Università
Ca'Foscari
Venezia

Master's Degree

in "Innovation & Marketing"

Final Thesis

Social media: the empirical analysis of the hospitality sector

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Matriculation number:
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Academic Year
2019 / 2020

To my family and my Guardian Angels Lino, Bruna and Jack.

There is a driving force more powerful than steam, electricity and nuclear power: the will

ABSTRACT

The advent of technology has deeply reshaped the way people and organizations communicate with each other all around the world. Specifically, social media have been having a truly revolutionary effect on organizations becoming integrative tools of communication strategies. This evolution, completely different from the best practices taken for granted over the years, has brought great social and economic changes to the traditional lifestyle and attitude of people. Moreover, what is true for people is even more true for organizations, that if they want to stay competitive, should properly manage these meaningful digital communication tools, used by billions of active users producing and exchanging information daily. Due to different reasons, to which I will refer later, users are affected by other users' comments, feelings, thoughts. More specifically, if we consider the brands' markets, some key elements such as comments, and reviews of users could be potentially crucial factors for subsequently customers' purchases. One of the many reason companies, organizations, and institutions should pay scrupulous attention to the communication that occurred in social media, is to attract, interact and satisfy as many customers or users as much as possible.

In the concluding section (part of my thesis), to better understand the relationship between social actions and their effects, I examined some empirical models to demonstrate how some elements of a sample of shared posts in social media, such as Facebook and Instagram, may in some way attract user's attention influencing consumers and users as well. The main purpose of the findings is to provide possible outcomes for future researches and organizations which might get interesting insights for their communication strategy.

INTRODUCTION

The communication strategy of each organization is extremely important for companies' success even if it presents critical issues. Over the years, the advent and the constant updating of technology have transformed the way people communicate to each other, converting daily life into a digital sphere trough which users interact, create and get information via laptop, mobile and any technological devices.
Thanks to the evolution of the Internet (Web), the development of the social media platforms takes places quickly. In fact, nowadays there are more than 206 social media platforms worldwide (Magliocco, 2018).

Considering the social media evolution, users, organizations and institutions are continuously exchanging any kind of information, transforming social media and Internet application the first source of information. In addition, the exchange of information could result important assumptions of users' behaviours (purchases) and useful insights of product/service developments. In the business perspective, the social media era has become an important tool of marketing communication strategy because of active participation of different users in this environment. In the course of time, the traditional marketing activities (TV, radio, billboards) have assumed less importance, giving more relevance to the digital marketing activities. In the communication process, organizations have to adapt to this "new" communication tools, in order to exploit the main benefits of social media platforms. Companies have to monitor any user actions in the social media in a way to promote brands, as well as take advantage of all the dynamics that take place in the social environment. On social media, objectives such as brand awareness, brand engagement and word of mouth are difficult to measure in monetary term because social media activities assume relevant roles in the sentiment evaluations of users and do not have an economic outcome but these are potential critical factor in the users' feelings, thoughts, as well as users' perceptions.
The phenomenon of social media has a considerable impact also in the number of existing social media, time spent by users and the continuous creation of new social media platforms (TikTok 2018). According to the updated Digital 2020 Global Overview

Report (Kemp, 2020)[1], approximately 3.8 billion people are using social media, representing more than half of the world's population. This means that social media has become an integral part of human life and it is highly likely that the total number of social media is estimated to grow. In fact, the general trend shows a significantly increase of 10% of new users, compared to the previous year. A closer look at the Italian data, as for January 2020, reveals an overall growth in numbers equal to an increasing percentage of 2,4% new users (1.2 million) compared to the previous year. In addition, the average amount of time per day spent using social media is equal to 1 hours and 57 minutes, and it is a critical data of social media uses for organizations because considering the amount of time spent by users on social media, companies need to intensify their digital communication strategies in order to achieve as many users as possible. Moreover, if we consider the active users versus total penetration, isolating the data to eligible users aged 13+, the average social media penetration rate is equal to 56%. The following figure classifies the most used social media in Italy.

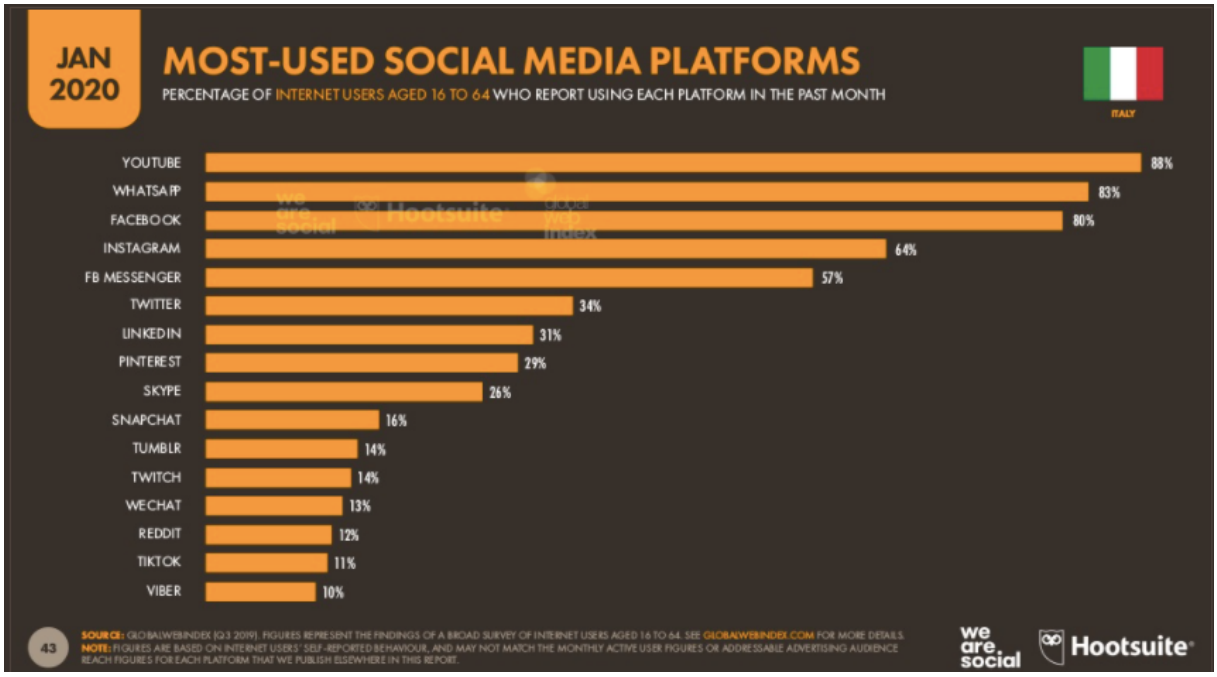


Figure 1: The most used social media in Italy (Hootsuite,2020)

Bearing in mind the eligible audiences aged, as we can see from the data above in the chart, (Figure 1) You Tube is the most popular social media, followed by WhatsApp and Facebook.

[1] Digital 2020 Reports: Simon Kemp – Hootsuite

Considering the massive use of social media and that it has become an integral and popular part of everyday communication all over the world both for users and/or customers, an in-depth analysis of social media data of this technological era, was done to highlight how relevant digital marketing channels are for business and organizations. From this perspective, marketers should take into account not only how to communicate with consumers through advertising, but also what active users do in the digital environment studying their behaviour and reaction. Firstly, thanks to a deep analysis of some academic articles and several researches on internet, I could identify risks and benefits and some critical issues of using social media both for companies and users.

Secondly, some leading academic journals has allowed me to deepen and identify which are the main and most used key performance indicators. (KPI)

Moreover, the empirical analysis is the core part of my studies, in which I compared Facebook to Instagram, mostly verifying if some graphic elements of the posts published by different companies operating in the hospitality sector, present critical factors for their business. Since sharing visual content on social media platforms, is considered a great way to boost engagement, it was important to consider customer satisfaction and his reaction as they play a fundamental role in making future decisions and contribute to the success or failure of a branded content.

Since several studies have not been exhaustive due to the inadequacy of the data to the type of analysis model used, I then concentrated on the analysis of some branded video content, scanning different cases, particularly the analysis of some branded video content comparing them to standard text posts or static images.

The result was that branded video is loved by the audience more than a simple image or a text post, increasing engagement and conversion. This data is also confirmed by the Hootsuite's report which highlights that the engagement average for branded video is equal to 7,59 % compared to 4,63% for static image.

The choice to conduct several analyses relating to the hospitality sector was dictated by the fact that nowadays the number of users who participate on social media increased significantly over the years.

Considering that the phenomenon of social media begins in the early 2000s, the generation most affected by this phenomenon is the millennial generation (Z) because it involves itself in this digital era. In fact, according to a study conducted by Agency Viga of polled 1,000 18- to 34-year-olds reveals that the 73% of users checked the company's social media feed before booking (Gazdik, 2019). For this reason, organizations

operating in the hospitality sector have to consider carefully their social media communication strategies in order to be seen and positively evaluated by users in social media.

Chapter I

SOCIAL MEDIA

The main objective of this chapter is to explain the era of Social media, deepening carefully its characteristics. In this section we are going to analyse the different main features about Social media definitions (par. 2.1), to explore the most exhaustive clues about Social media available in the literature, then to figure what is at the bottom of this incredible era, the Web 2.0 (par. 2.2). Next, it will present the classification of Social media (par 2.3), followed by its risks and benefits (par 2.4). In addition, we will explore the main benefits and risks of social media uses by companies (par. 2.5) and in the end, it will get some updated data about this phenomenon in Italy, the social media usage in the Italian businesses (par 2.6), aiming to understand the possible impacts on them (par. 2.7).

1.1 Definition

With the aim to define the Social media, we refer to the most exhaustive definition and the most mentioned among all the analysed scientific articles, which is: " The Social media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content " (Andreas M. Kaplan, 2010)[2]. Starting by this definition, it is possible to identify the main features about this "new" era. First of all, the prime element is the Internet group-based applications, which means that the Social media arises by the cooperation and collaboration in the Internet field. Another important item is the creation and exchange of User Generated Content. User Generated Content is an important topic widely discussed relating this era because some authors stated that the UGC is a part of social media, others suggested that the UCG is independent by social platforms. The common and distinctive aspect is the generation of content by the users. This term got particular attention in 2005, a time period when the first applications took shape in the world of the Internet and is applied to describe the different forms of media content available for everyone, created by end-users. In these worldwide applications, users become the active part of content generation because the Internet allowed them continuously the creation and exchange of information among different social platforms. According to the author (Vickery, 2007), the User Generated content can be defined through three particular conditions:

- The content must be published either on a public accessible website or on a social networking site obtainable to a selected group of users;
- It must be determined by a certain amount of creative exertions;
- The content must be created aside from professional routines and practices.

Although the aforementioned definition is the most exhaustive one, it is useful to show other definitions in the academic research (Table 1).

[2] Business Horizons,2010, Users of the world, unite! The challenges and opportunities of Social Media

Definition	Authors, year
"Websites and applications that enable users to create and share content or to participate in social networking"	Oxford Dictionaries, 2012
"Social media are interactive computer-mediated technologies that facilitate the creation or sharing of information, ideas, career interests and other forms of expression via virtual communities and networks"	Wikipedia
"Social media platforms have emerged as a dominant digital communication channel via which consumers learn about, share information on, and interact with brands they consider, purchase, and evaluate"	Simon Hudson, Li Huang, Martin S. Roth, Thomas J.Madden, 2016
"Social media refers to the mobile or network-based application, which supports the creation, exchange and access of user generated content among members"	Tsan-Ming Choia, Shu Guob, Suyuan Luo, 2020

Table 1: Social Media definition

Considering the table above, the different definitions have one common element: the active participation of users has become the key element of social media, through which

users are able to create and disseminate information via social media interactions, including positive and negative conversations with companies, or particular brands.

The social media is a general term to define endless numbers of applications, because each social platform has its specific and recognizable elements that characterized itself from others. Afterwards, we need to distinguish and classify the different social platforms available by the users, explaining the different functions and objectives.

The following part of this section examines the key elements of Social media, taking into account the "Honeycomb of Social Media[3]" proposed by an author (Jan H. Kietzmann, 2011). This framework is based on seven main blocks that allow us to understand the different functions and objectives of different user experiences and how these experiences influence and impact the communication of firms, which have to understand the usefulness and power of this "new" communication channel.

Figure 2 The Honeycomb of Social Media (Jan H. Kietzmann, 2011)

[3] Business Horizons, 2011, Social media? Get serious! Understanding the functional building block of social media

These seven blocks (Figure 2) can be explained as follow:

- Identity: according to the functioning of the different social media platforms, users who want to participate on specific social platforms have to reveal themselves. The disclosure of the identity is one of the core elements of most social media platforms. In particular social environments, the identity takes through personal information (age, name, gender, professional, location) and personal hobbies, interests and so on. The identity identification allows firms seeking information about users' interests, preferences and tastes, allowing companies to provide an appropriate strategic communication to engage as many users as possible in the different platforms;
- Conversation: this block represents the way through which people communicate to each other. Most social platforms have designed to promote users conversation among individuals and groups. In many social platforms, the possibility to talk with potential customers, loyal customers increase indirectly the dissemination of information about product, a company or a brand, as well as fostering the brand awareness;
- Sharing: this item represents how users are facilitated on exchanging, distributing and receiving contents in a social environment where sharing is one of the most important elements of social relationships;
- Presence: this element represents the accessible of users by others, it means that a user who participate actively in a social platform can be seen by other users who participating on it. Active participants are able to know where other users are. Companies, in this case, should evaluate each particular consumer behaviour and investigating their actions in a way to address them in the most appropriate and profitable manner;
- Relationships: this aspect represents how users can be connected to each other. By connecting, we relate the fact that people are linked as forms of association that lead them to converse, share information, meet up or simply just list each other as a friend or fan;
- Reputation: this term refers the extent to which consumers are able to identify other users through particular information, allowing them to solve the trustworthiness of online relations. LinkedIn, for example, is a professional

network, which shows particular professional skills (managerial, logistic, computer) confirmed by other users in the same platform.

- Groups: the last criterion means the possibility of users to form new communities and sub-communities.

According to the authors, one important consideration in these 7 blocks is the interconnection and interrelation between presence, conversation and relationship because each of them implies indirectly the maintenance and updating of other elements. Regardless of social media functions, the evolution and constantly updating of any social media platforms are due to constantly evolution of Internet, which is the root of the evolution of social media itself.

1.2 Web 2.0

As anticipated before, the acronym Web 2.0 is the source through which the Social media era occurs. When we talk about Web 2.0, Social Media and User Content Generation (UCG), we have to distinguish each of them in order to understand how the social media have evolved.

Tim O'Relly first introduced the Web 2.0 term in 2004 during a business conference. He meant by this acronym the dynamism and interconnections of Internet web pages, created and constantly modified by users, who became the creators of the internet contents in this era (web 2.0). Considering the opportunities by users to create, exchange, comment contents, in that era, users are able to exchange information among different web platforms and they are able to acquire and provide personal knowledge between peers. Due to the feasible and ease actions carried out by users, during the years, many and many social applications have been created, such as Wikipedia, YouTube, Snapchat and so on. The interactions between users have increased the disclosure of information, as well as the growth of knowledge flows. Simultaneously, businesses have advanced because they were able to get some useful information provided by users.

Therefore, the web 2.0 can be defined as the updating technology that allows users in the web to exchange information created by the users themselves, which enrolled an active role in the creations and interactions. The web 2.0 introduced during 2005,

distinguished itself by the previous era, web 1.0, where users were passive to Internet web pages. As a consequence, the web pages were static, and people were not able to modify them. Although the clear distinction between web 1.0 and web 2.0 seems clear, it is useful identify some key elements that characterize the web 2.0. According to a scientific article[4] (Shang, 2011), there are three key elements which identify the web 2.0, in particular:

- Knowledge-creating (KC) cycle enabled: web 2.0 platforms demonstrate the execution of the standardize SECI[5] (Wikipedia, s.d.) model, through which people interact to each other, creating and exchanging tacit and explicit knowledge;
- Control mechanism: the platforms of web 2.0 guarantee the efficacy of exchanging, sharing, transforming and application knowledge acquisition process between users. Some examples of control process are log, frame, standardize, authorize, review;
- Customer value: web 2.0 platforms give users to distribute knowledge acquired in that platforms in any way they want such as videos, messages, images, diagrams and so on.

Keeping in mind the aforementioned key values of web 2.0 platforms, the same article proposed four main service models of web 2.0:

- Exchanger: this type of platform authorizes information acquisition process between socialization and externalization activities between users with a low control mechanism. Examples of such platforms are MSN or Skype;
- Aggregator: this platform with a low control activity, allows the knowledge acquisition process with socialization and externalization activities. These webpages unionized web contents (different from each other) in a unique place for easy viewing which increased considerably with the rise of users in the same platform;
- Collaborator: these platforms include all activities of knowledge acquisition process as well as internalization, socialization, externalization and high control mechanisms in place. Through these social environments, users are able to update, share information into specific information categories without losing the

[4] Information & Management, 2011, Understanding Web 2.0 service models: A knowledge-creating perspective
[5] SECI model of knowledge dimension, Wikipedia

knowledge efficiency from peers' interactions guaranteed by the complex mechanism of control, which is based on standardization, systematization, authorization and revision;

- Liberator: these platforms based the knowledge cycle process through socialization, externalization and internalization with low control mechanism. Additionally, they open their source code, allowing continuous reviews and significant improvements in quality of data;

A classification of different Web 2.0 service models.

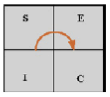
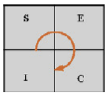
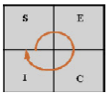
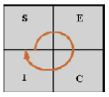
Model category	Experience-socialization platform		Intelligence-proliferation platform	
	Exchanger	Aggregator	Collaborator	Liberator
Web 2.0 applications (number of sites listed on AjaxProjects.com)	Calls & VOIP, chat, e-mails, networks (268 sites)	Blogs, bookmarking, music, photo, video, RSS, networks (613 sites)	Wikis, travel, bookmarking, business, office, programming, games (118 sites)	Business, office, programming, Web 2.0 tools, games (43 sites)
Dimension type Community knowledge-creating cycle enabled by Web 2.0 platform	Type II 	Type IV 	Type V 	Type VI 
Control mechanism	• Log	• Log • Framing • Standardization	• Log • Standardization • Systematization • Authorization • Review	• Log • Standardization
Customer value	• Exchange of instant message or data	• Share and retain information	• Share, retain, assimilate, and regenerate knowledge under specific standards	• Share, retain, assimilate and regenerate knowledge under free format
	• Extended social network	• Information sufficiency • Extended social network	• Knowledge quality • Information sufficiency • Upgraded user knowledge and skill	• Knowledge reliability • Application flexibility • Upgraded user knowledge and skill
Exemplary cases	MSN, Skype	Twitter, Plurk, YouTube, Facebook	Wikipedia, Answers.com, Salesforce.com	OpenOffice, Linux

Figure 3: Classification of Web 2.0 (Shari S.C. Shang, 2011)

Summarizing, the web 2.0 can be seen as a massive platform through which people (users, businesses, public authorities, etc) are able to communicate to each other, creating and exchanging knowledge. By these interactions, in this platform, contents are created, modified, updated by users.

The term social media does not have to be synonymous of web 2.0 because the latter is the base on which social media and its evolution is determined. The social media term refers to the creation of contents by users. Instead, the web 2.0 is the application that allows contents' creations.

1.3 Classification of Social Media

Regarding the classification of social media, we are going to focus on some academic researches such as the explanation of Andreas M. Kaplan and Michael Haenlein and the paper of Rumen Varbanov. Both of them present common features and distinctive elements.

When we ask to a person what the term Social media means, most people relate directly to Facebook, Wikipedia, You Tube and so on. This answer is partially correct because even if all of aforementioned platforms are considered into the Social media World, nowadays, almost no one is able to define correctly the social media. There are many differences among the social platforms in the social world. Before showing the elements of different social platforms, it is useful to analyse which are the two key elements that characterized the Social media, since in the literature, there is no a specific, exhaustive root to classify the social media.

According to the article "Users of the world, unite! The challenges and opportunities of Social Media" (Haenlein, 2010)[6], in order to categorize the social media applications, we rely on a set of theories in the field of media research and social processes. Several theories focused on two distinctive elements, which are:

- Media Side: in this field, what characterises a social media is the social presence or media richness. According to the social presence theory (Short, Williams & Christie, 1976), the social presence can be defined as the audible, observable and personal contact that can be obtained between two involved users. In turn, the social presence is affected by the closeness and instancy of the medium. This means that based on these two features, different social media differ for the social presence.
- Social Side: in this context, the essential concept is the self-presentation or self-disclosure. It states that in all social interactions, people concern about the impressions of other people form of them (Goffman, 1959). Instead, the self-disclosure indicates the conscious or unconscious revelation of individual information.

As we analysed in the first paragraph the interrelation of different elements, such as relationship, conversation and presence can be translate in this analysis, since more the

[6]Business Horizons, 2010, Users of the world, unite! The Challenges and opportunities of Social Media

presence is larger, more the media increased; in turn, more the desire of people to others' opinion is higher, more information dissemination is required.

Keeping carefully the social presence and the self-presentation concepts we are able to exploit different social media categories.

