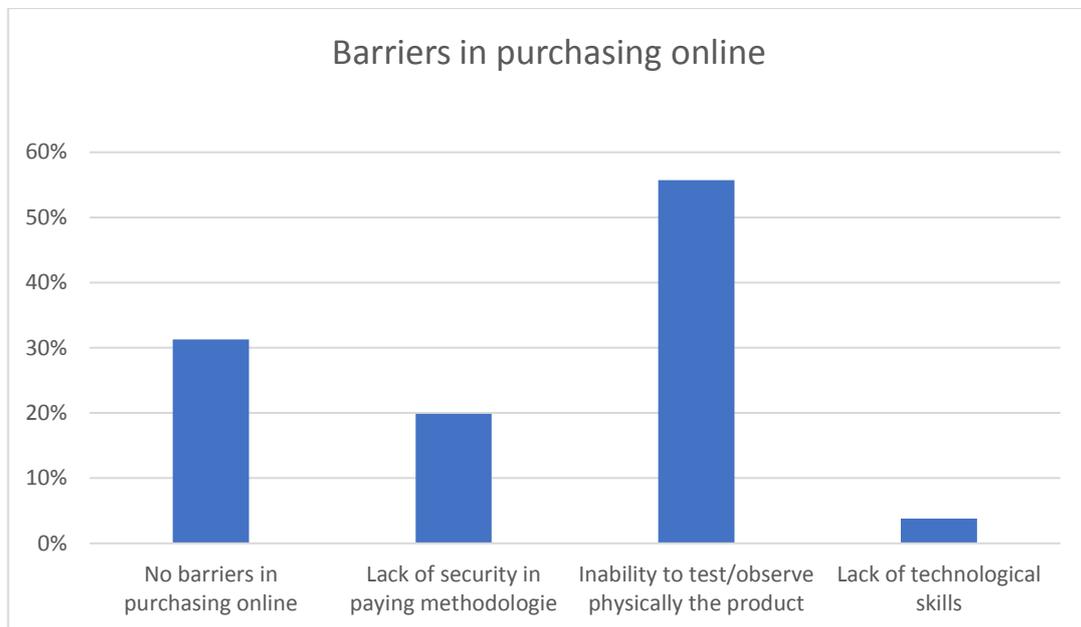
We can observe that the 50% of consumers actually made online purchases every month, this is an interesting data since it makes clear how nowadays there is the tendency to buy online, confirming what we have already expressed in the previous chapters, that is the change in the purchasing behaviour of the consumers.

This survey's results move on with the analysis of the goods class that is mainly purchased online, described as follows:



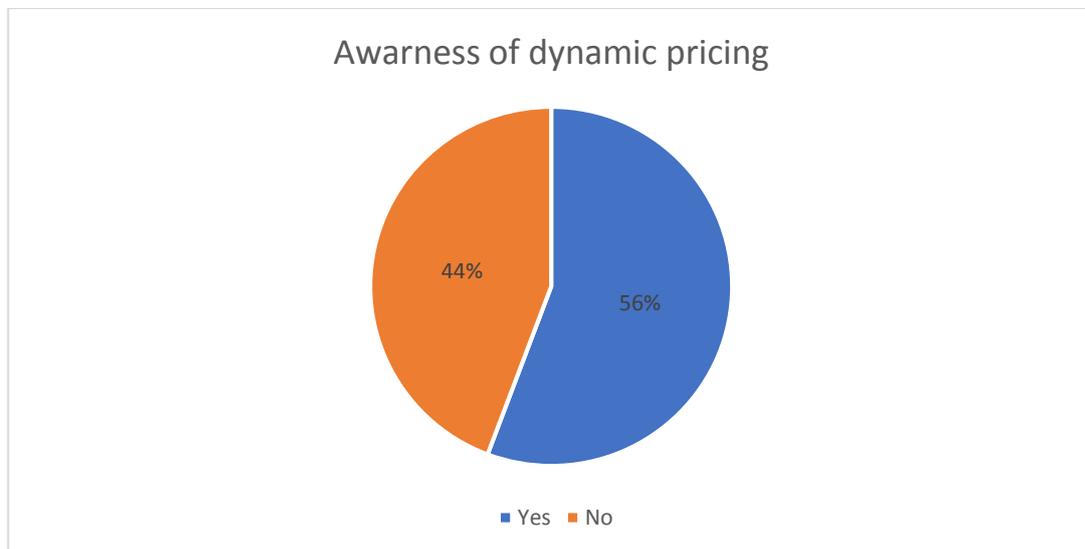
The highest percentage represents the 80% of respondents that chose as first option physical goods as a main category purchased online.