		Social presence/ Media richness		
		Low	Medium	High
Self-presentation/ Self-disclosure	High	Blogs	Social networking sites (e.g., Facebook)	Virtual social worlds (e.g., Second Life)
	Low	Collaborative projects (e.g., Wikipedia)	Content communities (e.g., YouTube)	Virtual game worlds (e.g., World of Warcraft)

Table 2: Classification of Social Media (Kaplan, Haenlein, 2010)

Considering the table above, we can observe six categories of social media as follows:

COLLABORATIVE PROJECT – Collaborative projects allow simultaneously the connection and the creation of contents made by multiple users. This kind of social media represents the most appropriate result of UGC. In turn, collaborative projects can be distinguished between wikis and social bookmarking applications. The first is a website which enables users to carry out some activities such as adding, removing and changing texts of contents. The latter allows the collection and the evaluation of web (link) and media content. A proper example of wikis is the Wikipedia, instead Delicious is the most appropriate case of social bookmarking. Summarizing, the social media collaborative projects are the result of different actions taken by different users that figure out the best outcome through different users' efforts. In the business view, wikis might be employed by companies to share information, ideas, suggestions, and feelings on particular project status between employees.

BLOG - this form is the earliest form in the social media classification. Blogs are nothing more than a website managed usually by a single person who put on it, different contents featured in reverse chronological order. The matters come in different variations; they could contain a form as personal diaries, providing information about the blog manager. Inside blogs, users can do a single action: posting comments. Additionally, since users are able to comment specific topic inside the blog, they indirectly promote some characteristics of brand (in case of Corporate blog).

Conversely, in case of negative posted comments, blog could take a disadvantageous and unprofitable situation for companies.

CONTENT COMMUNITIES - The main aim of this kind of social media is the possibility of users to share different types of contents in various forms such as text, photos, videos and power point presentations. Some examples of content communities are YouTube, Flickr, Slideshare. Users can access to content communities in a very simple way considering that they do not have to create any profile and they access through registration. In a corporate view, this kind of social media exhibits the risk of being used as arena for the distribution of copyright-protected materials; in addition, in this type of social media it is very complicated to prevent widespread videos. On the other hand, the content communities could be very interesting communication channel for companies because users are able to promote positively worldwide several features of companies, or specific brands.

SOCIAL NETWORKING SITES – Whenever we talk about social media, the majority of people tend to define social media itself in this field, such as Facebook. As we have seen, the social media term is general and comprises some different social media applications. When we talk about Facebook, which counts 2,5 billion users worldwide (Fazio, 2020)[7], we refer precisely to this type of social media. The social networking sites are platforms that empower users to connect to each other through e-mail and instant messages. These sites required an accurate registration by users, who can provide personal information in the various form such as photos, video, blogs. Over the year, this form of social media has exponentially increased worldwide, attracting the attention of younger Internet users.

VIRTUAL GAMES WORLDS – This category of social media is represented by platforms that enable participants present themselves in the form of avatars in a three-dimensional environment. Just as other categories, users can interact with each other as they would be in real life. The virtual games sites have been developed in two forms: the first is the virtual games world where users interact according to particular rigorous rules in the context of a widely multiplayer online role-playing game. In this arena, due to strong imposed restrictions, people are not able to present themselves freely. Consequently, the degree of self-disclosure is limited.

[7] Social Media Marketing, blog, February 2020

VIRTUAL SOCIAL WORLDS - In this last category, active participants behave freer than virtual games worlds due to the absence of narrow rules. Furthermore, people experience in three-dimensional environment as they were in their real life.

Now I present another interesting social media classification (Varbanov, 2015)[8].

Figure 4: The Main Categories of Social Media (Varbanov, Economics, 2015)

This classification seems to be more precise and detailed even if some categories are in common with the previous classification. Considering the classification seen previously, the common categories are not described. The new categories of Varnabov classification are:

MICROBLOGGING - This type of Social media is similar to the blog category described before. It differs from the blog because it can include short contents with a maximum of 200 characters. Microblogging started to be famous in 2007 when the Twitter platform

[8] D. a. Tsenov Academy of Econonomics, 2015, The Business potential of Social Media platforms

was created. The contents published in microblogging are the same contained in blog, such as photos, sentences, comments. Nowadays the microblogging can be employed to boost business sites, products etc. The most popular microblogging (Ionos, 2017)[9], Twitter, permits participants to comment up to a maximum of 140 characters.

SOCIAL NEWS SITE – This item of social media classification is characterized by the fact that a user can be simultaneously a reader and an author. It means that a person can comment, assess and read others' published materials and at the same time can publish some personal article. Due to large interactions between users, people can focus on this information as reliable source of information aiming to evaluate and consider which information as news. An example of social news site is Google news.

GEOSERVICE – Geoservice platforms allow users to visit, find and check various elements on the Earth with high veracity. Platforms as Maps.google required a log in of the users who want to check places they visit such as restaurant, churches, cinemas.

LIVE STREAMING – The live streaming platform is a web service that enables participants free video streaming from different technological devices, such as computer, mobile phones via the Internet directly to users' monitors. In this way, users can communicate in live with other users who are simultaneously connected via the Internet. In this way, the user takes the form of a reporter or present the live as broadcast. An example of live streaming is Upstream.

The category Photo-sharing is represented in the Kaplan document as Content Communities. Just as for Community Forums, which is represented by the Content Communities.

Considering that the social media classification found out in the academic research are many, and there is no a particular classification and clear explanation of this era, I am going to present some definition taken by the Internet searches, as well as in Web 2.0.

Since lots of social media classifications using the most famous academic research made by Kaplan and Haenlein in 2010, some interesting suggestions have been uncovered on Internet.

[9] Digital Guide, Ionos, 2017

Figure 5 shows the social media classification carries out by Maurice in 2017.

Figure 5: Social Media classification (Maurice, 2017)

The important and key element of the above image is the position of the user among all different six categories. The user is at the centre of the scheme, which emphasizes the critical and active role conducted by users in this enormous era of social media. Maurice established six categories such as Networking (Facebook, LinkedIn), Collaboration (Prezi, Wikipedia), Video sharing (YouTube), Image sharing (Instagram), Blogging (Wikipedia) and finally Micro-blogging (Twitter).

Additionally, Digital Marketing in 2013 identified and classified the Social media into seven categories, as displayed in Figure 6.

Figure 6: Social Media classification (Digital Marketing, 2013)

In this description, the VoiP Software category represents the unusual class of social media classification. According to the author, the Voip Software is the different platforms that allow user to communicate to each other via Internet showing the interaction users on the desktop of your laptop or your mobile phone. This class is considered in the Varbanov classification as Live streaming. Example of this type of Social media is Skype or Messenger. The other classes are in common with most of classifications as well as social networking, social bookmarking, social media news, blogging sites, media sharing and document sharing. In the blogging sites the author includes blog, micro-blog; instead, in the media sharing there are video, audio, photo sharing and podcast. A podcast is defined as an audio plan, which can be downloaded in different technological devices through some particular and dedicated software. Podcast usually occurs in serial episodes.

Furthermore, Cavazza through the "Social Media Landscape 2019" proposed another important Social media classification via Web 2.0, illustrated in Figure 7.

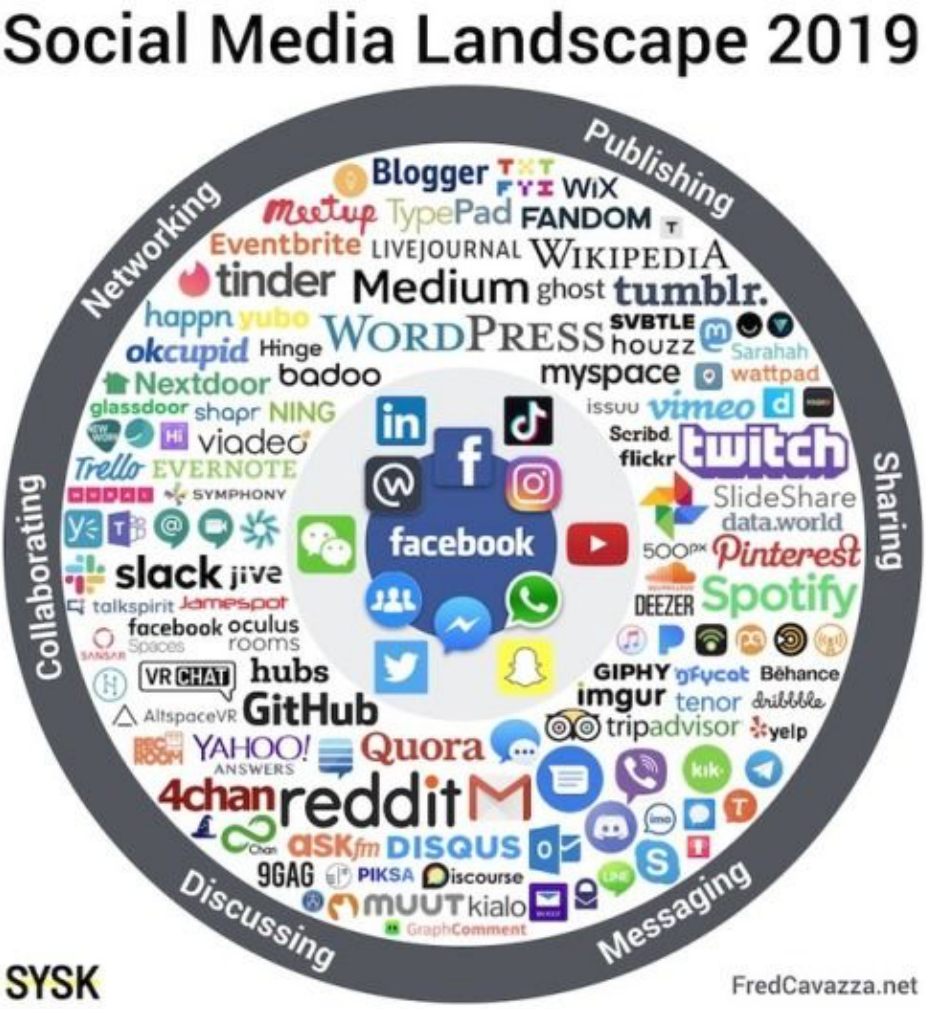


Figure 7: Social Media classification (Cavazza, 2019)

The superior image is an updating work in the Social media field since 2008. Cavazza made some social media classification taking into account main updating and constantly innovation process in the social media field. Anyway, the lasted and updated version presents the common six categories of the Landscape Cavazza 2017: discussing, collaborating, networking, publishing, sharing and messaging. This classification is inarguably the most complete. Fred Cavazza describes each class as follows:

- Discussion - Discussion platforms allow users to communicate and discuss in the world. Examples are Facebook, Quora, Disqus.
- Collaboration – Collaboration activities through particular platforms such as Yammer, Dropbox.
- Network – Some professional networking such as LinkedIn, Viadeo, platforms about data and meeting services.

- Publish – The activities of publishing thanks to blog platforms such as WordPress, wikis, hybrid services like Tumblr or Myspace.
- Share – Activities of sharing different multimedia types such as video, live video, photos, document, music and inspiration through explicit platforms (YouTube, Pinterest, Twitch etc).
- Message - Messaging activities available also in mobile form such as WhatsApp, Facebook Messenger. Classical activity of messaging through traditional message software as well as webmail (Gmail, Outlook).

The framework proposed by Fred Cavazza has to be considered inherent to older generations since generation Z every day faces with other updated social media (Silvia Di Gennaro, 2019)[10] such as TikTok and Imgur. Additionally, the framework relies on main occidental platforms, without considering the Chinese medias, which are based on Country regulation (think about for example that WhatsApp is not allowed by the Chinese Government).

The last but not least is the model presented as the Conversation prism version 5.0 accomplished by Brian Solis and Jess3 in 2017. The conversation prism faces a general map classifying social media through which users can interact together via Internet. According to the prism meaning, each communication takes place from different points of view. Keeping in mind this assumption, we are able to support that the availability of social media is infinite. In Figure 8 the Conversation prism 5.0 is presented.

[10] Ninjamarketing , Silvia Di Gennaro, 2019

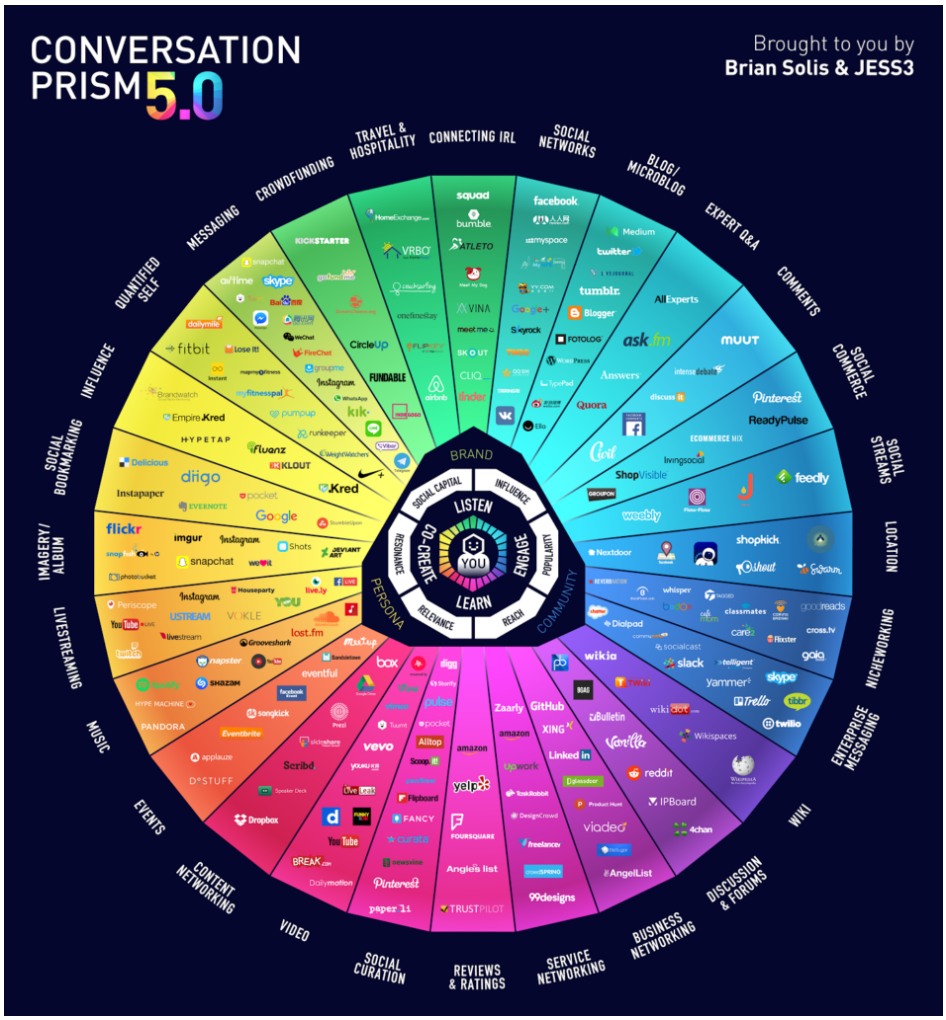


Figure 8: Conversation prism (Brian Solis and Jess3, 2017)

Regardless of the numerous social media present in the World Web, the common peculiarity with the Maurice classification (Fig. 5) is the presence and the centrality role assumed by users. Therefore, at the centre of the map we find out the personal brand, composed by brand, persona and community. This new map shows 28 categories of social media. Apart from the several classes we have seen previously, new categories are social commerce, social Streams, social Curation, travel & hospitality etc.

1.4 Strengths and weaknesses of Social Media

With the aim of identify the different benefits and risks of active participation in the world of social media, I focused on some literatures, aiming to present the most important elements examined among them.

As we have seen in the first paragraph, one of the most important things in the social media participation is the interaction between users and the exchange of information. Additionally, the free access among different social media has generated a complex social media ecosystem. In doing that, we need to observe the social media world as a sphere, without focusing on a single social platform. The sharing behaviour is the key of each social media but the differences among social media are the different consumers motivations (John, 2012). The possibility to create a profile, interact with your like-minded people in your social relationship, drives people to participate and maintain these relationships. Then, the latter important aspect of social media is characterized by the social presence factor. In order to evaluate different aspects of social media participation, we also focus on TRA[11] and U&G[12] theory. According to the just mentioned approaches (Chang-Dae, 2019), people tend to behave in a certain way that they project to perform, which means that the intention is a key element with the actual behaviour (Conner & Armitrage, 1998). Whenever a user wants to share something in a social platform, this action is determined by the intention to share. Accordingly, the relationship between intention to share and the actual sharing behaviour is positive. Considering the Uses and Gratification approach, some elements are discussed in the literature about the reasons of social media uses. The author who clarified U&G theory (Whiting, 2013)[13], presented some interesting elements such as the social interaction, information seeking, pass time, entertainment, relaxation, expression of opinions and so on.

In the literature another important clear consideration about uses of social media by users is expressed in "the emergence of social media empowered consumer" article (O'Brien, 2011)[14]: the ego defensive strictly connected with self-importance and self-esteem, the "value-expressive function" which means that a user agrees with a content

[11] TRA: Theory of Reasoned Action

[12] U&G: Uses and Gratification Approch

[13] International Journal, 2013, Anita Whiting, Why people use social media: a uses and gratification approach

[14] Irish Marketing Review, 2011, The emergence of the social media empowered consumer

based on his moral beliefs and the social function that allows users to create friendship, bonds and a sense of belonging to a community. The ego defensive plays a crucial role because people protect themselves from outside warning, eliminating uncertainties.

Nowadays, the social media is considered as a trustworthy source information, considering that users are able to create, share or modify contents freely in the Internet, without any particular restrictions.

Furthermore, I-ping Chiang has realized another clear explanation about social media participation. According to him there are different elements characterizing the use of social media. In particular, the author analysed five main categories (Chiang, 2019)[15]:

- Social relationship: considering a deep interaction between users, people interact in social media in order to encounter like-minded people, build virtual friendship uncovering social support. People on the same mind tend to interact and then help each other, maintaining the relationship;
- Social identification: this element can be represented by the sense of belonging to a particular community. Users with similar ideas, feelings and thoughts identify themselves as a member in a community compared to a non-member;
- Social influence: being member of a community influences each member on some personal ideas, feelings. The social influence involves two important features: individuals' sense of their influence on social media and the impact of social media applies about individuals, which means that more the degree of group cohesion is higher, more the social media community influences decision making actions of users;
- Social satisfaction: the social satisfaction occurs through the evaluation or the opinions about the individuals' experiences. According to Casaló, the social satisfaction results from the overall assessment of the historical association between users-community, which influence the past, current and future execution of social media;
- Social commitment: this is the long-lived willing to keep a long-term friendship with a group.

[15] International Journal of Electronic Commerce Studies, 2019, Exploring the benefits of social media marketing for brands and communities

So, as we have just seen, there is no way to explain what drives users to participate in social media because there are different elements affecting the users' participation on social media.

The explanation of social media weaknesses is well evaluated in the articles "Consumers' ethical perceptions of social media analytics practices: Risks, benefits and potential outcomes[16]" (Michaelidou, 2019,) and "Social media opportunity or risk[17]" (Everett, 2010):

- Anonymity: considering that some social media platforms do not require a real identification of people, in this context people can be object of some spear phishing, presented as right and normal web stuff, performed by malicious individuals in the world web. These actions occur through sending specific friendship links, which seem to be a normal link, becoming vulnerable to malware infection from drive-by downloads;
- Data leakage: Information shared, created, exchanged and commented in the social media platforms can bring bad misunderstanding that can be dangerous for personal and corporate reputation;
- Risk implications: considering the ease of exchanging information in social media, not all users and businesses are concerned about the implicative risks they may incur such as dissemination of information or privacy security;
- Criminal action: the possibility to access to social media platforms through different technological devices such as smartphone, laptop or tablet, increases the probability of criminal actions performed by hacker. Due to the synchronization of different devices, malicious users could access to any kind of information storage in different instruments.

As we have analysed, the social media applications offer lot of opportunities for users, as well as they are source of updated information and they act as communication channel to interact and make friends. On the other hand, they are tools that require adequate knowledge to avoid incurring illegal actions. Table 3 summarises the overall benefits and risks.

[16] Journal of Business Research,2019, Consumers' ethical perceptions of social media analytics practices: Risks, benefits and potential outcomes
[17] Computer Fraud & Security, 2010, Social media opportunity or risk?

Benefits	Risks
- Ego defensive - Social identification - Strengthening of moral beliefs - Social relationship - Social commitment	- Anonymity - Criminal actions - Data leakage - Privacy

Table 3: Main benefits and risks of SM uses by users

1.5 Social media in the corporate view

In the previous section we faced the main risks and benefits of social media participation by users. As we have analysed, this era is characterized by free access of source information, free creation of information by users, which generates the formation of community among different social media. In this part of item, I am going to explain the main risks and benefits of social media in the corporate perspective, aiming to clarify how different elements are strictly related to the features of the social media uses.

One of the most important articles which regards to the functionality of social media in a corporate view is the article already analysed in the first paragraph, as well as the Honeycomb of Kietzmann in 2011.

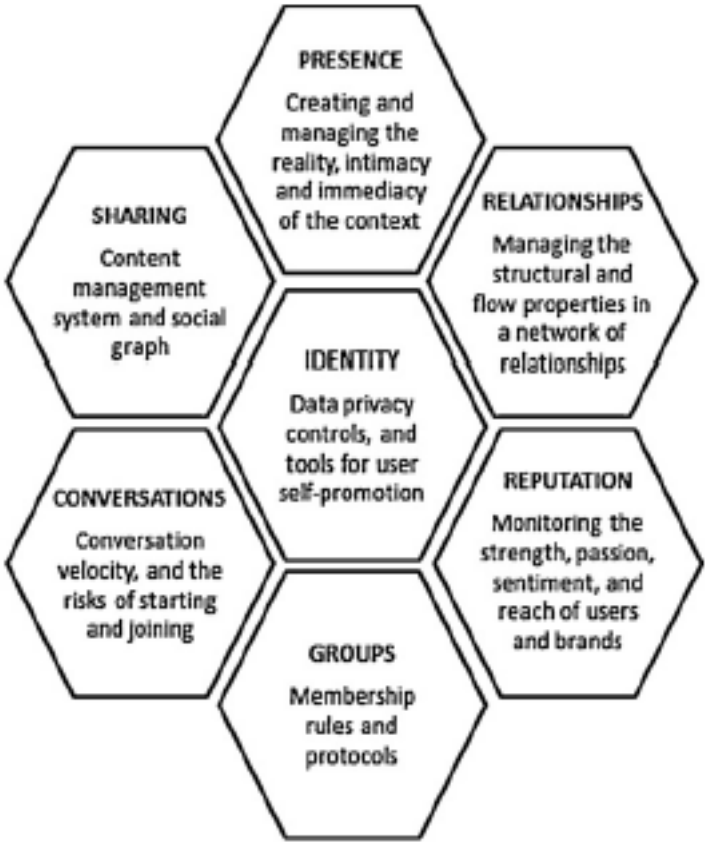


Figure 9: Implications of Functionality (Kietzmann, 2011)

Figure 9 shows the different implications about the social media uses, in particular:

- Presence: considering the important element of presence and the possibility to trace geographically users in the social media, the business has to evaluate in which social media should be present in order to engage the maximum of users in order to reach business objectives. Considering that each social media has particular characteristics and functionalities, companies must choose carefully the state of presence in appropriate social media platforms;
- Sharing: the possibility to share different contents in different platforms by users, it is a "double-edged sword" for businesses. On the one hand, the appropriate contents shared by companies can bring to the creation of a community, in which members are engaged because they are interested in the products businesses, and the products satisfy users' needs. On the other hand, a content inadequate can be an object of negative evaluation by the users, then the lack of products value;

- Relationship**:** Companies in the social media have to create and maintain the relationships between interested users based on their personal needs and type of users.
- Identity**:** in this element, the privacy concern plays a critical role in the choice of social media for businesses. Some social platforms require real personal information sharing (Facebook) while others not. In this sense, the businesses should equilibrate both of them in order to avoid losing the responsibility and credibility of users, who could engage in illegal and unpleasant privacy behaviours;
- Conversation**:** the different social media platforms functions require companies to converse in different way according to the different aims and communication manner that social media and users' needs demand;
- Reputation**:** companies have to monitor different elements inside a social media platform, such as sentiments, feelings, passions and reach of users in order to be reputed positively by that users and then increasing the brand reputation;
- Groups**:** the importance of sense belonging to a community suggests to companies to behave in an enveloping way in order to increase the engagement of users and then the rise of a community with a strong sense of being part.

According to all above characteristics, in order to plan and maintain a right social media strategy in the long run, companies should balance carefully all these elements to survive and reach business goals in the social media area.

The overall benefits of social media for companies could be presented as follow[18] (Siddiqui, 2016):

- Target audience: due to high and true level of interactions between users to users, users to company, company to community, businesses are able to analysed deeply different target of consumers, trying to understand which is the better target for them, according to the behaviours of likes or dislikes, negative or positive comments of users;
- Cheap promotional activity: the access of social media platforms is completely free also by the firms. In this way, contrary to traditional advertising such as

[18] International Journal of Computer Applications Technology and Research, 2016, Social media its impacts with positive and negative aspects

radio, TV, billboards, companies are able to promote their brands effectively with low costs;

- Competitors analysis: the free access to business social media, allows companies to snooping other competitors networks present in different social platforms;
- Brand awareness: due to the ease of exchanging, sharing information through different users located in different geographical areas, this increases the possibility to diffuse brands without making significant economic efforts, considering that the promotional activities can be occurred by users;
- Word of Mouth: considering that users are able to create contents, they become promoters of business affirmation creating an amplified word of mouth effects due to the constant updated of technologies;
- Product developments: due to the user generated content in the social media era, this allows companies to inquire some useful information to consumers during the product developments such as the colour, size, design and so on through questionnaires and surveys, translating some user behaviours in functional information.
- Brand Engagement: the ability to interact with lot of different types of users in different way can provide companies to reach a large amount of like-minded people with positive impacts. Consequently, the higher positive brand engagement leads to higher brand loyalty (Donna L. Hoffman, 2010).

Even if there are several scientific articles about social media risks for companies, there is no a clear categorization of risks for companies, because the infinite risks where companies can occur on them, depend on different actions taken by humans. The "old" literature treats the privacy risk as effective risk, instead the most current theories assume the privacy risk as a consequence of human actions[19] (Williams, 2017).

The article proposed by Williams, divides several risks for organizations based on different human actions which lead to different "technical field" risks. It identifies five broad categories as follows:

[19] International Conference on Enterprise Information System, 2017, Categorizing the Business Risks of Social Media

1. Technical Risks:
    a. Hacking: companies can become subject to hacker attack, and then loss of corporate data access by unauthorized access by users;
    b. Malware: software to damage functionalities of computer such as programs and networks;
    c. Spam: companies could receive undesired messages through messages and links by social media profile or the social media profile can be used as spam;
    d. Reliance on external software: it may be difficult for companies to manage the content and functionality of the software for those companies that rely on subjects outside the company.
2. Human Risks:
    a. Confusing border: companies could face the risk to have difficulties to manage the social media use by employees in the professional way and the private life;
    b. Mental damage: employees that communicate on social media field (public) can be stressed and generate negative situations for organizations;
    c. Abusing authority: employees might have gotten higher knowledge and competences communicating via social media business profile;
    d. Inefficiency time use by workers: due to the facility to access to different social media platforms, employees could lose time during working hours;
    e. Shut out some group: companies indirectly can exclude some group target because they concentrate on some particular groups in some social media;
    f. Accountability: in the social media it is difficult to identify who post comments or sites and therefore who care about the reputation of company.
3. Content risks:
    a. Lack of control: this is one of the most important and common elements analysed in different scientific articles. The possibility to post, evaluate, exchange freely information about product or services, does not allow company to monitor and control the amount of information exchanged by users, as well as company are not able to contrast each negative comments, feelings present in different social media, leading company to

loss of credibility and brands' values; different situations may lead to the loss of information due to loss of intellectual property, disclosure of confidential information, information overload; In this category another important risk is the revelation of corporate information made by malicious employees;

b. Updated information: considering the constantly exchanging information between users in different social media, companies have to maintain their information disclosure updated;
c. Obsolete information: malicious and unconscious users can publish false report about brands.

4. Compliance risk:
    a. Publisher abuse;
    b. Violation of laws: failure to comply with various laws/industry regulations;
    c. Access-Audit: companies may not be able to access the fair access in conformity with companies' rules or to verify and audit clear information.
5. Reputational risk:
    a. Negative word of Mouth: the inadequate social media strategy by companies can lead to unfavourable and unprofitable situation for them;
    b. Criticism: companies' brands could become the subject of discussions in different social media, receiving negative feedback by users;
    c. Language: In different social media, users interact all over the world. This implies the use of an appropriate language in order to be understood by everyone;
    d. Loss of confidence: companies may be incurred in the loss of trust due to inappropriate information provided in the social media.
    e. Measure of Social media activities: lot of companies are not able to measure effectively the social media results and performances.

As se have seen, social media platforms offer lot of opportunities for both users and companies. In each interaction, companies can take some advantages such as the increase of brand awareness, using social media as cheaper advertising activities but they face with some risks unattached from them, such as information control, brand reputation by users, time spent and so on. Whenever a company aims to participate

actively in a social media, it has to consider and analyse each benefit and risk in order to be able to reach business goals.

1.6 Social Media in Italian Businesses

Now we are going to analyse some updated data concern the use of Social media in the Italian businesses.

According to the report "La SocialmediAbility delle aziende Italiane" (Fraia G. D., 2019) conducted by the Executive Master SDC IULM dedicated for "Centromarca", we are able to verify and understand how Italian businesses have constantly been adapted to the evolution of Internet and the "new" consumers' needs. The available report relies on 6 business categories from 15th October to 15th December 2018. The study focused on six categories: food, banking, hospitality, fashion, furniture and care person. The research extrapolates 120 companies for each category, classifying them for business dimensions (40 small dimension company, 40 medium and 40 big). The study focused on penetration rates (how many companies used social media channel), which are the main social media used by companies, communication strategies via social media channel, the concept of storytelling (companies talk about themselves in social media), the level of efficiency reached and knowledge of different brands in social media uses in the communication process. The figures extrapolated are the most suitable to explain the social media phenomenon.

Figure 10 updates data about companies, which are present in the social media with at least one social media.

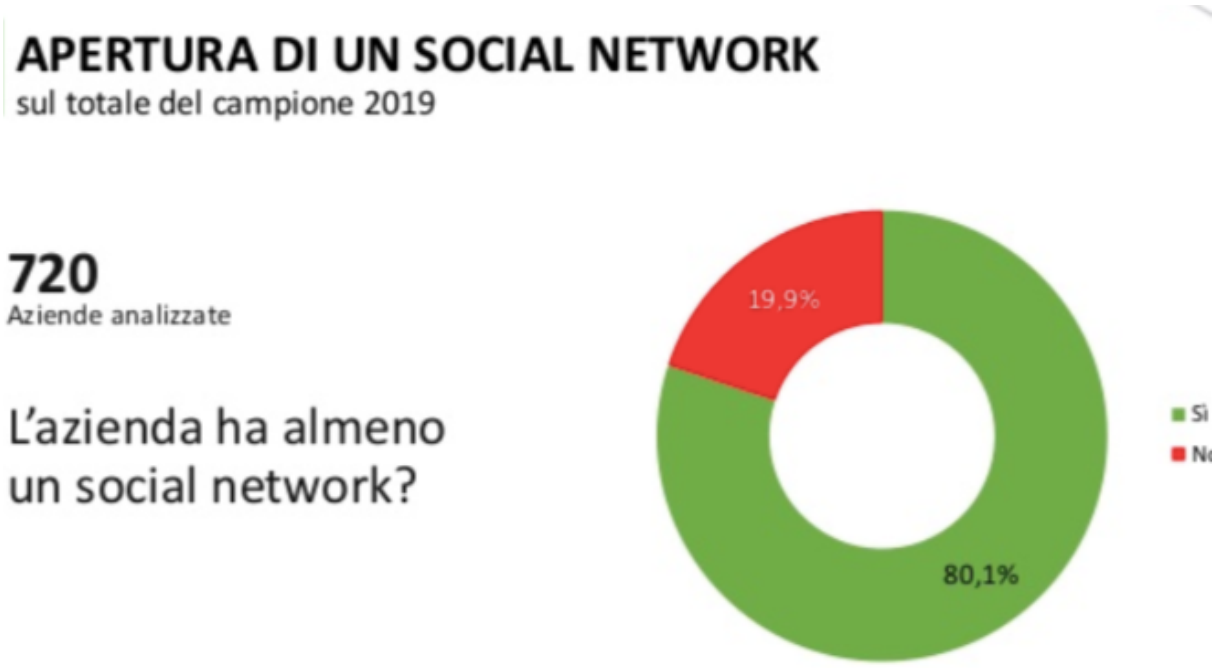


Figure 10: Companies with at least one social media (Social Media Marketing & Digital Communication - Executive Master SDC IULM, 2019)

Analysing Figure 10, it is possible to notice that more than 576 companies use at least one social media.

Another important explanation is represented by Figure 11, which gives some important implications about medium companies: these medium companies are more and more increasing the use of social media then the biggest side. Since the social media becomes a really potential communication channel for businesses, this implied directly that businesses have to open and promote their brands in different social media platforms. As a result, social media channels became the main communication tool between consumers and companies, in particular for medium enterprises, which increased the percentage rate with at least one social media more than 20 % during 2011-2019.

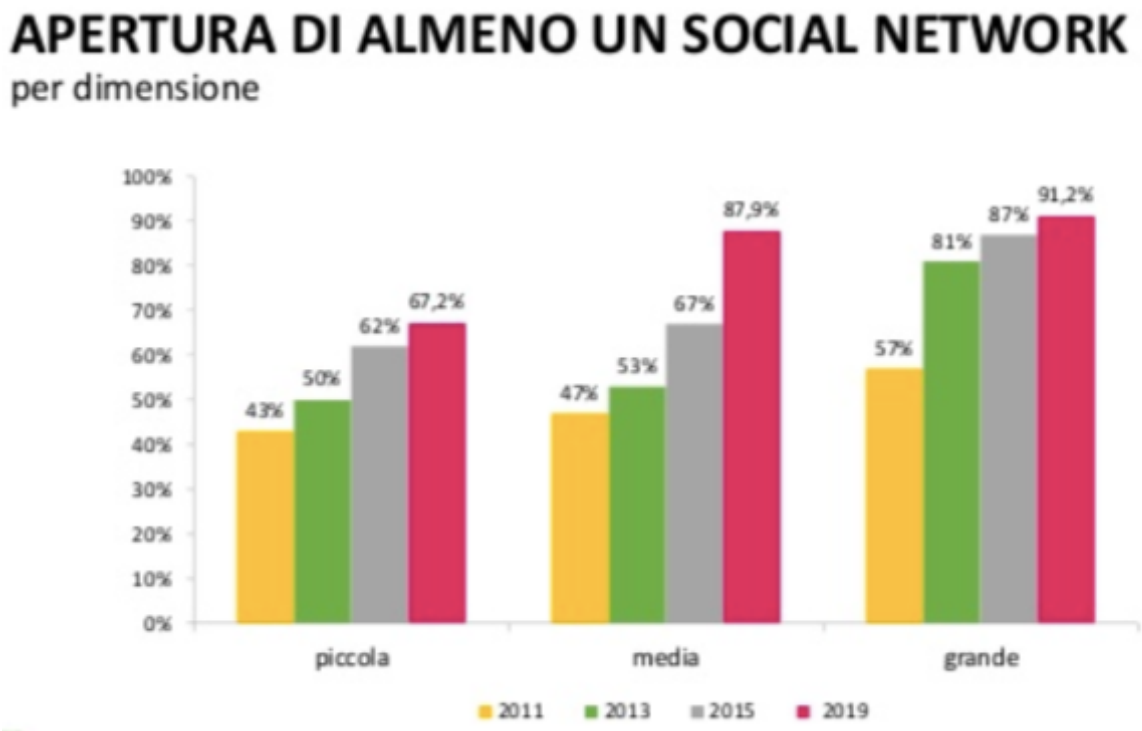


Figure 11: Companies with at least one social media for dimension (Social Media Marketing & Digital Communication - Executive Master SDC IULM, 2019)

Moreover, Figure 12 confirms a constant used of Facebook by companies even in 2019.

Figure 12: The most used Social Media (Social Media Marketing & Digital Communication - Executive Master SDC IULM, 2019)

Considering carefully the graph above, the most used social media are Social network (Facebook), Image sharing (Instagram) and Video Sharing (YouTube). Each social media has particular functions and objectives: Facebook allows companies communicate strongly and quickly with consumers, increasing the brand awareness and brand reputation, Instagram helps companies to show themselves through images and videos in which consumers are able to communicate with brands via comments published in the video. In addition, Instagram allows users to conduct surveys. In this way, companies are able to target their audience through these "simply" questions, which could be important studies of consumer needs. An image sharing, such as Instagram, it became a platform uses by companies in order to increase conversion and sales. Instead, YouTube permits companies sharing their videos, which can be shared by any users in this platform, improving brand awareness, brand identity of companies. As shown in Figure 13, Facebook remained over the years, the most used social media by Italian companies, followed by Instagram, which increased significantly from 2015 to 2019 more than 20%, and YouTube which has penetrated the market and recorded a constantly raise percentage from 2013 until now (more or less 53%).

Figure 13: The most used Social media over the years (Social Media Marketing & Digital Communication - Executive Master SDC IULM, 2019)

Considering the higher use of Facebook by companies, MLP MindLikePassion that is a Digital Agency, has classified the most Italian brands in Facebook. The ranking published

in 2018 shows, which are the Italian brands that have been success in social media in terms of most popular brands.

Classifica dei brand italiani più seguiti su Facebook

Brand	Fan (M = milioni | K = migliaia)
Nutella	32 M
Ferrero Rocher	20 M
Gucci	17 M
Ferrari	16 M
Lamborghini	12 M
Kinder	11 M
Giorgio Armani	8.3 M
Prada	6.4 M
Versace	5.1 M
Nazionale Italiana di Calcio	5 M
MSC Crociere	4.5 M
Bulgari	4.3 M
Fiat	3.8 M
Martini	3.1 M
Barilla	2.6 M
Fendi	2.6 M
DiSaronno	2.6 M
Fernet Branca	2.5 M
Costa	2.5 M
Tim	2.3 M
Vodafone	2 M
Pirelli	1.9 M
Salvatore Ferragamo	1.7 M
Comix	1.6 M
Campari	1.6 M
Wind	1.3 M
Rai2	1.3 M
Lavazza	839 K
Enel	820 K
Smemoranda	738 K
Italia1	722 K
Regno Disney	704 K
Amaro Montenegro	500 K
UniCredit Italia	475 K
Esselunga	462 K
Intesa San Paolo	444 K
Banca Mediolanum	138 K
Taffo	67 K
Buondì Motta	71 K

Figure 14: The most popular Italian brands on Facebook (Love Brand, MPL Studio, 2018)

At the top of ranking there is Nutella brand with more than 32 million followers, followed by Ferrero Rocher brand with 20 million and complete the podium the fashion brand Gucci with 17 million followers. It is necessary to specify that the aforementioned ranking is not completely exhaustive because it considers only the number of followers.

The same digital agency has conducted a ranking of Italian brand more appropriate, because it ranked the top Italian brands in a social media, in particular on Instagram, considering other variables as well as engagement and views during 2018.
Figure 15 shows the top 25 Italian brands on Instagram platform.

N.	BRAND	LOGO	FOLLOWER	ENGAGEMENT	VISUALIZZAZIONI
1	Gucci		23900000	0,62%	147%
2	Dolce&Gabbana		16900000	0,38%	253%
3	Prada		15500000	0,28%	312%
4	Lamborghini		12700000	2,49%	223%
5	Versace		12500000	1,24%	210%
6	Armani		10400000	0,31%	338%
7	Valentino		10200000	0,24%	362%
8	Fendi		9100000	0,44%	285%
9	Ferrari		7500000	1,85%	169%
10	Maserati		6900000	1,8%	140%
11	Moschino		6200000	0,66%	485%
12	Bulgari		5700000	0,79%	340%
13	Roberto Cavalli		4600000	0,26%	307%
14	Ferragamo		3100000	0,56%	318%
15	Calzedonia		2200000	1,71%	773%
16	Serie A TIM		2100000	2,04%	318%
17	Nutella		1700000	2,68%	252%
18	Intimissimi		1700000	2,04%	498%
19	Moncler		1500000	0,64%	331%
20	Bottega Veneta		1200000	0,58%	256%
21	Tod's		1000000	2,84%	2248%
22	Alfa Romeo		1000000	2,61%	189%
23	Alberta Ferretti		1000000	1,34%	1038%
24	Furla		984000	1,32%	368%
25	Ducati		714000	2,57%	297%

Figure 15: The top 25 Italian brands on Instagram (Instabrand, MPL Studio, 2018)

As we can observe in Figure 15, the most followed Italian brands are all inherent in the world of fashion. Through this representation, it is interesting to see that the first Italian brand Gucci counts more than 23 million followers with the engagement rate of 0,62%, which represents a very limited value compared to the number of followers. The engagement rate represents how much the community of a company profile or a company page interact actively in that page or profile and how much users are interested in the content posted in the page/profile. It means that even if a company profile counts more and more people, who seem to be interested on it, the communication strategy that they are adopting are not well designed and do not arose really interests by people. The Italian brand of luxury cars, Lamborghini, despite being in the 4th place in the ranking, it reports a successful engagement rate of 2,49%. This

means that being at the first place of Italian brands ranking it does not imply you are managing efficiency your digital communication strategy, because if a brand page counts the engagement rate less than 1 % (Gucci, D&G and Prada) probably these companies do not project strategically their social media channel, in particular in a social media such as Instagram, which is constantly increasing.

1.7 The social media in the businesses

In this section, I explain the different scientific literatures related to the use of Social media in the corporate view. Table 4 gathers some social media uses by companies.