The further result analyses the main barriers that the consumers could find online, leading to hinder the purchases.



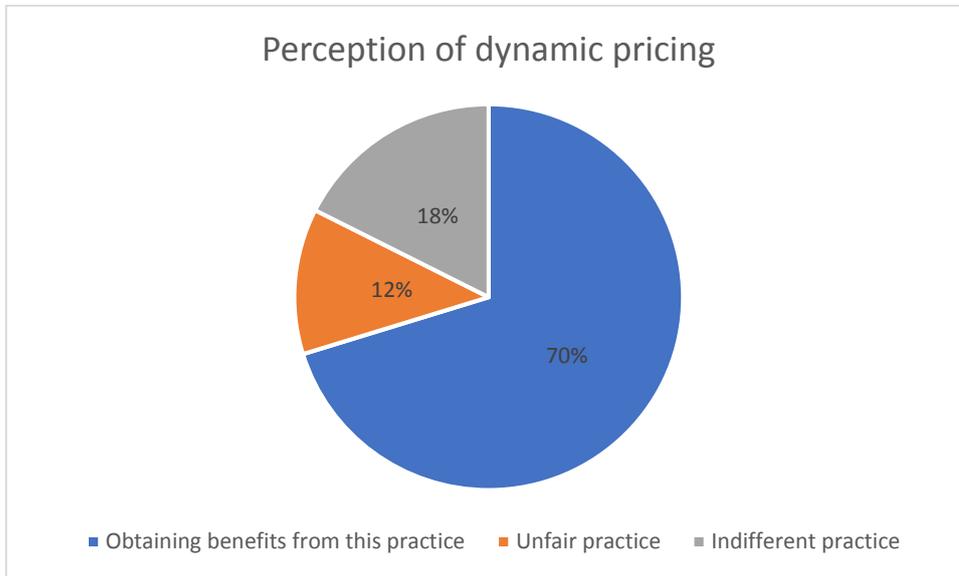
The inability to test/observe physically the product represents the main obstacle that consumers could meet in purchasing online, this means that actually consumers are dampened when they would buy something, since the desired item probably could not satisfy their expectations.

We can now move on with the results given by the second section of the questionnaire, the results achieved from the first question of this section is represented as follows:



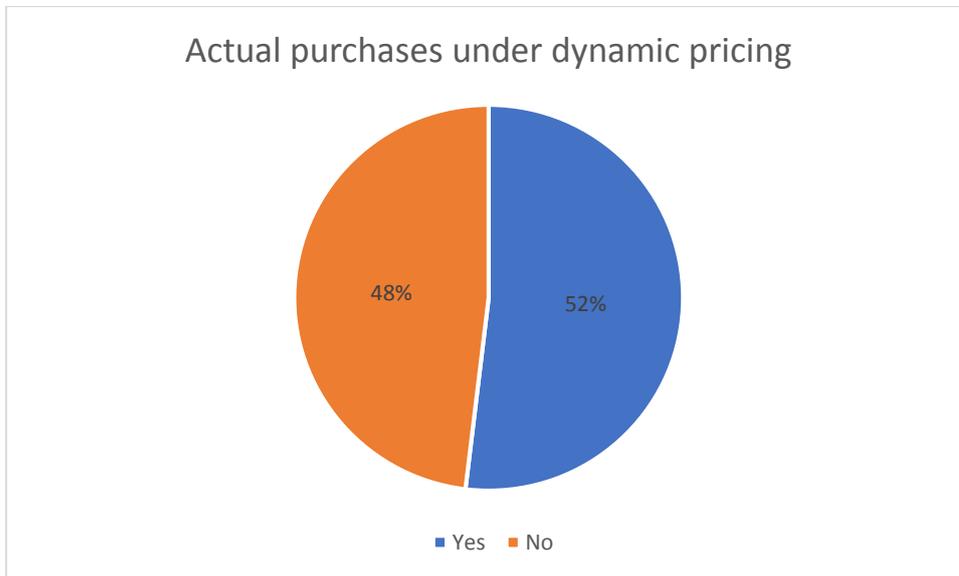
This graph represents an interesting result, since actually does not arise a huge difference between the two answers. In fact, it is possible to notice a slightly difference in percentage, anyway the 56% of respondents is aware of dynamic pricing, while the remaining 44% declares of not being aware of it. This latter value could be reasonable since the dynamic pricing is a recent strategy used by companies, that could be the reason why it is not so much known.