Use of Social media	Source	Authors
"We argue that marketing managers should include social media in the promotion mix when developing and executing their Integrated Marketing Communication strategies."	Social media: the new hybrid element of the promotion mix Business Horizons 52: 357-365	W. Glyn Mangold, 2009
"Social media helps conversations to reach a wider audience leveraging the long tail concept, which means conversations that can be conveyed to different forums."	The History of Social Media and its impact on Business The Journal of Applied Management and Entrepreneurship	Simeon Edosomwan, 2011
"Social media are a category of Web sites, which provide opportunities for free publication, exchange and discussion of diverse content by a huge range of users, who do not have special knowledge and skills."	The business potential of social media platforms D. A. Tsenov Academy of Economics – Svishtov	Rumen Varbanov, 2015

"Business use social media to enhance an organization's performance in various ways, such as to accomplish business objectives, increasing annual sales of organizations".	Social media its impact impacts with positive and negative aspects International Journal of Computer Applications Technology and Research – Volume 5 Issue2, 71-75	Shabnoor Siddiqui, 2016
"Social media is becoming an integral part of business strategy and has transformed the way that businesses interact with their customers – it enables marketers to influence brand outcomes and purchase decisions through fan promotion and popularization of brand content."	What messages to post? Evaluating the popularity of social media communications in business versus consumer markets Industrial Marketing Management 62: 77-87	Kunal Swani, 2017
"Social media refers to a set of online tools that support social interaction between users, facilitating the creation and sharing of knowledge, and transforming monologue into dialog."	The missing link: Creating value with Social media use in hotels International Journal of Hospitality Management 75: 94-104	Aurora Garrido-Moreno, 2018
"Social media as a channel specifically offers new opportunities for companies to innovate, which can lead to their improved credibility, success, and sustainability".	Value co-creation through social media: a case study of a start-up company Journal of Business Economics and Management – Volume 20 – Issue 1: 1-19	Junic Kim, Hwanho Choi, 2019
"Social media support real time, media-rich, and personalized interactions between a company and its customers [3], thus allowing for open innovation, whereby	How social-media-enabled co creation between customers and the firm drives business value? The perspective of organizational learning and social Capital Information	Hong Zhang, 2020

the firm can obtain external knowledge from outside its organization."	&Management 57	

Table 4: The social media uses in Businesses

The table above explains how companies use different social media platforms in different ways for different purposes. One first application of social media is to give to companies the ability to converse with different users participating in different forums. It means that companies can engage different contents types according to the manner required by each social media. As we saw in the previous section, each social platform has distinctive communication way, through which users and companies interact together changing constantly the structure of communication (think about Twitter platform in which users communicate with the maximum of 140 characters for each content). Due to different characteristics of social media, companies are able to communicate to a wider audience in the long period, allowing them to identify their appropriate target. Another important literature assumption provided by Junic Kim is that social media allow companies leading new opportunities in terms of credibility, success and sustainability: the key factor assumed by users to create and disseminate content generating new opportunities for companies because of users engaged in social media, convey positive feedback and behaviour about that companies. Rumen Varbanov underlines the latter concept of user co-creation in social media, who sustains that contents generated, discussed and exchanged in the social media are made by non-professional people who do not have particular social media skills. Additionally, social media offer opportunities to companies to reach organizations objectives, in terms of brand awareness, word of mouth and other non-economic aims (in the next paragraph we will see how we can measure the social media activities). Moreover, social media transform the way through which consumers interact and communicate with companies: in this era, thanks to the ability of generating contents by users, the higher and constantly interactions between customers and holdings have transformed the monologue (when consumers were passive subjects of advertising activities) into dialogue (in which users are active participants and companies have to adapt to their needs). The social media era can be viewed by an innovation process, particularly as open innovation, where people exchanging information, indirectly influence the

knowledge cycle process of other users, comprising companies, which are able to get some external useful information about the customers' needs, tastes. As a consequence, observing different behaviours in the social media platforms, companies are able to convert them inside the organization (Hong Zhang). Finally, both authors Mangold and Kunal Swani defined social media, as an integral part of business strategy because they became an important element of marketing strategy of companies. Using social media in appropriate way allows companies influence brand value and purchasing decisions process of consumers through the active actions of users. For this reason, social media have to be combined with traditional marketing activities forming a business ecosystem, in such a way as to achieve business objectives.

In the end, what distinguishes this era is the interactions between three main elements, as shown in Figure 16.

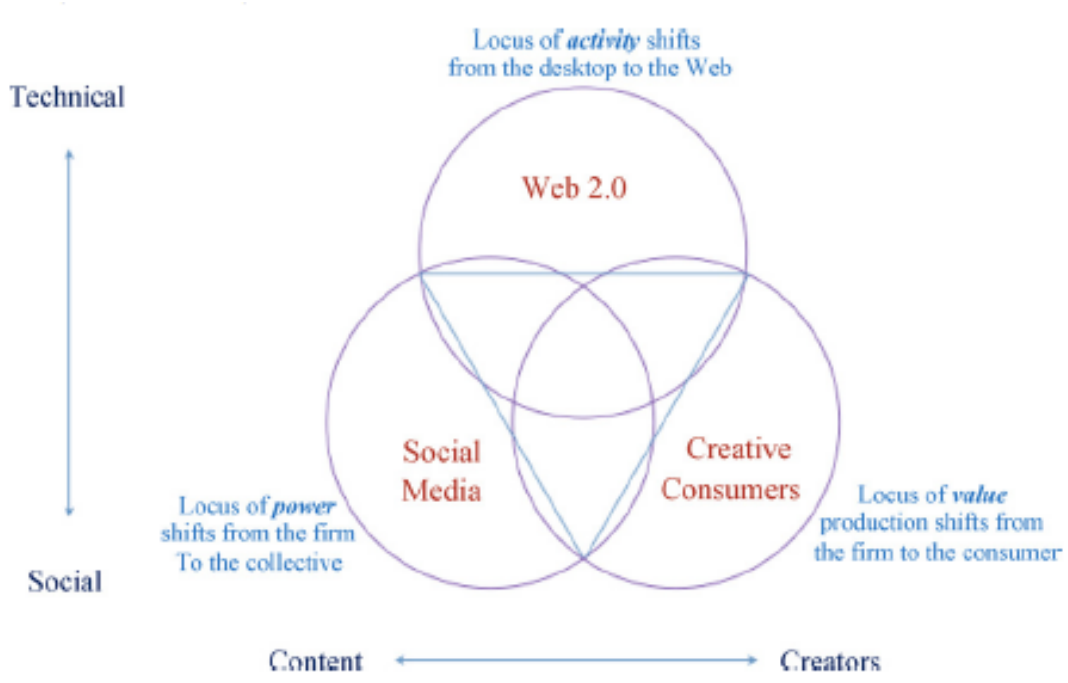


Figure 16: The key elements of Social media era (Pierre R. Berthon, 2012)

As we analysed, the term social media has to be distinguished separately by the web 2.0 and creative consumers, as well as user generated content. The figure above explains how much these three key elements are interconnected to each other. The web 2.0 is the technical platform that allows the evolution of social media, which facilitates the creation of contents by users. The root of social media, as well as Web 2.0, transformed

several activities from desktop to web. Due to the evolution of Internet technologies, the contents production changed from companies to consumers and then the power got by companies before that era, moved from companies to consumers, who became the generator of information and then knowledge.

Chapter II

MEASUREMENT MODELS AND KPI

Considering that the emerging social media activities have become an integrative part of traditional marketing activities of businesses, organizations have to consider and analyse all performances about social media activities. In order to accomplish it, organizations have to include the management control system in terms of flow of information arising by social media activities, as well as translating consumers' behaviours across different social media channel such as Facebook, YouTube, Instagram and so on.

2.1 Management Control System

The management control system is an essential element of business environments through which the superior managers at top level of companies monitor, check out, evaluate and take decisions about activities performed at different levels of classes maximizing internal and external elements in order to achieve business' goals. The management control system can be defined as "the formal, information-based routines and procedures managers use to maintain or alter patterns in organizational activities ". The management control system is one key element that allows companies to evaluate the overall business activities in terms of reached objectives. The system "plays" a role of satnav that allows corporate decision maker department evaluate business performances, including internal and external capabilities and resources, analysing business achieved goals. The essential roles of the management control system from a business perspective are:

- Scheduling results: this phase is characterized by defining goals which have to be achieved, analysing factors that can affect the achievement of results, clarifying the proper resources to achieve them; in this particular stage, the control system helps the decision maker to estimate which resources, internal capabilities and other corporate elements are necessary and useful to achieve pre-defined goals;

- Measurement outcomes: the important role of management control on measuring the corporate results is due to the fact that not every elements are controlled by firms because in the production processes some influential elements are external by firms such as market demand or new competitors; on the other hand some internal corporate features cannot perform as companies estimated;
- Analysis of deviations: whenever the business outcomes differ from business predictions, the control system allows business to understand the reasons of that variances, identifying endogenous and exogenous factors;
- Corrective measures: this last phase of control system is characterized by the introduction of corrective actions once the aforementioned phases are accomplished. The different actions, which can be undertaken in this stage, are related to business objectives, action plans to achieve them, and establishing which elements are exogenous or endogenous.

Considering the complexity of businesses, the different hierarchy levels inside them, internal and external elements affecting business performances, the management control system is divided in three systems:

- Budgeting system: this system defines different ways of business entities to achieve business goals; different ways in terms of money, resources, time and so on;
- Performance measurement system: this system gathers information about business performances of different organizational departments and calculates value over time period;
- Reporting system: this system compares business results with pre-defined goals providing information to decision makers.

Considering the complexity of management control system, which is divided in different stages and in different operative systems, the activity control of different objectives for different department levels plays a crucial role in achieving the business goals.

In particular, in the social media field, the evaluation of different social media outcomes in different steps during a social media project has become a critical element to the success of social media activities, and then the introduction and exploitation of different key performance indicators are necessary in order to gain a business competitive advantage. In doing that, it is necessary to exploit different objectives for different steps

in the social media, trying to determine which objectives are most relevant for organizations.

2.2 Models of Measurement

Since social media activities have becoming more and more important inside the communication strategies of companies, and considering that the management control system is one of the most important key components of business organizations, companies have to apply the management control system in the field of social media, dealing social media as traditional advertising media (in terms of organizational plan). Being able to measure outcomes of social media, the management control system applied in social media required to companies a well-defined social media plan. A social media plan is a specific model that allows companies organize, evaluate and implement activities performed in social media field. Before looking the critical aspects of social media activities, it is necessary to exploit some scientific literatures in order to understand how control activities are linked with social media activities, as well as which are the necessary organizational actions that need to be taken, in order to measure the failure or success of a social media project.

The authors (Tracy L. Tuten, 2017) on their publication pointed out the main steps to do in social media marketing plan, just before launching and evaluating a social media project; in particular they suggested the following measurement model[20]:

- Conduct a situation analysis and identify key opportunities: in this embryonic phase, companies have to analyse all factors, which could affect the overall business goals. The situation analysis can be divided in internal and external. The first one consists in evaluating which are the resources capable of interacting in social media activities, evaluating if the corporate culture is adequate to social media norms, identifying the strength and weakness of organizations. External analysis refers to all possible elements which could prevent and affect the social media functionalities and capabilities of internal resources such as brand competitions, drop demand, regulation and so on; additionally, external analysis refer to all elements which are over business control or events that are not a consequence of a corporate choice;

[20] Tracy L. Tuten, Micheal R. Solomon, Social Marketing, 2017, chapter 4 – Social media marketing strategy

- Define Objectives: in this stage, companies have to decide what are the possible outcomes they could achieve through social media activities. In doing that, organizations have to identify the human and financial resources necessary to obtain that predicted results. In the next section we will see which is the main goals that companies can achieve in social media. Regardless of objectives, the latter have to be SMART which means specific, measurable, achievable, relevant and time-bound[21]:
    - Specific objective means that the objectives have to be clear and specific. In order to be clear and specific, objectives must rely on the 5 W: what a company wants to accomplish, why that objectives are important, who is involved in achieving these goals, where are these goals and which resources and limits are involved;
    - Measurable means that the achieved objectives have to be monitored via particular monitoring actions defined by companies. In order to monitor objectives, companies can make use of any measurement metrics so that they can be defined whether the objectives have been achieved and how they reached them;
    - Achievable means that the predefined objectives must be realistic and achievable in terms of resources and skills;
    - Relevant objectives mean that companies just before defining the objectives, have to evaluate all possible purposes, trying to examine which objective is most appropriate and then relevant for themselves;
    - Time-lined objectives means that each objective must have a deadline so that companies are able to give the right importance to the activities useful to achieve them;
- Gather insight into target audience: once established opportunities, weakness and business goals, companies have to gather as much information as possible of target audience for which companies decide to reach via social media channels. The criteria to select a proper target can be different: demographic, psychological, behavioural and so on;
- Select social media zone and vehicles: this step is characterized by the identification of specific zone (relationship development, social publishing, social

[21] Ca' Foscari University of Venice – Management - Social media Strategy SMM2018

entertainment and social commerce) and the appropriate vehicles, which differ according to the social interested zone. The relationship development zone aims to build relationships and conversations, which differ from each zone. In the social publishing zone, the aims are to be informative, educational about a product/service, the entertainment zone is characterized by that entertainment and the social commerce zone focuses on shopping and buying products/services. It is important that in this stage companies evaluate all possible available media useful to achieve the business goals, as well as making equilibrate choices about owned media and paid media;

- Create an experience strategy: in this section of measurement model, companies have to decide what message to promote in social media, how they set up that experience strategy, according to the key elements analysed in the aforementioned stages, such as objectives, target audience, internal analysis and so on. In creating an experience strategy, companies can focus on four important elements:
    - Affective: the strategy stimulates emotions;
    - Sensory: the strategy engages senses, particularly vision;
    - Behavioural: the strategy affords physical actions;
    - Cognitive: the strategy activates intellectual reasons such as curiosity.
- Establish Activation Plan: companies decide the overall principles in order to activate the social media plan, identifying the responsible resources, defining the budget and considering other possible integrative promotional tools;
- Manage and measure: the final stage of social media plan is characterized by the analysis of social media performances in order to implement and enhance future social media marketing projects. In the following section we will exploit the main social media metrics available by companies.

According to the social media process described above, it seems to be essential that companies have to follow specific steps in order to obtain a successful marketing communication program, and then to be competitive in the marketplace. Each organizational department has specific objectives to be achieved, and each one pass through a well-defined organizational plan. The respective social program depends on departments' goals. Some departments care about financial measurement such as sales, ROI, others focus on measurements related brand reputation and so on. Another

important scientific framework (Susan, 2011)[22] explained four main blocks useful to create an appropriate social media strategy.

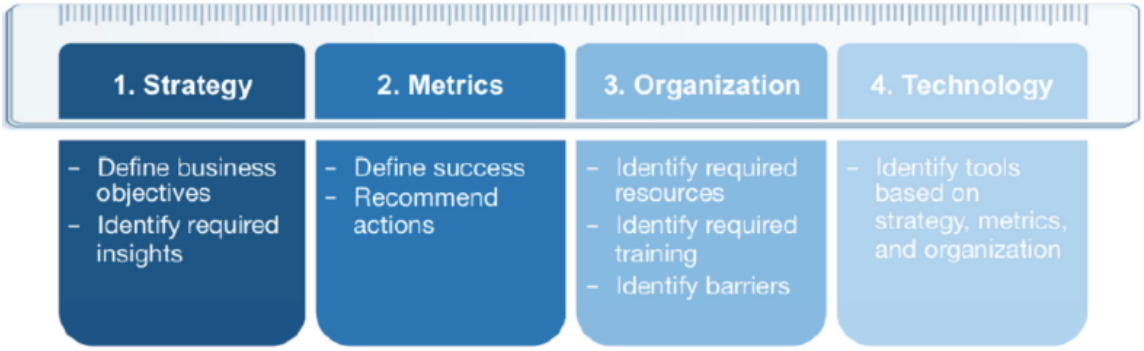


Figure 17: Social Media Measurement Framework (Altimeter Group, 2011)

As we can observe in Figure 17, the first step just before building a social media framework is represented by the "Strategy" block. In this phase, companies need to identify the main objectives that companies would like to achieve in a way that social media activities purposes are adequate to overall business goals. The companies need to keep in minds the overall business goals, and then identify social media objectives. In turn, once social media aims are in line with the overall business goals, companies have to exploit specific insights required by business goals and then social strategy. In the next step, companies must outline the main elements companies want to evaluate from a business view, which means that companies could evaluate brand awareness, improve search engine placement; after that, companies can apply respective measurements in the social media field. The third stage of this social framework is characterized by the organizational structure: companies should evaluate internal and external collaborations, in terms of capabilities of resources, highly knowledge employees, and analytical and intellectual business' properties. The final step refers to the choice of appropriate available tools by companies in order to evaluate what has been established in the previous sections, in terms of objectives, what and how evaluate outcomes and resources. In this field, considering the constantly emerging of new analytical tools, companies could rely on external vendors, which have highly skilled and updated resources.

[22] Altimer Group, 2011, A framework for Social Analytics

In addition, another interesting prospective (Gifoil, 2012) related to social media measurement[23] is based on units of analysis. According to the authors, even if the social media measurement activity over the years got attention by lot of economists, scientists, researchers and experts, in the literature there is no clearly specified framework that explains carefully all different aspects on measuring activities performed in the social media field. They rely on units of analysis with the aim to do an effective social media measurement, which not includes only financial measures. They defined units of analysis as particular units that are being considered in a specific research business, which perform particular tasks for particular levels of organization, and for this reason, social media measurement has to be divided carefully for each research effort because not every social media activity can be evaluated in the financial perspective. Considering the social media measurement for different levels of organization (unity of analysis), the framework is proposed as follow:

- External Measurement: in this kind of level, companies must identify all possible external factors such as industry, competitor and regulator that could affect social media activities. In this section some possible objects of evaluation are financial and non-financial evaluation such as sales, brand awareness, advertising and financial consumer protection;
- Internal Measurement: internal level allows companies evaluate their performances in terms of corporate level, including logistics function;
- SBU measurement: Strategic business unit comprises several elements such as production division, region, market segmentation and technology, and in turn for each level some important functions, which can be evaluated in social media activities are product launch, product development, retirement planning and training;
- Department Measurement: this level includes all different departments inside organizations, as well as finance, human resources, marketing, information technology and customer service with accurate functions evaluation for each of them such as account receivable, recruiting, advertising, product repair and customer relationship management;

[23] Journal of Business & Economics Research, 2012, Return on Investment for Social Media: A Proposed Framework For Undestanding, Implementing, And Measuring the Return

- Individual Measurement: the final level incorporates product, person and program with specific functions such as consumer product design, image management, and healthcare awareness.

Analysing the aforementioned social media frameworks, one interesting thing is that each of one pointed out how much important is firstly the definition of overall business goals, without them, a social media plan results inadequate to achieve predefined goals in the social media platforms. In addition, the last framework underlines that in order to make a successful social media measurement, every level of organizations has particular functions, and then specific different measures.

Another critical framework which focuses on the backstage of social media measurement is explained through the article "Social Media Strategy and Return on Investment"[24] (Looy, 2016).

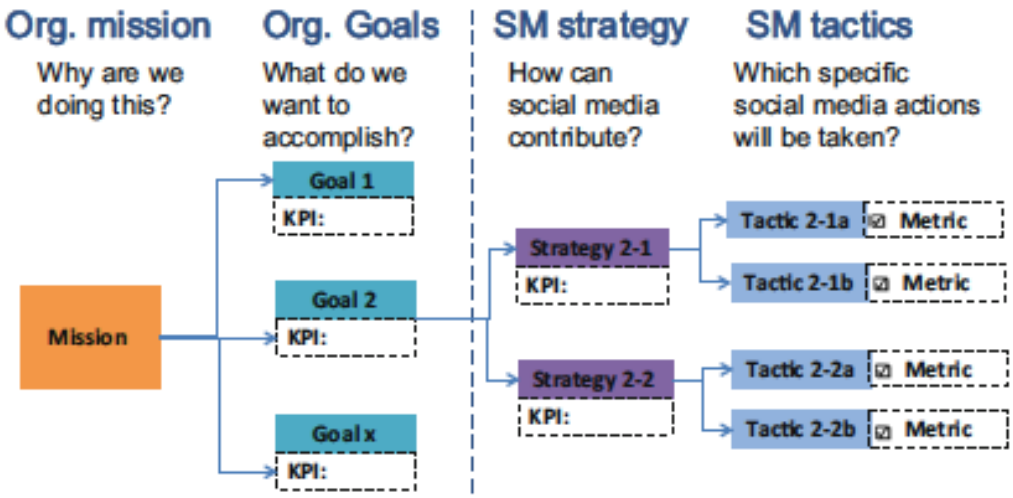


Figure 18: Social media strategic plan (A. Van Loy, 2016)

As Figure 18 shows, before deciding a social media tactics, companies have to start from organizational mission, which means that a social media strategy has to link with the organizational strategy. The organizational mission represents the reasons about business performances. As we can note, the organizational mission can present different business goals. Identifying business goals means establishing what outcomes companies want to achieve. In turn, since organizational goals have been determined, according to the organizational mission, each predicted aim makes use of multiple social media

[24] Springer International Publishing Switzerland, 2016, Social media Management, Social media strategy and Return on Investment

strategies. This means that in order to achieve a particular goal (e. g. goal 2) there will be a specific social media strategy, which it will be different from a social media strategy used to reach the organizational goal n. 1. In the social media strategy, companies determine the contribution of each social media channel companies choose for that overall social media strategy. Furthermore, each social media strategy has different social media tactics. In the block of social media tactics, companies decide which kind of social media actions will be taken. Finally, in the social media tactics companies must decide metrics to evaluate the social media tactics, while each business goals and strategy are assessed by respective key performance indicator (KPI). An important consideration in this framework of social media plan is that we can distinguish business actions and social actions, because organizational goals and social media strategy are evaluated by particular KPI related to business actions, instead metrics used to evaluate social media tactics are linked to social actions (e. g. number of Facebook shares, likes).

2.3 Objectives and performances measurements

Once social media plan has been established, most companies face problems in evaluating social media activities. As we have seen, there is no a well-defined social media measurement because the latter depends on business goals (different), and social media objectives, which affect the social media measurement process. There is no a standardize model to measure social media activities. Since social media measurement depends on overall business goals, and in turn social media aims, it is essential analysed most frameworks which treated social media measurements according to the social media objectives. The first interesting literature article[25] (Barger, 2013) focuses on two kind of social media objectives: short-term and long-term objectives.

Considering that the main aims of short-term objectives is to generate revenue, the authors identify three purposes of short-term aims:

- Gaining consideration: since consumers are increasingly using social media platforms in order to evaluate a product/service before their purchasing behaviour, companies have to monitor and respond requests for advice their product or service if they want to be competitive and obtain strong attention;

[25] International Journal of Integrated marketing Communications, 2013, An integrated marketing communications perspective on social media metrics

- Stimulating trial: using social media platforms, companies are able to promote their product or service via specific communication forms of promotion such as printable coupons, discount codes, games encouraging users take product (service);
- Encouraging repurchase: usually, effective promotional activities that stimulate trail via social media encourage also repeat purchases. In social media field, promotional sales activities with discount codes induce trial and then acquisition behaviour.

If short-term objectives aim to generate revenue, the long-term purposes focus on the creation of brand equity and building brand relationships. Objectives of long-term aims are:

- Improving customer satisfaction: monitoring and constantly evaluate customers' experiences with a brand via social media allows companies respond readily to consumers' complaints that could lead companies' unfavourable situations;
- Creating awareness: brand awareness represents the degree of a brand to be recognized by consumers for features, qualities of a product/service;
- Building relationships: the creation of relationships between brands and consumers arise by repetitive positive interactions between brands and consumers in social media environment;
- Fostering community: focusing on the idea of building relationships with customers, companies are able to organize brand communities. In addition, via social media communities can be created independently, which perform specific functions on behalf of the brand, such as exchange information, provision of assistance.

Keeping in mind the main aforementioned objectives of social media activities, the seven critical success factors linked to the objectives of business are:

- Volume: this critical success element is represented by the number of times a brand receives mentions among all possible social media platforms over a period of time; this kind of evaluation in terms of brand recommendation helps marketers analyse the success or failure of a marketing campaign, and in turn, volume metric allows companies to improve the brand awareness. In addition, mentions metric depends on the type of volume a brand receives, which can be

negative or positive mentions. Through it, marketers are able to understand how consumers react with a specific brand;

- Share of Voice: this factor focuses on the same process of volume mention with a particular feature: the share of voice is expressed in percentage because it calculates mentions of a brand with the overall mentions of all brand of a product category. Through share of voice, managers are able to get useful information about how marketers perform their activities in the social media platforms;
- Engagement: as we have seen in the previous chapter, the engagement ratio in social media is represented by all possible actions undertaken by users in terms of liking, commenting, sharing and replying a brands post with other people in the social media environment; the analysis of engagement ratio affords marketers determine the audiences level of interest for each post. Monitoring the social actions of users, allows companies determine the level of that engagement in a growing hierarchical form[26] (Shawky, 2020) as follow:
    - Connection: this kind of users perform in the social media in a passive way, this means that they see brand posts and brand mentions but they do not perform any activities in social media;
    - Interaction: users interact with other actors in social media environment about a brand (product/service);
    - Loyalty: users interact with brand's communications and interact constantly with like-minded users.
    - Advocate: this kind of users are the ones that favour the word of mouth in social media, promote the brands creating personal message and contents about brands.
- Leads Generated: this metric allows companies count how many users (leads) have been generated via social media. A lead is an interested consumer about a product/service of a company. A lead[27] is a potential customer of companies. The determination of number of leads is useful for evaluating if a social media marketing campaign has been carried out efficiently, attracting attention of as many users as possible, who could be potential customers, as well as leads;

[26] Journal of Business Research, 2020, A dynamic framework for managing customer engagement on social media
[27] Source: glossariomarketing.it

- Response Time: since users participate actively in the social media, and they are able to interact with brands, a response time is a useful factor, which determines the amount of time it carries the brands answer to social media questions, complaints in social media by users;

The critical successful factors of social media activities can be grouped in three types of measures (Ewing, 2009):

- Attitudinal: this benchmark establishes the outcomes of a promotional plan; these attitudinal measurements are represented by volume and engagement ratio and response time;
- Behavioural: behavioural metrics are expressed by leads generated and again engagement ratio since the latter indicates all possible actions undertaken by internet users;
- Financial: the most common financial measure of social media is represented by ROI. The ROI, a measure used also in traditional marketing activities, measure the amount of "revenue gained from a social media marketing campaign minus the cost of campaign divided by the cost of the campaign". This benchmark is most appropriate for short-term social media objectives because it calculates social media activities in monetary results. In turn, evaluating the long-term objectives through ROI measurement is heavily difficult because brand awareness, customer satisfaction, creation of relationship can be hardly converted in the monetary evaluation.

Another important performance measurement framework (Kościelniak, 2018) is explained with the article "Key performance indicators of social media in enterprise management"[28], that categories all possible key performance indicators according two concepts:

- Involvement
- Range

The first analytical evaluation of social media activities relates to the quantification of users' activities in terms of registration in the database, actions of brands' recommendations between users, the quantifications of comments or posts on websites, participation of questionnaires, installation of applications and play video games. The

[28] Polish Journal of Management studies, 2018, Key performance indicators of social media in enterprises management

second one, the level of range, cares about numbers related to unique user/visitor, impressions' pages, click through ratio[29] in different targeted people, visits of website, pages and conversion rate[30]. The CTR is the relationship between the number of generated clicks of particular advertisement and the number of views of that advertisement. Instead, the conversion rate represents how a particular advertisement has been success in terms of users' actions of that advertisement.

In addition, the framework "The social media Measurement Compass"[31], which lists some important but not exhaustive social media metrics, according to the business objectives, identified the following benchmarks:

- Brand Health: This criterion measures the sensations of people, whenever consumers talk about the brand in the social media. Analysing social feelings in the social media field, allows companies evaluate and implement market researches, exploit weaknesses and opportunities of brands; as shown in Figure 19, measuring the brand health of a company, enables companies evaluate and plan how to "hit" consumers' feelings.

[29] Source: glossariomarketing.it
[30] Source: glossariomarketing.it
[31] Altimeteter Group, 2011, A Framework for Social Analytics

Themes	Insights	Metrics	*Actions*
Conversation and Sentiment Drivers	How people feel about your brand What words or qualities they associate with it Where conversations occur Conversation drivers Frequently shared topics	Sentiment over time Source of positive, negative and neutral sentiment Highest-performing topics, brands, regions Number of fans/followers, brand mentions Top keywords Top shared, liked, RT'ed	***Research*** *Conduct real-time market research.* ***Planning*** *Conduct scenario planning, crisis planning.* ***Decision Support*** *Use as support for marketing, service, product or other business decisions.* ***Competitive Intelligence*** *Inform competitive moves.* ***Advocacy*** *Identify and develop relationships with advocates, detractors.*
Location, Time, and Impact of Conversations	Top channels Sentiment variation by channel Location of conversations about your brand /products How far your conversation reaches Content speed/resonance	Where people talk about your brand or products Sentiment by social media channel Time-parting analysis by conversation topic	
Competitive Implications	How people talk about your competitors Competitive position in industry/product area/topic Competitive opportunities, threats	Sentiment by company/competitor Social Share Of Voice (SSOV) over time/vs. competitors Share of total conversation by industry, product, topic	
Issues Identification	Emerging issues Issue sentiment Sentiment drivers	Accelerating keywords, volume, sentiment	
Influence	Influencers, whether advocates or detractors	Influencers by topic (by followers and/or reach) Sentiment by influencer	

Figure 19: Insights, metrics and actions of Brand Health (Altimeter Group, 2011)

- Marketing optimizations: via social media measurement, companies use social data to explore deeply information about consumers. In doing that, companies are able to understand how a marketing communication campaign performs in the real world, again the competition. In turn, they are able to manage future social media plans targeting narrowly specific group targets. Figure 20 explains different metrics that companies can use in order to obtain specific insights about consumers behaviours related to the content of posts, channels performances, times of impacts of consumers and then exploiting which channels could be more efficient for marketing campaigns.

Themes	Insights	Metrics	*Actions*
Overall Campaign Performance	Performance of social compared to traditional advertising campaigns How segments perform against each other[8] Whether social cannibalizes other channels	Revenue, conversions, leads per dollar spent compared to traditional programs	***Planning*** *Develop future campaigns based on insights.* ***Advertising*** *Focus on highest-potential markets or groups (geo- or demographic).* ***Segmentation*** *Develop programs geared to highest-value customers, prospects.* ***Program Development*** *Develop programs based on lifestyle insights.* ***Investment*** *Plan social channel utilization/investment.* ***Engagement*** *Plan for optimal times, topics to engage.* ***Advocacy*** *Identify/develop relationships with advocates, detractors.*
Content Performance	How many people viewed, shared, liked your content Segmentation: how videos, calls to action perform	Visit loyalty by content Sentiment, retweets, likes, fans, followers by content Revenue, conversions, leads by content	
Channel Performance	Effectiveness of programs by social channel/network: Facebook, Twitter, YouTube	Visit loyalty/view-/click-through by channel Sentiment by channel Retweets, likes, fans, followers by channel Revenue, conversions, leads by channel	
Timing Impact	Most effective times to post social content and engage	Time-parting analysis by conversation topic	
Influencer Identification	Where to find advocates and detractors	Most active/followed by campaign, channel Sentiment by influencer	

Figure 20: Insights, metrics and actions of Marketing Optimization (Altimeter Group, 2011)

- Revenue Generation: Even if it is difficult using social media to generate revenue, because main social media objectives refer to non-financial business aspects (awareness, engagement), in order to gain a competitive advantage companies must understand key values that social media transmit in the purchasing process.

Themes	Insights	Metrics	*Actions*
Revenue	Effectiveness of social channels for conversion and revenue generation Whether the social experience influences purchase behavior	Leads by channel Conversions by channel Sales by channel Visit loyalty [Stated] intent to purchase Revenue by review rating Revenue by product by channel over time Revenue derived from social channels compared to direct revenue	***Advertising*** *Focus on highest-potential markets (geo- or demographic).* ***Assortment*** *Focus on highest-impact products or services (geo- or demographic).* ***Customer segmentation*** *Develop programs for highest-value customers.* ***Campaign Development*** *Develop campaigns, promotions based on lifestyle topics.* ***Investment*** *Make investment decisions based on social channel performance.*
Search	Impact of social media on search results	Improved search engine placement that drives increased traffic	
Relationship	Whether social media is helping increase customer loyalty over time	Customer lifetime value Transaction size Transaction frequency	

Figure 21: Insights, metrics and actions of Revenue Generation (Altimeter Group, 2011)

- Operational Efficiency: as we have analysed in the previous chapter, social media channels assign companies to save lot of operational costs compared to the traditional marketing activities. In addition, over a period of time, some non-economic benefits arise by the brand advocacy through which customers interact and exchange information about a product/service favouring indirectly the brand awareness. as well as the diffusion. Identifying advocate or user really interested in a brand, provides organizations to save money on brand advertising (Figure 22).

Themes	Insights	Metrics	*Actions*
Call Containment/ Deflection	Potential cost savings from contained (deflected) calls	Percentage of inquiries in social channel that were resolved; i.e., did not culminate in 1–1 chat or call center call	***Identify Inefficiencies*** *Align web/social content to customer questions and issues; move most popular social answers into knowledge base.*
Advocate/"Super Fan" Identification	Who is driving the savings? What topics do they prefer? Which advocates/"super fans" are most respected?	Most active advocates Sentiment/hot topics by advocate Kudos, likes, shares, retweets by advocate	***Extend Advocate Reach*** *Develop advocacy/"super fan" network to accelerate impact.*
Cost Containment Opportunities	Which services issues are best answered online? Knowledge base gaps	Most frequent questions online versus in call centers	

Figure 22: Insights, metrics and actions of Operational efficiency (Altimeter Group, 2011)

- Customer Experience: managing effectively social media channels brings companies have positive impacts in social media on the customer experience, which is the outcome of brand health, cost savings and growing earnings. There are different metrics available by companies in order to increase the customer experience, according to the different topics in which companies decide to focus on, as explained in Figure 23. Companies have to evaluate the attitude of users even when companies are not socially online and in doing that, they can take some useful inputs for their marketing campaigns.

Themes	Insights	Metrics	*Actions*
Attitudes	How people talk about your brand and product when you're not "there," and how it compares to traditional service channels	Common keywords Common topics in social versus in CRM/call center software	***Service Improvement*** *Set service levels; identify and act on service, product issues.* ***Optimization*** *Align content and service focus to top issues in social channels.* ***Engagement*** *Directly engage with and address service issues, positive or negative.* ***Issues/Crisis Management*** *Identify and act on emerging issues/crises.*
Intensity	Momentum of a topic or issue	Acceleration of keywords or phrases	
Context	Sentiment and emotion drivers	Most common words associated with keywords "love" and "hate" in relationship to your brand	
"Blind Spots"	"What are we missing" in relation to NPS or customer satisfaction scores	Correlate with corporate metrics, such as NPS and customer satisfaction	
Issues and Crises	Service and product issues Emerging crisis	Volume/acceleration of terms related to your product, service, brand, executives, or industry	
Service Levels	Performance of social CRM How quickly your organization responds to issues online	# of service issues addressed in social media % escalated and resolved inside/outside social media # positive ratings and reviews Retweets, content shared	

Figure 23: Insights, metrics and actions of Customer experience (Altimeter Group, 2011)

- Innovation: Being online in social media by companies afford them to exploit new ideas generation arose by consumers, reducing risks to fail to launch a new product. Via social media companies are able to track customers feelings, tastes, through which they can be useful to exploit new opportunities (Figure 24).

Themes	Insights	Metrics	*Actions*
Opportunities and Threats	Service and product opportunities and issues (marketing, design, service) Competitive opportunities and threats Emerging crises	Terms such as "idea," "I wish," "I hate," "I love" in relation to brand and competitors Acceleration, unusual volumes of new terms (trending terms, top keywords)	***Product Innovation*** *Identify customer likes/dislikes for input into product roadmap.* ***Service Innovation*** *Identify customer likes/dislikes for input into service roadmap.*
Idea Resonance	Which ideas gain most traction/resonate most strongly? Customer requests in context Perspective on popularity of ideas	Number of ideas (volume) Sharing of ideas (RTs, likes, shares) Acceleration and reach of idea topics over time	***Engagement*** *Identify/engage on topics that appeal to the community.* ***Marketing*** *Market back how consumer-led innovation has been used; demonstrate company's support/appreciation of its community.*
Idea Impact	Idea impact Effect of time on the above	Popularity and sharing of ideas Trends over time	***Trend Spotting*** *Identify trends to be evaluated against corporate criteria.* ***Competitive Intelligence*** *Monitor competitors' innovations, as well as community response.*

Figure 24: Insights, metrics and actions of Innovation (Altimeter Group, 2011)

Another important contribution is the chapter 11 of the book "Social Media Marketing" already mentioned in the previous paragraph, it focused on three main performance measurements as follow:

- Activity metrics: this measure allows companies evaluate themselves in the social media environments. Metrics such as engagements, time spent with contents and many others enable companies assess their efficiency marketing campaigns;
- Interaction metrics: companies understand how their targeted group are engaged with their social media plans, which means that how people interact with brands in social media;
- Return metrics: metrics related to financial and no-financial measurement, such as ROI (already explained) and other performance metrics (explained later).

As we have seen, there are endless social media metrics available by companies; regardless of social media metrics types companies want to evaluate, the common element that links all analysed scientific article is that the social metrics have to be connected to the business objectives. In order to evaluate the social media activities,

first of all companies have to decide overall business objectives, and then deciding the most appropriate social media metrics according to the "rules" and "objectives" each social media presents. In the next paragraph we will explore the most critical social media metrics in scientific literature and in the web 2.0.

2.4 Key performance indicators

The KPI are indicators that enable companies evaluate their social media performances. In order to evaluate if they reached their predefined business objectives in social media, companies have to select the most appropriate social media metrics, which differ from each other, and depends on the type of social media platforms in which companies decide to be present. The scientific article "Can You Measure the ROI of Your Social Media Marketing?"[32] (Donna L. Hoffman, 2010) classified different social media metrics according to the type of social media application and business objectives companies want to achieve.

[32] Management Review, 2010, Can you measure the roi of your social media marketing

SOCIAL MEDIA APPLICATION	BRAND AWARENESS	BRAND ENGAGEMENT	WORD OF MOUTH
Blogs	•number of unique visits •number of return visits •number of times bookmarked •search ranking	•number of members •number of RSS feed subscribers •number of comments •amount of user-generated content •average length of time on site •number of responses to polls, contests, surveys	•number of references to blog in other media (online/offline) •number of reblogs •number of times badge displayed on other sites •number of "likes"
Microblogging (e.g., Twitter)	•number of tweets about the brand •valence of tweets +/– •number of followers	•number of followers •number of @replies	•number of retweets
Cocreation (e.g., NIKEiD)	•number of visits	•number of creation attempts	•number of references to project in other media (online/offline)
Social Bookmarking (e.g., StumbleUpon)	•number of tags	•number of followers	•number of additional taggers
Forums and Discussion Boards (e.g., Google Groups)	•number of page views •number of visits •valence of posted content +/-	•number of relevant topics/threads •number of individual replies •number of sign-ups	•incoming links •citations in other sites •tagging in social bookmarking •offline references to the forum or its members •in private communities: number of pieces of content (photos, discussions, videos); chatter pointing to the community outside of its gates •number of "likes"
Product Reviews (e.g., Amazon)	•number of reviews posted •valence of reviews •number and valence of other users' responses to reviews (+/–) •number of wish list adds •number of times product included in users' lists (i.e., Listmania! on Amazon.com)	•length of reviews •relevance of reviews •valence of other users' ratings of reviews (i.e., how many found particular review helpful) •number of wish list adds •overall number of reviewer rating scores entered •average reviewer rating score	•number of reviews posted •valence of reviews •number and valence of other users' responses to reviews (+/–) •number of references to reviews in other sites •number of visits to review site page •number of times product included in users' lists (i.e., Listmania! on Amazon.com)
Social Networks (e.g., Bebo, Facebook, LinkedIn)	•number of members/fans •number of installs of applications •number of impressions •number of bookmarks •number of reviews/ratings and valence +/–	•number of comments •number of active users •number of "likes" on friends' feeds •number of user-generated items (photos, threads, replies) •usage metrics of applications/ widgets •impressions-to-interactions ratio •rate of activity (how often members personalize profiles, bios, links, etc.)	•frequency of appearances in timeline of friends •number of posts on wall •number of reposts/shares •number of responses to friend referral invites
Video and Photosharing (e.g., Flickr, YouTube)	•number of views of video/photo •valence of video/photo ratings +/–	•number of replies •number of page views •number of comments •number of subscribers	•number of embeddings •number of incoming links •number of references in mock-ups or derived work •number of times republished in other social media and offline •number of "likes"

Figure 25: Social metrics of social media types (Management Review, 2010)

Figure 25 explains lot of social media metrics useful for companies to evaluate their social media activities, linked them to the type of social media (Blogs, Micro-blogging, Co-creation, Social Bookmarking, Forums and Discussion Boards, Product Reviews, Social Networks and Video and Photo-sharing) related to three main objectives: brand awareness, brand engagement and word of mouth. The word of mouth objective means the disclose information between users in social media about product/service. Words of

month are generated by positive (negative) users' thoughts in social media. Regarding the aim of word of mouth, brand awareness and brand engagement, the most critical social media metrics for each kind of social media are:

- Blogs: considering the functionality of this kind of social media channel explained in the first chapter, the activities performed can be evaluated in terms of number of unique visits, return visits (how many times users come back to a content in the blog), number of times bookmarked (how many time users marked blog as preferred in order to open quickly the content), numbers of members (how many users are subscribed to a blog), number of comments, the generation of contents by users, the time (on average) users carry on a blog, numbers of re-blog and numbers of likes;
- Micro-blogging: this channel (e.g Twitter) allows evaluate social media performances in terms of numbers of tweet about the brand, positive or negative tweets, number of followers and number of re-tweets (a brand content shared by a user with his follower);
- Co-creation: social media metrics such as number of visits, the amount of production efforts;
- Social Bookmarking: social media channel included in the classification of Kaplan, Haenlein as collaborative project can be evaluated via number of tags, numbers of followers and number of additional taggers;
- Forums and discussion Boards: similar to the micro-blogging metrics, activities performed in social forums and discussion can be analysed by page views, number of visits, citations of brand in other site and all activities related to brand in a private community such as shared videos, photos, discussions;
- Product review: reviews by users evaluated in terms of number of reviews present in social media, positive or negative feedback, references of users about reviews and the dimension of reviews (duration);
- Social Networks: social media activities in social network such as Facebook, Instagram, are evaluated through numbers of fans of brand' page, numbers of impressions, relevant positive and negative feedback through comments, posts on wall, posts re-shared or repost, number of users actions undertaken due to friend invitation and numbers of times users download social network application;

- Video and Photo-sharing: metrics similar to social network, such as numbers of views of video or photo, how many times users on video and photo-sharing media interact via comments, like, re-shared, numbers of subscribers and how many times video brand contents are published in personal user profile of other media.