The last questions of this survey asked which is the actual perception of dynamic pricing according to the consumers. What emerged from the results is that the highest percentage of respondents (70%) perceive the dynamic pricing as a practice that could bring benefits when the consumer considers that the price that is going to pay is fair. This is represented in the following graph:



An interesting value is the 12% of the consumers that consider the dynamic pricing as an unfair practice, since they are aware that the item desired can be affected by price fluctuations from day to day.

In the last question of this survey I asked to my audience if they made online purchases being aware of the existence of dynamic pricing, the possible answers were “Yes” or “No” and what is emerged is shown as follows:



In this case there is not a huge difference in percentage terms, however slightly more of the 50% of the respondents declared that they have made online purchases being aware of dynamic pricing's presence.

Going deeper in the analysis, it has been possible to cross different data in order to find if there existed a pattern among different variables.

An interesting relationship between the age and the frequency of purchases made online emerged. As follows, the results obtained after carrying out the analysis by crossing data:

Etichette di riga	20/30 years	30/40 years	Over 40 years
Every year	6	1	6
Every month	50	9	7
Every six months	27	5	7
Every week	7	3	3

Between the consumers of 30/40 years and those over 40 years there is not a big difference in the frequency of purchases made online, while it is clear how there exist a relationship between the consumers that have 20/30 years old and their frequency of purchases made online. In fact, we can observe that this latter audience is the one that makes mostly purchases online every month/every six months and also every week with a percentage of 64% compared to the other age ranges.

Another pattern has been found, it is the one between the familiarity with the e-commerce platform and the awareness of dynamic pricing.

Always adopting an analysis by crossing the data, what emerged is represented as follows:

	1	2	3	4	5
No	11	4	14	18	11
Yes	1	7	12	17	36

Recalling that 1 represents non familiarity with e-commerce platforms and 5 represents high familiarity with e-commerce platforms, we can notice that actually

the consumers that have a high familiarity with the e-commerce have made more purchases online being aware of the dynamic pricing's practice, exploiting this when the cost of the desired good/service was favourable according to the consumer, in fact the percentage of consumers who are effectively aware of the dynamic pricing and who are more familiar with e-commerce platforms is about the 50%, while the users who have less familiarity with the e-commerce platforms are those who are less aware of dynamic pricing. In fact, analysing the answers given by the audience, has emerged that who answered "No" justified this respond explaining that they actually were not aware of the existence of this practice.

CONCLUSION

In this work we first analysed the development of e-commerce, the new digital world that increasingly includes retailers who want to be present on these "new" commercial platforms. Concerning the e-commerce, in this work it has been treated its history, its main characteristics and the role that covers in the digital market. We have seen how e-commerce has revolutionized sales and purchasing processes, since this tool offers advantages both from the point of view of companies and from that of the consumer. Continuing with the work, the theme of e-commerce was further discussed as e-commerce 2.0.

We have explained the role of this increasingly advanced electronic market, which allows the consumer to access e-commerce platforms at any time with extreme ease, thanks to the development of mobile commerce. The latter makes a faster navigation possible, in which users carry out research in a short time, obtaining all the information they need.

The development of social media was also discussed, which allows the creation of a real digital world in which users exchange opinions and get impulses from other consumers belonging to the same community.

Moving on it has been discussed the basic characteristics of what is the key element of this work: the dynamic pricing. It has been explained that this instrument is regulated by artificial intelligence, through a system of algorithms that vary prices depending on certain variables. This strategy is fairly recent, but already implemented by several companies that exploit its great potential. Subsequently, the purchasing behaviour of the consumer was analysed, now considered at the heart of every business strategy, and its relative perception with respect to the dynamic price, of which another analysis was carried out through the use of questionnaires. The objective of the questionnaire and also the ultimate goal of this elaboration was to verify the actual awareness and perception that the consumer has of dynamic prices. A first result obtained from the questionnaires is that the majority of users who use e-commerce platforms belong to the 20/30 age group. Furthermore, carrying out a depth analysis with the aim of finding patterns, it emerged that, crossing the data, it is the 20/30 age group that is most familiar with e-commerce platforms. Regarding the actual awareness of dynamic pricing, the results showed that just over half of the respondents were aware of the existence of this practice.

This result can be reasonable, considering dynamic pricing as a strategy that is certainly better known by the companies themselves that apply it, rather than by consumers who can instead take advantage from dynamic pricing being aware of it.

A further investigation has been elaborated, also this time with the aim of finding an existing pattern between the awareness of dynamic pricing and consumer familiarity with e-commerce platforms.