As we can see in the figure above, most social media metrics are related to the number of visits, members, reference, return visits which varies according to the type of social media in which companies perform online activities. Therefore, the different social metrics depends mainly on which social media companies perform their activities.
The second important contribution about social metrics is represented by the article already mentioned "Return on Investment for social media: a proposed framework for understanding, implementing and measuring the return", which identifies social metrics according to the level (external, internal, SBU, Department and individual) of organizations (Figure 26).

Level	Function	Social Media Tool	Measure
External			
Industry	*Sales; brand awareness* - dairy industry	Industry blog	Sales; website visits
Competitor	*Advertising* - automotive	LinkedIn, Youtube, Twitter	Cost savings; sales; market share; # views
Regulator	*Financial consumer protection*– credit card	Youtube; Twitter	Cost savings; # fraud claims; views
Internal			
Corporate	*Logistics* – holiday reminder ads	Facebook; Youtube; Flickr	Cost savings; seasonal revenues; brand equity
SBU			
Product Division	*Product launch* – technology (online only)	Youtube; Facebook	Cost saved; revenues; # posts; # views
Region	*Product development* – regional salsa recipe	Crowdsourcing website	Cost saved; revenues; # ideas generated
Market Segment	*Retirement planning* - baby boomers	Insurance Webinar	Cost saved; revenues; # attendees; # Facebook votes
Technology	*Training* – new computer	Youtube; Facebook; Corporate Blog	Cost saved; free publicity; # likes
Department			
Human Resources	*Recruiting, hiring* – nursing	LinkedIn; Facebook, Twitter	Cost saved; publicity
Finance	*Accounts receivable* - healthcare collections	Facebook; Twitter; Ebay	Revenue collected; cost saved; # disputes
Marketing	*Advertising* - two for one meals	Foursquare; Urban Spoon	Revenue; cost saved; # views
Information Tech.	*Product repair* – consumer product	Youtube; Flickr; Blogs	Cost saved; revenue; # complaints
Customer Service	*Customer relationship management* - airline	Flyertalk, Facebook, Twitter; Blogs	Cost savings; revenue; brand image; # views
Individual			
Product	*Consumer product design* – product designer	Twitter; Facebook; LinkedIn, Blogs	Cost saved; # design ideas; brand image
Program	*Healthcare awareness* - cervical cancer program	Youtube; Flickr; Facebook; Blogs	Cost saved; lives saved; brand image; # views
Person	*Image management* - political campaign	Twitter; Facebook; LinkedIn; Blogs	Contributions; cost saved; # votes; # views

Figure 26: Social media metrics by unity of analysis (David M. Gilfoil, 2012)

This framework is similar to the first one, because it classified social measure according to the social media tools and functions companies want to perform. Most measures are related to financial evaluation, because of most organizational levels are related to economic function. Excluding social metrics common to the former framework, other important social metrics of each organizational level are:

Level	Metrics
Region, Market Segment (SBU)	# ideas generated, # votes (on a social platform)
Product, Person (individual)	# design ideas, # votes
Finance (Department)	# disputes

Information Technology	# complaints

Table 5: Social metrics of organizational levels

One interesting thing of Table 5 is that users can assess social media activities in terms of generating ideas. This information can be useful for companies to exploit new opportunities, as well as new products required by the same users. On individual perspective, companies are able to monitor users' evaluations about particular employees of companies through for example the number of votes. Social media measurements related to organizational activities enable companies evaluate narrowly every business performance executed by different units of analysis (person, product, program, finance, marketing), identifying specifically the responsibility at the company level to which a specific task is assigned to him.

Another important scientific literature which focuses on the social media metrics, is the already mentioned article "an integrated marketing communication perspective on social media metrics" which specified the metrics of social medial linked to the company objectives:

- Volume metric: as explained in the previous paragraph, this key performance indicator relates to the number of mentions a brand receives along a specific time period. Analysing the type of mentions (positive or negative), companies are able to monitor which social media performances are carried out in inefficient way;
- Share of Voice: metric calculated as the percentage of a brand related to the positive mentions of all brand in a particular product category (Table 6); a higher percentage of a share of voice about a brand means that people are willing and targeted to that particular brand;

Share of Voice	Positive volume of brand/ Positive Volume of all brands in product category * 100

Table 6: Share of Voice metric

In addition, the sentiment (Altimeter Group) social media metric can be represented by the following table:

Sentiment metrics	# of positive mentions # of negative mentions # of neutral mentions

Table 7: Sentiment metric

- Engagement metric: how many users are engaged about a content of a brand and which actions users take for brands contents, in terms of likes, comments, shares. (Table 8);

Engagement	# of comments, # of likes, # of shares

Table 8: Engagement rate per post

Companies can also evaluate the engagement metric as a percentage over a period of time as expressed in the following table;

Engagement rate overall (%)	# of comments + # of likes + # of shares at time t with all posts up to the present/ number of followers at time t * 100

Table 9: Overall engagement rate

- Advocates: considering the classification of Sarah Shawky about users engagement in social media, the higher level of hierarchical form of users engagement is represented by advocates, who are users that promote brand through their individual content production addressed to their social media network (follower), and that contents can be assessed by companies (Table 10);

Advocates	# of positive contents about particular brand during a specified period of time

Table 10: Advocate metric

- Return of Investment: social metric that enables companies to evaluate their social media activities with the financial perspective. This metric evaluates an economic investment of a social media campaign for example in terms of economic return generated by that social media project.

Return on Investment (ROI)	(Revenue from campaign – Cost of Campaign) / Cost of campaign * 100

Table 11: ROI metric

- Leads generated: this metric uses the counting of potential customers in the social media in which companies decide to invest; this metric can be also represented in a percentage of all leads generated: supposing a company invest money for a social media campaign related to a particular product/service, this metric allows that company evaluate how much that social media campaign generates potential customers;

Leads Generated	# of potential customers from social media platform

Table 12: Leads generated metric

- Response time: metric that counts the amount of time companies spent to interact with users of social media about a user request or inquiry;

According to the social media measurements expressed by the chapter 11 of the book “Social media Marketing” already mentioned in the previous chapter, we can divide social media metrics based on the three kind of activities, as well as activity, interactions and performance metrics. In turn, for each of them, social media metrics can be classified in qualitative and quantitative metrics, where quantitative measures are linked to the qualitative ones as shown by Figure 27.

Category/ Characteristic	Quantitative Measures	Qualitative Measures
Activity (input)	Number, frequency, and recency of: Posts by type, channel (blog posts, updates/posts, comments/reply comments, video, photo by SNS) Content design: CTA used, type of headline and number of words, average word count of post, interactive design element (e.g., poll, quiz, invitation for UGC), hashtag use Summary views such as: Post rates Content type mix Response rate Average response time	Creative messaging and positioning strategy Resonance/fit of campaign appeal Social media involvement Content alignment to brand image and voice Relative value/audience-centricity of content
Interaction (responses)	Number, frequency, and recency of: Impressions/reach Registrations Bookmarks/favorites/likes/ratings Comments/posts/mentions/tags Links/trackbacks/clickbacks Downloads/installs/embeds Subscriptions Fans/followers/friends Share/forward/invite/refer Reviews/testimonials Traffic/visits/views Time spent with post/site UGC contributed Discount/deal redemption rate Echo effect/virality	Sentiment Engagement Influence effects Recommendations Buzz/virality
Performance (outcome)	Engagement Cost/prospects Lead conversion rate Average new revenue per customer Cost efficiencies across marketing functions Customer lifetime value Earned media values Shifts in average sales/site traffic/search engine ratings Share of voice Return on investment	Attitude toward the brand Brand loyalty Customer satisfaction Service quality perceptions

Figure 27: A Social media metrics Framework (Social media marketing, 2016)

Since most of the qualitative measures have already been examined in the previous paragraphs, it is pertinent focusing on the quantitative measures, which are closely related to the qualitative ones, in particular:

- Activity metrics: these metrics enable companies evaluate their social performances in the social media environment in terms of number, frequency and recency of:

- Posts by type
- Channel (blog posts, updates posts, comment/reply comment, video, photo by Social Network Site)

This metric counts the number of posts companies shared (number) in different channel, how many times companies shared in that channel (frequency) and how much time companies spent from one publication to another in the various communication channel;

In addition, another important metrics in the activity category is the content design, which can be examined as follows:

- CTA used: a call to action can be defined as a marketing message exhibited by the company that invites consumers, readers and users to take an action aimed at achieving a goal set by the company for a specific product or service;
- Type of headline and number of words: evaluate if companies have chosen these elements (headline and words) strategically attracting as many users as possible;
- Average word count of post: how many words a post contains; the length of the post can be a determining factor for the success of the post because consumers may not be interested in a post containing too many words;
- Interactive design element (poll, quiz, invitation for UGC): elements which encourage consumers to be active in social media (e.g. a brand page);
- Hashtag use: this key marketing element is a kind of label that allows users and companies to identify and categorize a specific topic in social media environment. In a business perspective, it is a facilitator tool for companies that using the hashtag (#), following by a brand name, or a particular product/service brand or a particular topic connected to the brand in social media, allows companies to be found by users in a quickly way by typing only in the social media the interested topic, product/service or brand; for example, typing the hashtag #nikeairforce in a search engine (Google) or in a social network (Instagram), users are able to discover all users contents (including the Nike page) that rely on this kind of product.

  In turn, social media metrics can be examined in term of summary views of post rates, content type mix, response rate and average response time.

- Interaction metrics: this metric relates to the engagement rate, sentiment rate, recommendations and word of mouth, all of them refer to how users react to content published by companies on different platforms. Engagement and sentiment rate can be evaluated in terms of number, frequency and recency of:
    - Impression/reach: metric which measure how users are engaged with brand contents on social media. Engagement rate of users can be classified according to a precise classification[33]:

Engagement rate by reach	Total engagement per post/ reach per post *100
Average engagement rate by reach	Total ERR/Total posts
Engagement rate by post	Total engagements on a post/ Total followers *100
Average engagement rate by post	Total ER by posts/Total posts
Engagement rate by impressions	Total engagement on a post/ Total impressions *100
Average engagement rate by impressions	Total ER by impression /Total posts
Engagement rate by views	Total engagements on video post/Total video views *100
Average engagement rate by views	Total ER view/Total posts

Table 13: Engagement rate

As we can understand by the table above, every kind of engagement rate exploits some useful information about consumers behaviour. In particular, the engagement rate by impressions can be useful when a company decides to invest on paid media, which is a strategic paid tool that we will analyse later.

- Registration;
- Bookmarks, favourites, likes, ratings;
- Comments, posts, mentions, tags;
- Links, trackbacks, clickbacks;
- Downloads, installs, embeds;
- Subscriptions;
- Fans, followers, friends of a brand page;
- Share, forward, invite, refer to a brand page;

[33] https://blog.hootsuite.com/calculate-engagement-rate/

- Reviews, testimonials;
- Traffic, visits, views of a site
- Time spent with post or site;
- UGC contributed;
- Discount or deal redemption rate: whenever a company promotes product or service through these strategies;
- Echo effect or virality;

- Performance metrics: the quantitative social media metrics, which are linked to the qualitative metrics, as well as attitude toward the brand, brand loyalty, customer satisfaction and service quality perceptions, are:
  - Engagement: metric which enables companies evaluate how users react to their social media activities;
  - Cost/prospects: this metrics allows companies evaluate if a social media marketing campaign about a specific product/service have positive return of that social media campaign. The cost is the amount spent by a company for a social media campaign, while the prospects are the number of consumers who are really interested in that particular social media campaign about a product/service. Usually, prospects have already seen a social media campaign and they are interested to buy the object (product/service) of that social media campaign;

Cost/prospects metric	Cost of social media campaign/ Number of engaged prospects

Table 14: Cost/prospects metric

  - Lead conversion rate: this metric gives useful information to companies about their social media performances. This rate measures the number of visitors of a particular company website or a brand page who are converted to lead for companies; this allows organizations evaluate their functional structure of their communication channels to attract the right target audience and converted it into sales;

Lead conversion rate	Number of leads converted to sales/ Number of total leads

Table 15: Lead conversion rate metric

- Average new revenue per customer: metric that measures the amount of sales generated by social media;

Average revenue per customer	Revenue of social media/ Number of total users

Table 16: Average revenue per customer metric

- Cost efficiencies across marketing function: as explained in the previous frameworks (David M. Gifoil, Altimeter Group), there are different social media metrics about cost efficiencies such as number of views, cost saved, number of leads per dollar spent;
- Customer lifetime value: this financial social media metric determines the amount of financial value brought by each customer for businesses. It is calculated by considering a time period from a customer makes the first purchase until he stops to buy from that company;

Customer lifetime value	Annual revenue per customer * Customer relationship in years (time period) – Customer acquisition cost

Table 17: Customer lifetime value metric

As we examined, there are endless social media metrics available for companies. What differs from one social metric to another is affected by objectives companies want to achieve and then evaluate. Companies are able to focus on the engagement level of users, the ability of users to generate worth of mouth (WOM), the operational costs/benefits effects of social media plan (project), sentiment metrics and many others.

In addition to all social media metrics, the Altimeter framework considers another important factor that must be considered and evaluated, which is linked to the response time metric already discussed:

Service Level metric	Number of service issues addresses in social media % escalated and resolved inside/outside social media number of positive ratings and reviews

Table 18: Service level metric

As analysed previously, companies are able to evaluate their performances on social media in terms of organizational functionality of an employer or the functionality of a particular department; in dong that, more companies are quick to solve problems arising in social media, more users are satisfied and in turn, they can lead positive ratings and reviews about companies.

Beyond all the key performance indicators that companies can use to evaluate their social media activities, it is imperative to point out that in the field of social media communication, companies can fully manage their communication strategy (organic media) or can rely on paid social media tools. A clear distinction is necessary to understand the different approaches that these social media tools present.

2.5 Organic and paid social media

Considering that social media activities require a particular organization, defined by the social media plan (objectives, analysis, social media tools, evaluation of activities), companies can adopt two different kind of communication strategy: the organic and paid.

The first important difference between organic and paid social media is that the first one does not require any efforts in terms of spent money. The organic communication can be defined as the set of communication actions undertaken freely by companies in order to be present in the social media platforms, interact and communicate via social media with users and interested leads. In doing that, the organic communication requires a constant quality production of contents, targeted to the right audience and adequate to market research. For example, a clear content on a social network (Facebook) in terms of tone of voice, high quality of image and addressed to the right target is a potential

social media element that can attract a potential buyer. In turn, the organic communication strategy is the set of actions aimed to exploit all features of a social network presents, without making economic investment to exploit them. Companies, which adopt this communication strategy, will have to adapt to the algorithms that each social media presents to obtain a greater success of an advertising campaign. As a consequence, since the ability to reach users is defined precisely by the algorithm of each social network, the organic communication strategy implies that each content has to be relevant in terms of branded contents capacity to reach users who are effectively interested in them; Therefore, an algorithm defines which are the best contents to show according to its evaluation criteria, trying to show the best contents appropriated to particular users[34]. For example, Facebook assigns a particular ranking based on the relevance of themes of each post. Regardless several branded contents shared on social media, the organic communication approach can be useful when:

- Create relationship with users: companies have to build a strong relationship with users in order to be known across all social media platform. Considering that the organic communication requires lot of creativity, this communication implies a long time period to reach social relationship objective;
- Define social media target: this communication helps companies to determine the adequate target in social media, through the analysis of all the interactions that occur between like-minded people and users and brands;
- Limited budget: companies which are not able to invest money, can exploit the organic communication, in a way to communicate and interact with users, and then advertise brands;

On the other hand, companies can use paid communication strategy, which uses all prepared advertising tools by social network. In the business perspective, this kind of communication implies only the expenditure of a determined budget by companies to promote a particular product/service and does not require any efforts in terms of useful creativity to reach a predefined target, as occur with organic communication. Each social network uses sponsored contents addressed to a specific target, chosen by the companies in the creation of the advertising campaign. Some social network (Facebook) allow companies to determine the amount of budget, how to divide it (daily or total), the geographic area (it means that, once a specific area has been established, Facebook will

[34] Ninjamarketing.it

show that content in that specific area), the objectives of that advertising campaign (brand awareness, increase reach, installation app, increase traffic to company website or a particular link, contacts generation, interactions, video views), the structure of post (photo, video, stories, messenger, carousel (post contains the maximum of 10 photos/videos), slideshow, collection) and finally companies are able to monitor all sponsored contents. In this way, organizations can modify the several parameters just mentioned at any time, trying to maximize the social media performances. The software, which enables to define all aforementioned elements of an advertising campaign, is the Business Manager. In any case, companies are recommended to use the paid communication strategy when:[35]

- Increase brand awareness: companies which are unknown in social media, can rely on this type of advertising tools, which enable to reach endless users present on social media platform;
- Short time period: whenever a company want to launch a product/service for a short time period, it can use paid media in order to reach as many as possible the specific users who are interested in that product (service). In this way, using the organic communication may not be suitable because the same advertising campaign may not reach the desired users;
- Defined target: given the functionalities of each social network (for example Facebook), companies can restrictively define the specific target that the advertising campaign must reach;

As with the measurement models of social media, there is no critical element that defines the organic strategy better than the paid one, because each of them presents particular characteristics. The challenge of companies operating in the field of social media is to combine efficiently both of them, trying to equilibrate the paid communication and the organic one.

Keeping in minds the critical aspects of social media field, from the aims of social media to the endless key performance indicators, which characterize each social media, in the next chapter it will propose the empirical part through which on two social media (Facebook and Instagram), it will be examined several posts in the hospitality field trying to explore if there are some critical elements that lead to the success of each post.

[35] Ninjamarketing.it

Chapter III

THE EMPIRICAL MODEL

In this chapter, with the aim to complete and explain all the theoretical part seen in the previous chapters relating to social media era, an empirical model will be presented. The study relies on some critical aspects of branded contents of some organizations operating in the hospitality sector. In particular the research involves hotels located in Cortina d'Ampezzo.

Since the study could convey interesting outcomes about branded contents, the empirical model used to conduct the research will not be exhaustive for the entire data sample because it relies on limited amount of branded contents and is characterized by a subjective analysis.

3.1 Encoding and Decoding process

As we have analysed, the amount of posts shared via social media between users, companies and like-minded people are infinite. Due to the ability of users to generate and exchange contents (UGC), monitoring all users behaviours on social media platforms becomes an activity extremely important for organizations, because every users reviews, contents, feedback, positive and negative feelings and thoughts about brands could generate a positive word of mouth, which, as we have seen, is one of the promotional (indirectly) outcomes that can occur through the social media activities. For this reason, in order to have a successful communication strategy (in terms of engagement, involvement), companies (marketers) need to study and clarify carefully their communication strategy. Considering that the activities performed in social media by companies have an important hit in the business objectives (sales, brand awareness, brand loyalty and ROI), organizations have to share social media contents in a way to get attention by users, as well as encouraging them to take particular actions. First of all, published contents have to generate users' attention in order to create brand post popularity. According to the scientific article[36] (Kunal Swani, 2017) "What messages to

[36] Industrial Marketing Management, 2017, What messages to post? Evaluating the popularity of social media communications in business versus consumer markets

post? Evaluating the popularity of social media communications in business versus consumer markets" companies can design brand contents popularity in two ways:

- Stimulating brand fan involvement and fan likes
- Stimulating likes and comments of brands' posts

The first one can be represented by every monetary and non-monetary action undertaken by companies to generate curiosity and attention of users (fan membership). On the one hand, companies adopting this strategy can increase their fans' likes of the page through the acquisition of fans, as well as buying likes of them. On the other hand, this tactic could be inappropriate and inadequate if it does not cause effectively the popularity of comments and likes of branded posts.

Instead, the second one, the stimulation of likes and comments has a more important impact on the branded contents. Considering that the value of fans, which leads to a popularity of branded contents, comes from the level of engagement (likes, comments) of users, the second strategy requires more efforts in terms of creativity of posts because they have to generate attention of users. Although this strategy is more complicated, this is the best solution with which companies can obtain more users attention, as well as branded contents popularity. Therefore, the popularity of contents of brands is determined by the level of action undertaken by users (liking and comment), who exhibit their pleasure through sharing branded contents with their networks and associates (Lipsman, Mudd, Rich, 2012). For this reason, liking and commenting actions are important pillars of the success (popularity) of brand publications on social media platforms.

Whenever companies plan their communication strategy in social media, apart from considering all the different types of communication strategies required by each social media (photo, tweet, text), they have to set up a communication strategy that facilitates and encourages "engagement and sharing between network members, particularly their target customers and their networks of friends and associates" (Leek, 2016). According to the psychological motivation theory, users must be encouraged to read (decoding), publish (encoding) contents and spread companies marketing messages on their social media network (Swani, 2014). As we have already seen in the first chapter, there are several psychological reasons why users are affected to publish and interact on social media. These psychological motives include the self-identity expression, the increase of knowledge through sharing contents, the sense of belonging to a community, the increase of self-esteem in the social media (network) and the acquisition of social

benefits. As a result, marketers have to consider all psychological elements to perform effectively in the social media, balancing the values of the brand with the psychological elements of users.

According to scientific literatures (Kunal Swani, 2017) the successful of social media contents depends on the decoding and encoding processes of posts viewers.

On the one hand, the encoding process can be defined as the process accomplished by an encoder (user/person) to translate his thoughts, feelings, personal knowledge and emotions into an effective communication shared with other people, via different communication mediums such as social media contents, private message, e-mail, face to face meeting, phone. On the other hand, the decoding process occurs whenever a user (people) translates a communication (encoding) into feelings, thoughts and emotions. In the field of social media, the encoding process takes place whenever users share contents (brand post), any information in their social network. Instead, the decoding process accomplishes whenever users read that shared contents and elaborate personal thought about that content (brand).

Focusing on the social media contents, over the years, scientific researchers (Gilliland and Johnston 1997, Lothia 2003, Brown 2012) uncovered that the encoding/decoding processes in the social media between B2C and B2B communications differ completely. In particular, in the social media, a central decoding processing approach, characterizes contents shared in the B2B markets. This is due to the business environments, which require a more cognitive and rational evaluations. Instead, in the B2C communication contents, post viewers act more emotionally with less cognitive efforts. The B2C social media contents imply more spontaneous purchasing attitude because users act more emotionally and less psychological. According to the authors, the B2C social media contents generate a lower level of involvement and risk than the B2B contents because in the B2C social media environment contents are reviewed for more private and enjoyment intentions, instead the B2B environment entails information and business purposes.

Since the decoding processes differ between B2B and B2C contents, also for the encoding processes there are some differences between B2B and B2C. Considering the psychological reasons and that the encoding process in the social media is represented by actions undertaken by users, there are two important elements of popularity on social media, which are liking and commenting. Action of liking contents on social media differs completely from action of commenting because the first one is more

spontaneous, less sophisticated and it does not require a high cognitive process because the liking action is very simple. The second one, commenting contents, implies to user a deeply cognitive process. In addition, commenting action is a slower process than liking because it takes longer and then required more involvement. Based on what has just been described, in order to explain the differences between B2B and B2C contents, a dual process theory made by Kahneman in 2011 have to be considered: this theory in the social media context divides liking and commenting activity in two system. The system 1, which is more intuitive, less involved and low mindful, can be represented by the activity of liking. The system 2 is represented by activity of comments, so that it is more cognitive, more structured and rational. Based on system 1 and system 2, the first important difference is that the system 2 (commenting) compared to system 1 (liking) requires a profound way of engagement and is appropriate for that users who desire to have more highlighted self-expression in the social media platform. Besides, the commenting activity is independently by the brand contents because it aroused from a psychological reason and previous comments of other users. Instead, the system 1 (liking) is strictly affected by brands shared contents. Then, considering that the B2C communication process is narrowly linked to personal and spontaneous peripheral process of users, it is expected that in this market (B2C), users comment more than in the B2B environment, which is characterized by informational and business purposes. Then users are less likely to comment because the B2B contents process requires high cognitive process and also because they have no private, but corporate interests. Furthermore, they do not have intention to increase their self-identity on B2B contents because the aim of viewers' B2B contents is to gather as much information as possible.

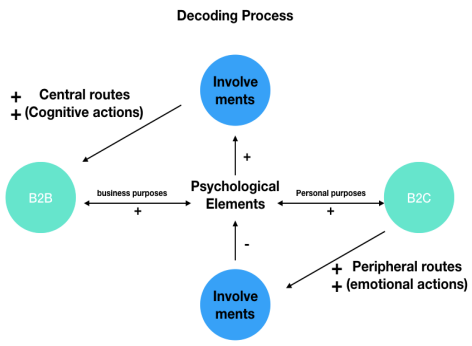


Figure 28: Decoding process of B2B and B2C

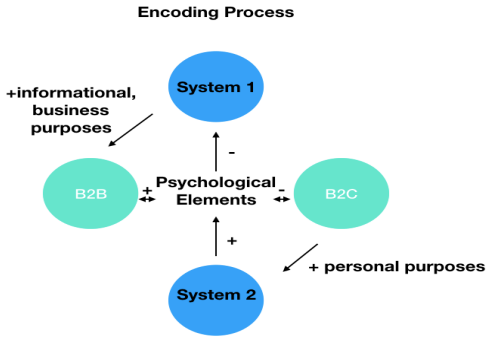


Figure 29: Encoding process of B2B and B2C

In the next paragraph, some empirical analyses have been conducted in the B2C market, trying to understand if some elements of branded contents have somehow a relationship with users' behaviours in the social media.

3.1.1 Empirical Model: Data collection

With the intention of creating some empirical models, the activity of gathering information is based on two important criteria: the first one is that the analysis is conducted on two different social media, precisely Facebook and Instagram; the second one is that the two analyses differ from each other in terms of number of shared contents. The process of gathering data has been accomplished as follow:

- Instagram: in this social media network, the collected data refer to ten hotels located in Cortina d'Ampezzo. In addition, considering that there are endless hospitality organizations in that area, I narrowly focused on medium and high-end hotels, so the analysis process involves to 4-four stars hotels, 4-three stars hotels and 2 five-stars hotels. The analysed shared contents refer to the time period between 1st January 2019 to 29th February 2020. The data collection process includes at least 50 posts shared by each hotel during the year 2019-2020. This means that, on Instagram, the analysis is based on more than 500 contents shared by the hospitality sector, precisely it focused on 511 shared contents, including posts in the form of videos;
- Facebook: the study conducted is slightly different because the sample of shared contents is more limited. Particularly, the analysis focused on the most recent 50 shared contents of one single hotel, the Monaco Sport Hotel ***, which is located in Santo Stefano di Cadore. The time period considered for the analysis is from July 2018 to February 2020. Moreover, even if this analysis is more limited in terms of analysed posts, it gives us deeper information about the collected data because it was conducted using the Facebook software known as Business Manager. The use of Business Manager allows the analysis to be more focused and exhaustive in terms of key performance indicators (KPI).

In order to gather useful information to perform the analyses, the data was collected according to specific "rules":

1. Time period: on Instagram, I selected at least 50 posts for each hotel from 1st January 2019 to 29th February 2020. On Facebook, since the number of posts shared during 2019-2020 was not sufficient to carry out the analysis, I referred to a period of time between 1st July 2018 to 29th February 2020 to obtain a sample of 50 posts;
2. Subjective analysis: in order to select real posts, some criteria have been established based on my personal point of view, in particular:
    - Analysing the graphical part of shared contents, I identified several level-category which characterize every single post published on Facebook and Instagram. In particular, on Instagram, the number of level-category identified in each post ranges from 2 to 7. Instead, on Facebook, the level-category are fewer and range from 1 to 3.
    - Posts in the form of videos were included in the analyses (Instagram/Facebook) because they are part of each communication strategy of organizations.

      Therefore, I conducted a narrow analysis of videos in order to understand if there are some differences between shared featuring a photo and shared posts featuring a video in terms of reached people and interactions. On Facebook, this was possible thanks to the Business Manager software, which is able to monitor everything about shared videos (minutes viewed, second video views, average video watch time, audience retention, top audience, top location).

      On Instagram, instead, due to the lack of features of Instagram's software, it was not possible to make a comparison between videos and images in terms of reached users, so for this social network I analysed to what extent the number of comments generated in the videos have a relevant impact in terms of view rate, trying to determine if comments are a successful factor for video view. The analysis conducted on video contents includes a sample of 27 posts shared both on Facebook and Instagram;

Since the analysis on Facebook turns out to be more precise concerning the quality of key performance indicators, I selected some particular criteria to perform the studies:

- The analysed sample is characterized by each post with at least 500 reached people (KPI). Given that the analysis considers the most performing posts, I attributed to the KPI (reached people) a

minimum value of 500 because a good post gets an engagement rate of at least 5%.

- The analysis focuses on posts created entirely by the brand, and does not include posts with links or posts re-shared by other users in order to determine how the strategic communication of the brand influences the behaviour of users and fans of the brand page;

Figure 30 shows all aforementioned criteria used to select contents of Monaco Sport Hotel shared on Facebook.

Post	Reached people	Reactions	Photo views	Click on link	Other Click	Click on post	Interactions	Level-category 1	Level-category 2	Level-category 3	Image
Post 1	521	9	21	0	12	33	42	Motorcyclists	Outside view	Hotel	
Post 2	1666	76	55	0	127	182	258	Food	Restaurant		
Post 3	1193	25	69	0	62	131	156	Outside View	Hotel	Menù	
Post 4	1404	82	49	0	37	86	168	Hotel	Outside view	Restaurant	
Post 5	509	11	33	0	12	45	56	People	Landscape	Mountains	
Post 6	509	19	10	0	21	31	50	Dessert	Fruit	Nature	
Post 7	1345	58	40	0	47	87	145	Food	Hands	Restaurant	
Post 8	512	23	15	0	33	48	71	Food	Restaurant		
Post 9	608	25	10	0	50	60	85	Wine cellar	Restaurant	Food	
Post 10	563	17	6	0	24	30	47	Wine Bottle	Counter	Appetizer	
Post 11	530	11	3	0	43	46	57	Restaurant	Happy new year	Fireworks	
Post 12	621	20	11	0	42	53	73	Restaurant	Food	Wine Bottle	
Post 13	958	33	14	0	17	31	64	Restaurant	Food	Wine Bottle	
Post 14	642	25	3	0	25	28	53	Notice	Award	Review	
Post 15	650	34	16	0	77	93	127	Food	Landscape	Mountains	
Post 16	667	41	11	0	5	16	57	Landscape	Mountains	Hotel	
Post 17	537	21	6	0	22	28	49	Restaurant	Wine Bottle	Dinner	
Post 18	597	38	4	0	18	22	60	Food	Hands		
Post 19	915	29	3	0	48	51	80	Notice	Work in Progress		

Figure 30: A part of dataset of Monaco Sport Hotel posts shared on Facebook

3.1.2 The objectives of empirical model

Considering the market segment in which the hospitality sector operates, taking in mind what has been already explained in the previous paragraph (4.1) I focused on the B2C contents. The main objectives of the analyses are to verify and demonstrate if some particular elements (level-category) within the published contents are key factors for

the success of the published posts. Thanks to the available key performance indicators on Facebook, the success of posts is measured in terms of reached people, reactions, comments, sharing and click on post as shown in Figure 31. On the other side, on Instagram, the measurement of successful posts is based on likes and comments.

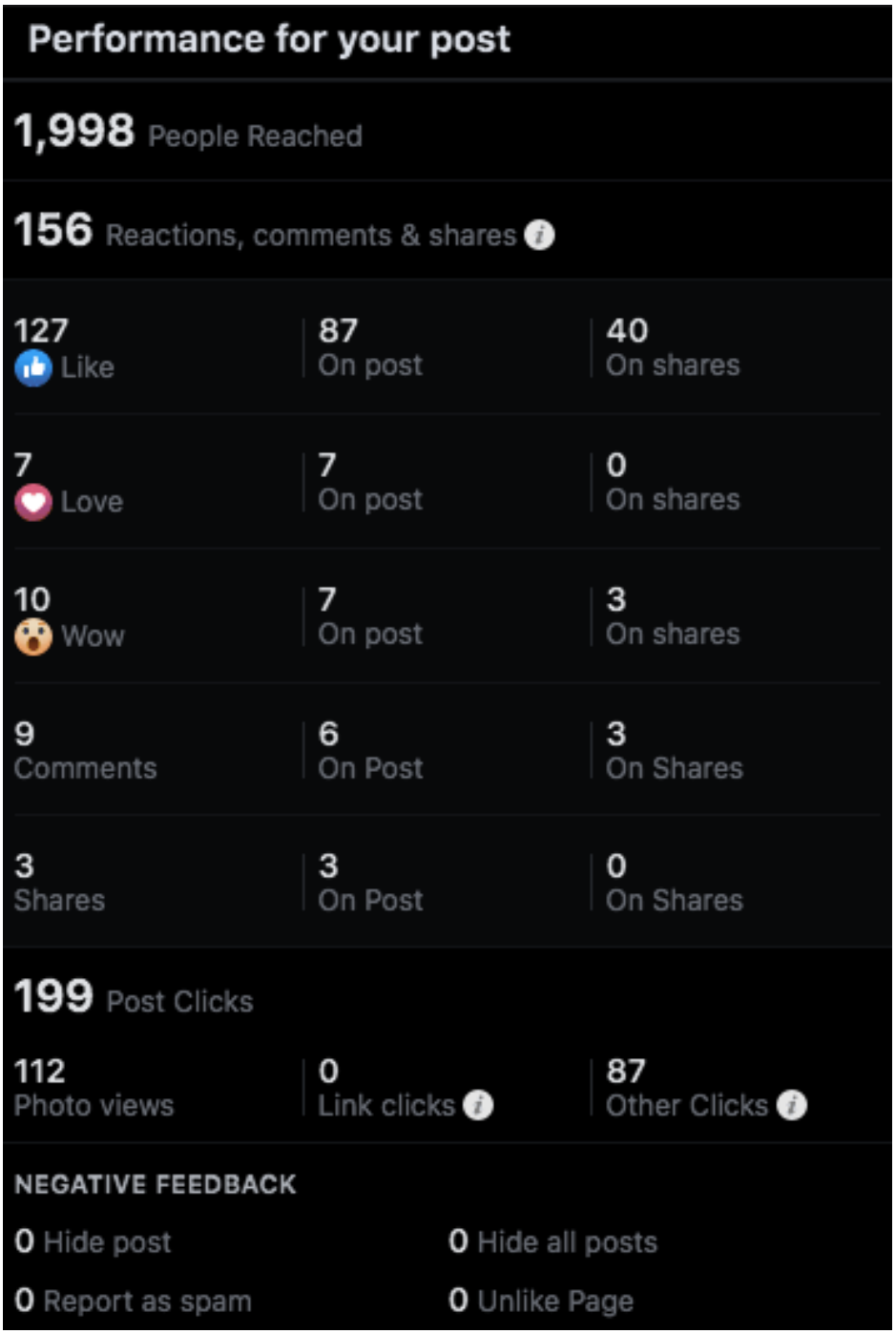


Figure 31: Example of KPI of Facebook Business Manager

As represented in the figure above, the Business Manager of Facebook allows us to uncover deep insights about each analysed post. As shown by Figure 31, the different KPI of the Business Manager are:

- People Reached: this measure quantifies exactly how many people saw the post on their Facebook wall without taking any action on it;
- Reactions, comments and shares: this metric includes likes, comments and shares about original post and all reactions occurred through re-shared brand contents by users;
- Post Clicks: metric which explains how many users click on the post. In this key performance indicators are included both users who click on the post and those who click on the title or if present on the link of it;
- Interactions: metric that comprises all reactions and post clicks.

As anticipated before, considering the different amount of contents analysed on Facebook and Instagram and the different KPI offered by each social network, the multiple regressions models present different features, explained in the next paragraphs.

3.2 The analysis model: Instagram

The different regression models used to perform the analysis of the success brands content relies on particular features about collected data. The objective of this multiple regression model is to understand if there are any elements in published content which trigger specific consumers behaviours. In the Instagram analysis, I applied two different multiple regression models because of the limited and unclear KPI of collected data. For this reason, in order to exploit some potential interesting outcomes, the analysis concentrated on two different research questions: customers satisfactions and customers reactions. In particular, the first one allows to measure the satisfaction of users through positive, negative and neutral comments published by the same users.
The second one is a bit different from the previous one: indeed, the customers reaction analysis comprises every like and comments (positive, negative, neutral) generated by posts but each of them presents different properties and requires different data collection activities.

3.2.1 Customer Satisfaction Analysis

The first presented model focuses on the analysis of contents shared by 10 hotels. This approach aims to understand if some elements of each post are crucial for the users' satisfaction. Customer (user) satisfaction could be a critical index to evaluate the products and services of companies. Organizations, via statistical analysis, are able to monitor and measure the value attributed to the product/service (brand) by consumers (users), to recognise the strengths and weaknesses of the brand and to determine customers' expectations. In this way, companies can improve their products/services and enhance businesses processes.

According to the data collected (par. 4.1.1) and the aim of the analysis, the first multiple regression model can be represented as follows:

- Y= Customer Satisfaction: the dependent variable is represented by positive, negative or neutral comments generated by each post. In the 511 sample, some posts received positive comments, others negative comments and others did not elicit any reactions in terms of user satisfaction. In order to classify positive, neutral and negative comments, I used the following criteria:
    - Positive: positive satisfaction includes users' comments featuring words and emojis of esteem and gratification about products, services, staff and furniture of hotels. In the analysed sample, the positive emojis are:

Table 19: Positive emoji comments on Instagram

In order to differentiate the positive emojis from the negative and neutral ones, user positive satisfaction via emojis is represented by the top, heart, 100, rocket, bomb and star emojis. I defined these emojis as positive because they expressed a positive satisfaction degree.

Considering the same subjective evaluation criteria used for the classification of positive emojis, Table 20 shows several positive comments published by users.

So romantic, Top, Interesting, Illuminated hotel, You are fantastic
See you soon, We miss you, Wonderful, Already booked for some time ... we can't wait
Paradise, Good delicious, I am looking forward to returning to see this great change"
I want to be there, So awesome! I send u DM, Epic, We arrive in mid-August
Just over a month ❤️, Your spa is wonderful, You are a splendour
I adore, Heaven exists, Nice, Here I always went as a child as many memories
Wonderful place, Wonderful people, This one is worth getting to know ..
Always the top!!!! A big hug to everybody!"
Great, Next week! As it pleased, The best, Congrats, Beautiful, Super, Wow, Sweat
Cool, Congratulations and a special wish for this new season❤️❤️ ehhhh already .... I miss .... return !!! I arrive, All right I would come, Pecol unique place and place of precious memories, Looking forward to visiting you next year
Mythical, Fantastic Landscape , What an incredible view from there!"
Already booked for some time ... we can't wait, Paradise
Good boy, Nice Diego, best cappuccino, congrats to staff, good food and mood good,
A "good" invitation ...How much I miss your dessert, Can you send me 75kg plus a dozen ricotta cakes in Buenos Aires for breakfast tomorrow morning?
Always a show, best wishes, It looks like Heidi's bed is super smoky❤️
congratulations on the renovation! You are a nice place to be. When I come to the mountains in those parts, I always stop with pleasure, Good boy, Nice Diego, best way to kick off a day in a beautiful corner of our planet, fascinating, I love it, the best of the best, Class

Table 20: Positive comments on Instagram

Since not every post has at least a comment and some of the comments above (Top, Wow, Congrats, etc.) are repeated among different posts, the total number of positive comments is 370. The most used comments are "Top", "Wow", "Congratulations" and the heart emoji.

By analysing the positive comments, it is possible to notice that they differ from each as some comments refer to users' desire to return to a specific hotel, place or landscape, while others concern memories of past experiences. Example of this kind of positive users comments are: *"I am looking forward to returning to see this great change"," how much I miss your dessert", "I miss, return and looking forward to visiting you next year"*; other

users' feedback refer to the beauty of hotels such as *"you are fantastic", "the best", "mythical", "paradise"*;

- Neutral comments: in the analysed posts, neutral comments are users' answers that are neither positive nor negative. They are considered as neutral because they do not praise services, staff, hotels, products and they do not express negative feelings and thoughts about hotels, services, the environment and users' past experiences. Most neutral opinions are represented by comments from Instagram user accounts who comment branded contents to advertise themselves. Some examples of advertising comments are: *"What nice picture!"," Would you like to upload it to our Clap app?", "Wanna be featured on our page? Message me", "take a photo of the dishes of your favourite Venetian restaurants immediately", "Like your shot please check our landscape feed - hope you will like it".* Others consist in requests for information to stay in the hotel, to know the prices, requests for information about the stay in hotel and prices, by users who are potentially interested in that hotel. Some of them are: "*it is possible to book even if I am alone"," cost per day for two people" and "where is the hotel".* The remaining comments are neutral thoughts about pictures, such as "*great picture", "beautiful photo congratulations"," great colours*".

  So, comments which do not induce a positive satisfaction about the hotel, services and products, and do not convey any information about the brand, are considered as neutral. Table 21 shows all neutral comments of the users:

Love this ❤️❤️❤️That nice picture! Would you like to upload it to our Clap app? Take a picture while skiing and challenge your friends by uploading them to #ski! What are you waiting for? Clap your best one! Good post, beautiful dog
so cute 😍 follow for follow cutie, Wonder I have three, Cheers the champion and fantastic, have you seen Debora? It's like grandma and grandma's friends
tagged Instagram account hotel, it is like the mine, in the wonderful Dolomites my beautiful friend lives, Sir make me at least half the man my dog believes me to be, Direct, Maybe, It is possible to book even if I am alone, Good morning from MC, tagged Instagram user account, a resort in the paradise of the Dolomites
Looking so chic n styling!!!
Cost per day for two people, great pic, Hey, reached out to me, so we can talk through and get you a bracelet!, Happy Christmas , Only small size?, breakfast without cycling, I make giant flower by hand, if you want take a look at my profile, beautiful structure, who is photographer? Custom made wooden objects, 100% handmade, Visit our page, where is the hotel? That's why my annual stop was missing today! Hi. Do you have an email address for visa application purposes?, beautiful Autumn, When do you open, great colour, A low-calorie joy, Very nice shot!!! Visit my gallery, l4l like, Like4like f4f 10/10
Beautiful photo congratulations. If you have time, follow @ r0bertovalente and my gallery! Amazing sunset, Very good photo because of the composition. I think just need some lighting in this photo then great!