From the results obtained, we can effectively conclude that those who are more familiar with e-commerce platforms are not only more aware of this tool but have also made purchases online using the dynamic pricing logic in their favour.

It would be interesting to know how consumers try to exploit the dynamic pricing obtaining a benefit from it, making a further analysis in the future.

REFERENCES

BOOKS:

Boscaro A., Porta R., Marketing digitale per l'e-commerce, tecniche e strategie per vendere online. FrancoAngeli Editore, Milano, 2016.

Boscaro A., Porta R., Tecniche di web marketing : e-commerce e social media come opportunita per la piccola e media impresa, FrancoAngeli Editore, Milano, 2010.

Caputo C., Ciccone R., Nesci, D.D., Modelli decisionali e comportamenti di acquisto, una visione sistemica del consumatore nell'era digitale. Giappichelli Editore, Torino, 2018.

Chiappini F., Come realizzare un e-commerce di successo e guadagnare online. Editoriamobile Editore, 2011.

Chiarvesio M., Di Maria E., Che cos'è il web marketing. Carocci, Roma, 2008.

Christ S., Operationalizing Dynamic pricing models: Bayesian Demand Forecasting and customer choice modeling for low cost carriers. Gabler Editore, Augsburg, 2009.

Croxen John., C., Tonder J.V., Ottimizzazione e-commerce, Apogeo Editore, Milano, 2017.

Damian R., Calvin J., Marketing digitale: trarre il massimo vantaggio da email, siti web, dispositivi mobili, social media e PR online. Tecniche nuove, Milano, 2013.

Dell'Erba M., Quadrato, F., Dynamic Pricing, logiche e strumenti per impostare una struttura variabile del Prezzo. FrancoAngeli Editore, Milano, 2018.

Foglio A., E-commerce e web marketing; strategie di web marketing e tecniche di vendita in Internet. FrancoAngeli Editore, Milano, 2010.

Ghislandi R., Il manuale dell'e-commerce. Apogeo Editore, Milano, 2012.

Laudon K., Traver C.G., E-commerce, business technology and society, Pearson Editore, Londra, 2008.

Maltraversi M., SEO e SEM: Guida avanzata al web marketing. FAG, Milano, 2012.

Vergura D,T., E-commerce and digital transformation, nuovi scenari per imprese omnicanale e consumatori on demand. Giappichelli Editore, Torino, 2018.

WEBSITES:

https://www.researchgate.net/publication/267976594_Impact_of_Dynamic_Pricing_Strategies_on_Consumer_Behavior

http://jibe-net.com/journals/jibe/Vol_2_No_2_June_2014/1.pdf

<https://docplayer.net/12255564-Taking-a-look-at-different-types-of-e-commerce.html>

http://webbut.unitbv.ro/BU2016/Series%20V/BULETIN%20I/10_Todor.pdf

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.113.2212&rep=rep1&type=pdf>

<https://books.google.it/books?id=OVP-CQAAQBAJ&pg=PT163&lpg=PT163&dq=eurisko+new+media+2007&source=bl&ots=Y8ZG0kkHND&sig=ACfU3U3gGKJuNwdnTBmMEVxjwcCd6Ujg5w&hl=it&sa=X&ved=2ahUKEwippOP-g->

[TiAhVQIYsKHSqWAJ0Q6AEwAHoECAkQAQ#v=onepage&q=eurisko%20ne
w%20media%202007&f=false](http://www.francoangeli.it/Area_PDFDemo/100.471_demo.pdf)

https://www.francoangeli.it/Area_PDFDemo/100.471_demo.pdf

[https://www.cpe.ku.ac.th/~mcs/courses/2008_01/214571/slides/Laudon_Traver_E
-commerce4E_Chapter09.pdf](https://www.cpe.ku.ac.th/~mcs/courses/2008_01/214571/slides/Laudon_Traver_E-commerce4E_Chapter09.pdf)

[http://ceit.aut.ac.ir/~sa_hashemi/My%20Teachings/MS-CEIT-
Engineering%20and%20Construction%20of%20E-Commerce%20Systems/4-
Books%20&%20references/Economics%20Of%20Electronic%20Commerce.pdf](http://ceit.aut.ac.ir/~sa_hashemi/My%20Teachings/MS-CEIT-Engineering%20and%20Construction%20of%20E-Commerce%20Systems/4-Books%20&%20references/Economics%20Of%20Electronic%20Commerce.pdf)

<https://academic.oup.com/jcr/article-abstract/33/3/304/1891884>

<https://www.sciencedirect.com/science/article/pii/S1040619005000412>

<https://www.sciencedirect.com/science/article/pii/S0305048300000219>