Have you finished the windows? Nice Composition, Hello, nice shot! tag us in your photos to be reposted on our page! tag us in the stories to be shared, Good start to the season, Wow !!! It seems that we have common passions take a look at my page!!!, This is just the style I like! I would be glad to see my gallery! Ohhhhh if my dog was there Lovely shot and a beautiful profile :) Do visit my profile and follow me if you like my work too :) you can also visit my website www.rdmoments.com :) wonderful panoramic, Looking great! I would really like to connect with you, DM me! If you got time I would love your opinion on my art gallery Hello, nice shot! 📸 Take a photo of the dishes of your restaurant in Veneto and tag us in your photos to be reposted on our page! 🍝 tag us in the stories to be shared immediately, his hotel view is amazing! :) Enjoy your trip! Ball so hard #neighbors building without end.. # DuomodePocol # postcard, Good Pecol, That nice picture. Did you Giovanni do it? Compliments, Hello I'm the SottoSopra, the new Disco in Parma! They are practically the Ex First Floor ... Come and discover our Brand New Events! Hello, WOOOW! Congratulations Try to win a Weekend on Lake Garda, I send you a private message, Love this travel pic! Keep up the nice photos 👌🏻 If you have a minute, check out my latest posts and follow back if you like them, It's me where you improve your photo level, Just a suggestion but perhaps you should rethink your choice of caption given the situation in Australia, good news, wow😍😍 you are such an amazing creator👏 do follow ***** for more ispiration, thank you and good Monday, to know, I came first, Not the dolomites, those are the swizz alps. what the hell ate you? No, I say

Table 21: Neutral comments on Instagram

In addition to neutral textual comments, some users' answers were given using emojis, defined as neutral:

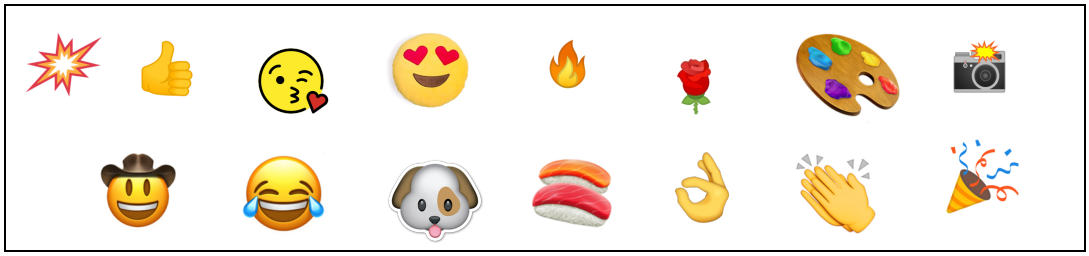


Table 22: Neutral emojis on Instagram

As we can see from Table 21 and Table 22, neutral comments and emojis are many. Nevertheless, the total amount of total neutral users' satisfactions (including both text and emojis) is lower than the amount of positive satisfactions, in fact neutral comments are 344.

- Negative: negative comments include users' complaints about bad experiences due to a lower quality of services, products of hotels and the inability of the staff to meet customer needs. So, every comment (including both text and emojis) which expresses the aforementioned feelings, thoughts, experiences, would be considered as negative

satisfaction. Unfortunately, among the sample, no negative comments or emojis were identified. For this reason, the analysis focuses on two degrees of satisfaction: positive and neutral.

Table 23 summarizes all comments examined on Instagram, and then used to determine the users' satisfaction:

Degree of Satisfaction	N. of comments and emojis
Positive	370
Neutral	344

Table 23: User satisfaction on Instagram

Once all examined comments have been classified, the first purpose of this research is to establish whether there are any critical elements in shared content that can convert into positive and neutral customer satisfaction. Since the first estimated regression model includes users' satisfactions and specific identified level-category that describe the content, the most suitable model for customers satisfaction analysis in this case is the traditional multiple regression analysis, OLS:

$$Y = \beta 0 + \beta 1 X1i + \beta 2 X2i + \beta 3 X3i + \beta i Xi + \text{ui}$$

Where:

- Y is the dependent variable. In this case Y is represented by all positive and neutral comments examined in 511 sample;
- $\beta 0$ is the intercept;
- $\beta 1$ is the inclination of Y with respect to variable X1, maintaining constant the effects of X2 and X3;
- $\beta 2$ is the inclination of Y with respect to variable X2, maintaining constant the effects of X1 and X3;
- $\beta 3$ is the inclination of Y with respect to variable X3, maintaining constant the effects of X1 and X2;
- ui is the error term in correspondence with the observation i.

Considering that the analysis is characterized by quantitative variables (the amount of positive and neutral comments), before proceeding with the study, it is necessary to explain which are the independent variables (X1, X2, X3) and how these are classified to best perform the investigation.

When explanatory variables are qualitative in nature, a proper regression model is the model of dummy variables, through which the qualitative variables are represented by some proxy. The property of this kind of regression model is that those variables are constructed artificially in a way that they assume value 1 whenever the qualitative phenomenon occurs and 0 otherwise. Thus, in this first regression model, I constructed 4 dummy variables, as follow:

- $X1$ is represented by all critical level-category identified in the "Environment" Category;
- $X2$ is represented by all critical level-category identified in the "Wellness" Category;
- $X3$ is represented by all critical level-category identified in the "Restaurant" Category;
- $X4$ is represented by all critical level-category identified in the "Other Relevant Level-category" Category;

Since the variables X1, X2, X3 and X4 are qualitative elements because they include different keywords (level-category) that describe each post, in order to simplify the analysis, all level-category are classified according to particular criteria (explained later) inside the categories just presented.

For example, in Figure 32 the level-category identified are: landscape, snow, sunset, village and mountains. According to my subjective analysis, these are the key words that best represent the image below.

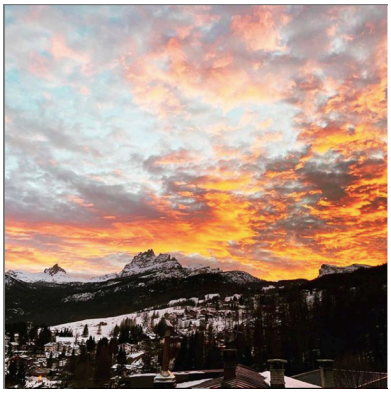


Figure 32: Example of analysed post on Instagram

Therefore, with the aim to identify the level-category, the analysis process just presented has been accomplished for each post. On Instagram, in the 511 sample, I identified 162 different level-category.

Among the sample, the most key words (level-category) used by different hotels are mountains, landscape, snow, nature. As a result, most hotels rely on landscape, snow-capped mountains level-category on their communication strategy.

Table 24 exhibits the different level-category identified in 511 sample:

staff:11,breakfast:20, corridor:1, door:3,entrance:7, wood:60, people:89, nature:52, view:80, mountains:166, shelters:4, food:44, shelter:2, lunch:1, pool:22, relax:36, spa:10, design:65, landscape:106, hotel:39, outside view:43, hands:14 body:4, massage:1,dinner:13,snow:115, village:27, lake:4, bench seats:1, counter:2, luxury environment:2, fireplace:2, notice:43, closing:1, lamp:7, clouds:2, tables:14, glasses:8, cutlery:1, sport":10, Sunbeds:4, face:1, bathroom:4, bathtub:2, shower:1, towels:2, mirror:4, sink:1, bed:2, shot:1, love:1, rose petals:2, pillows:1, rose:1, bottle:1, bedroom: 36, restaurant :26 dj:1, console:2, street:13, cars:8, poetry:1, historical photo:1, wine bottles:9, Christmas tree:4, pen:1, cup:1, sofas:7, trees:18, band:3, church:10, appetizer:5, gazebo: 3 room:9, flowers:7, sunset:8, super heroes:1, carnival masks:1, merry Christams:1, happy new year:1, kids:6, pet: 22, children's works:1, fruits:5, dessert:8, child:4, cottage:3, easter bunny:1, sunrise:3, rainbow:1, garden:1, terrace:2, break:5, Christmas nativity scene:1, stairs:1, ski:2, hall:3, flat bread:1, sauna:3, bicycles:6, armchairs:4, window:3, baby cot:1, winter sport:1, kitchen:1, wooden statue:7, Christmas decorations:9, logo:1, reservation:1, carnival:4, masked people:8, masked kids:1, bell tower:1, signboard:4, billboard:1, race:2, plants:1, portraits:1, bar:1, cableway:4, champions:1, banner:3, helicopter:2, wasps:1, truck:1, reception:1, mountaineer:1, runners:1, vintage car:3, shooting:1, building process:3, snowboard boards:1, santa claus:1, ski run:1, luxury dinner:1, walk:2, wedding:3, shoes:2, leg:2, hotel entrance:1, coach:1, reindeer:1, chair:2, sheep:1, ice:3, painting:2, leaves:1, skis:1, puppets:1, wooden beam:1; shop window:1, dummies:1, deer:1, snowboard:1, colorful clouds:1, tractor:1, sunglasses:1, easter eggs:1, fashion:1,wood stove:1, stream:2, furniture:1, models:1

Table 24: All level-category identified on Instagram

As we can see by the table above, level-category vary significantly from each other because they depend on the different images shared by each hotel. The number next to each word represents the number of times that the same lavel-category has been identified among the analysed posts. For example, the topic "mountains" has been identified 156 times among all shared contents, which represents almost 100% of all strategic communications of different hotels. Since the most analysed contents comprise the level-category "mountains", it is possible to state that all different hotels published several branded contents using mainly mountains related images. Again, level-category such as "snow" and "landscape" have been discovered more than 100 times. Furthermore, other key words such as people (89), view (80), design (65), wood (60), nature (52), food (44), notice (43), outside view (43), hotel (39), bedroom (36), relax (36), village (27), restaurant (26), pool (22), pet (22), breakfast (20), trees (18), tables (14) hands (14), dinner (13), street (13), staff (11), wine bottles (10), sport (10), spa (10), church (10), room(9), Christmas decorations (9) have a reasonable impact on the total number of level-category.

On the contrary, other keywords including "appetizer, cars, cableway, break, bicycles, Christmas trees, cottage, cuddles, entrance, glasses, lake, pathway, race of dogs, shelters, signboard, sofas, sunrise, sunset, flowers, window, wooden statue and kids" are level-category that count less than those just mentioned, in fact they vary from 5 to 8 times and therefore have less relevance among all level-category. Likewise, other level-category such as "wall, telephone, podium, coffee, wooden beam, cocktails" have no relevance because they only count 1 to 4 times of the total (162).

In order to classify all 162 level-category and considering them in the first regression model, I used the following specific criteria:

a. Positive level-category: I consider a topic as positive and valid for the analysis when it is found at least 9 times in the whole sample, which in percentage means that a positive topic is considered as valid and therefore included when it represents at least 5% of the total quantity (9/162). The choice of setting 5% as a threshold for a topic to be considered as relevant is based on the fact that usually in these types of analysis (Ordinary Least Squares) a small value tending towards zero but different from 0 is used to verify the significance of the data;
b. Negative level-category: the lack of negative level-category among the sample is the peculiarity of the collected data;

c. Not considered level-category (NC): considering the amount of gathered data, level-category that count from 1 to 8 times in the whole sample are not treated because they would distort the analysis, as well as the results. Therefore, they are excluded from this analysis.

Table 25 summarizes the aforementioned criteria:

Topic	Percentage
Positive (valid)	>= 5%
Negative	Absent
Not Considered	>= 0 % < 5 %

Table 25: The conditions of level-category

Since there are a lot of keywords, in order to best perform the regression (OLS) analysis, all relevant and positive level-category have been grouped into 4 macro categories, which are:

- Environment Category: in this category, I grouped all the positive level-category that somehow refer to the environment. It means that posts showing certain characteristics (graphical) of the environment such as mountains, landscape, street, snow and so on are clustered in this category. The relevant level-category of the "Environment" category are 10, as follows:

Environment Category
Mountains 156
Snow 115
Landscape 106
View 80
Nature 52
Outside View 43
Hotel 39
Village 27
Trees 16

Street 13
Church 10

Table 26: Environment Category

As explained before, the number next to each keyword (level-category) is how many times a topic occurs in the whole sample; the environment area includes all posts which exhibit part of the environment, such as mountains, villages, snow. Figure 33 is an example of post embodied to the environment area;

Figure 33: A post related to the "Environment" category

Figure 33 is represented by the followed level-category: mountains, street, hotel, snow and street;

- Restaurant Category: Level-category included in this area are those which refer to the restaurant environment, as well as food (44), restaurant (26), breakfast (20), staff (20), dinner (13), wine bottles (10) and room (10).

Restaurant Area
Food 44
Restaurant 26
Breakfast 20
Staff 20
Dinner 13
Wine Bottles 10
Room 10

Table 27: Restaurant Category

The food topic is represented by posts that contain different type of food (pasta, sushi). In addition, the "Restaurant" category is represented by posts showing actually the restaurants. The breakfast topic includes all food (brioches, biscuits) and beverage (coffee, cappuccino) relating to the breakfast in hotels. The staff topic is represented by waiters of hotels, chiefs, cook assistant and bartenders of hotels. Posts that showed wine bottles, fit into this area.

Figure 34: A post related to the "Restaurant" category

- Wellness Category: within this particular area, I grouped all posts which contain at least an element related to the wellness area:

Wellness Area
Design 60
Wood 60
Bedroom 36
Relax 36
Pool 22
Spa 10

Table 28: Wellness Category

The “Wellness” category is represented by posts showing some environments connected to the wellness, which transmit a sense of relax, peacefulness and silence. Figure 35 shows an example of post concern about the “Wellness” area.

Figure 35: A post related to the "Wellness" Category

- Other relevant level-category: in this field I collected all positive level-category which are not part of the areas described above because of they do not indicate anything inherent of the "Environment", "Restaurant" and "Wellness" categories. In the "other relevant level-category" classification, the main themes are:

Other relevant level-category
People 89
Notice 43
Pet 22
Tables 14
Hands 14
Sport 10
Christmas decorations 9

Table 29: Other relevant level-category Category

As we can see by the table above, among the various level-category there is no a strong relationship between them as happened in the previous areas. This is due to the fact that among the sample, lots of branded contents describe atmospheres which differ by the "Environment", "Restaurant" and "Wellness" areas but they are still relevant. "People" topic is represented by each post containing a group of people posing, eating together and enjoying time. The "notice" topic relies on shared posts which contain some communications of hotels such as the winter closure, a scheduled event, a job position and many others. Posts showing pets are identified inside this area, posts of people who play a sport (ski, snowboard, running) are defined trough "sport" topic and "Christmas decorations" topic regards all shared posts which contain some objects related to Christmas. Since "tables" and "hands" level-category are included in this category, they are not very useful for hotels communications because of anything about hotel, their products and services are presented.

Figure 36: A post related to the "Other relevant level-category" Category

Table 30 summarizes the independent dummy variables (X1, X2, X3, X4) of the first regression analysis:

X1	Environment Category
X2	Restaurant Category
X3	Wellness Category
X4	Other relevant level-category Category

Table 30: Independent variables of the first regression

Considering that dummy variable is characterized by unknow coefficients, the regression model has to be estimated as follows:

$$Y = \beta 0 + \beta 1 Environment\ Category + \beta 2 Restaurant\ Category + \beta 3 Wellness\ Category + \beta 4\ Other\ Relevant\ Level\ Category$$

Where:

- Y is the number of positive or neutral comments examined in each post;
- β0 is the intercept;
- β1 is the inclination of the value of positive satisfaction with respect to the presence of the "Environment" area while maintaining the effect of the presence of the "Restaurant", "Wellness" and "Other relevant level-category" areas constant;
- β2 is the inclination of the value of positive satisfaction with respect to the presence of the "Restaurant" area while maintaining the effect of the presence of the "Environment", "Wellness" and "Other relevant level-category" areas constant;
- β3 is the inclination of the value of positive satisfaction with respect to the presence of the "Wellness" area while maintaining the effect of the presence of the "Environment", "Restaurant" and "Other relevant level-category" areas constant;
- β4 is the inclination of the value of positive satisfaction with respect to the presence of the "Other relevant level-category" area while maintaining the effect of the presence of the "Environment", "Restaurant" and "Wellness" areas constant;

3.2.2 Positive Customer Satisfaction Analysis

The first regression analysis is concentrates on the positive customers satisfaction index. This study aims to understand whether any particular areas have interesting (positive/negative) effects on the success of shared contents. As explained before, a way to measure the effects and the correlation between different qualitative and quantitative variables, is through the dummy variables. In the analysis of positive customers satisfaction, the dependent variable assumes a value equal to the number of comments found in the 511 posts analysed. The number of total positive comments is 370, but the number of posts in which positive comments were found turns out to be 211. Table 31 shows the different dummy variables of the positive satisfaction index.

Y	X1 Environm	X2 Wellness	X3 Restaurar	X4 Other relevant Topics
1	0	1	0	1
1	1	1	0	0
1	1	0	0	0
1	1	1	0	0
1	1	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	0	1	0
2	0	0	0	1
1	1	0	0	0
1	1	0	0	0
2	1	0	1	0
1	0	1	1	0
1	1	0	0	0
2	0	0	1	0
1	0	0	0	1
2	0	0	1	0
1	1	0	0	0
4	1	0	0	0
1	0	1	0	0
3	1	0	0	0
2	1	0	0	0
1	1	0	1	0
2	1	0	0	0
1	0	0	0	1
1	0	0	0	1
1	0	0	0	0
2	1	0	0	0
1	1	1	0	1
2	1	0	0	0
1	1	0	0	0
1	1	0	1	1
1	1	0	0	0
1	0	1	0	0
2	0	0	1	0
1	0	1	0	0
1	1	0	0	0
5	1	1	1	0
1	1	0	0	0
1	1	0	0	1
1	1	0	0	0
1	1	0	0	1
2	1	1	0	0

Table 31: A part of dummy variables of positive satisfaction

As shown by the image above, the column "Y" represents the number of positive comments generated by each post. All dummy variables (X1, X2, X3, X4) assume value 1 whenever each area occurs in a post, 0 otherwise. According to the variables expressed by Table 31, the estimated regression model is:

Y= 1,984710 - 0.13446 Environment area - 0.28936 Wellness area + 0.01443 Restaurant area - 0.36809 Other relevant level-category area

	coefficients	Std. error	t-value	p-value
Intercept	1,984710	0,18385	10.795	<2e-16 ***
X1	-0.13446	0,18385	-0.731	0.4654
X2	-0.28936	0,21305	-1.358	0.1759
X3	0.01443	0,23521	0.061	0.9512
X4	-0.36809	0,18224	-2.020	0.0447 *

Table 32: The coefficients of the positive satisfaction regression analysis

The table above explains in detail the outcomes of the positive satisfaction regression analysis.

Although not all areas are statistically significant, the area which generated a positive customer satisfaction is represented by the coefficient X3, that is the "Restaurant" area. All other areas have a negative impact on the customers satisfactions, as the "Environment" area counts -0,1346, the "Wellness" area -0,28936 and the "Other relevant level-category" area is equal to -0,36809.

By analysing the features of the estimated coefficients in Table 32, it is possible to notice that not all of the coefficients of each variable are statistically significant. Particularly, since the p-value of X3 ("Restaurant" area) is very far from 0, the "Restaurant" area is not critical for the purpose of this analysis. In order to perform the best estimated model and try to understand if there are some relevant categories, the analysis makes use of stepwise regression, aiming to remove from the model, those variables that result to be irrelevant in the hypothesis testing phase. Using backward elimination way, the "Restaurant" area (X3) is removed. Now, the estimated regression model without the variable corresponding to the "Restaurant" area is:

Y= 1.9899 -0.1378Environment area -0.2913Wellness area -0.3698 Other relevant level-category area

	coefficients	Std. error	t-value	p-value
Intercept	1.9899	0.1626	12.240	<2e-16 ***
X1	-0.1378	0.1750	-0.788	0.4318
X2	-0.2913	0.2101	-1.387	0.1669
X4	-0.3698	0.1796	-2.060	0.0407 *

Table 33: The coefficients of the positive satisfaction regression analysis without X3

By considering the features of the estimated coefficients in Table 33, it is necessary to highlight that again, not all the coefficients of each variable are statistically significant. Since the p-values of X1 ("Environment" area) and X2 ("Wellness" area) are very far from 0, also these areas are not critical for the purpose of this analysis. As a consequence, with the aim to perform the best estimated model all those variables are removed. Using backward elimination way, the "Environment" and "Wellness" areas are deleted. Now, the estimated regression model without the variables corresponding to the "Environment", "Restaurant" and "Wellness" areas is:

Y= 1.8406 -0.3267 Other relevant level-category area

	coefficients	Std. error	t-value	p-value
Intercept	1,8406	0,1023	17,89	<2e-16 ***
X4	-0.3267	0,1747	-1,87	0,0629

Table 34: The coefficients of the positive satisfaction regression analysis without X2, X3 and X4

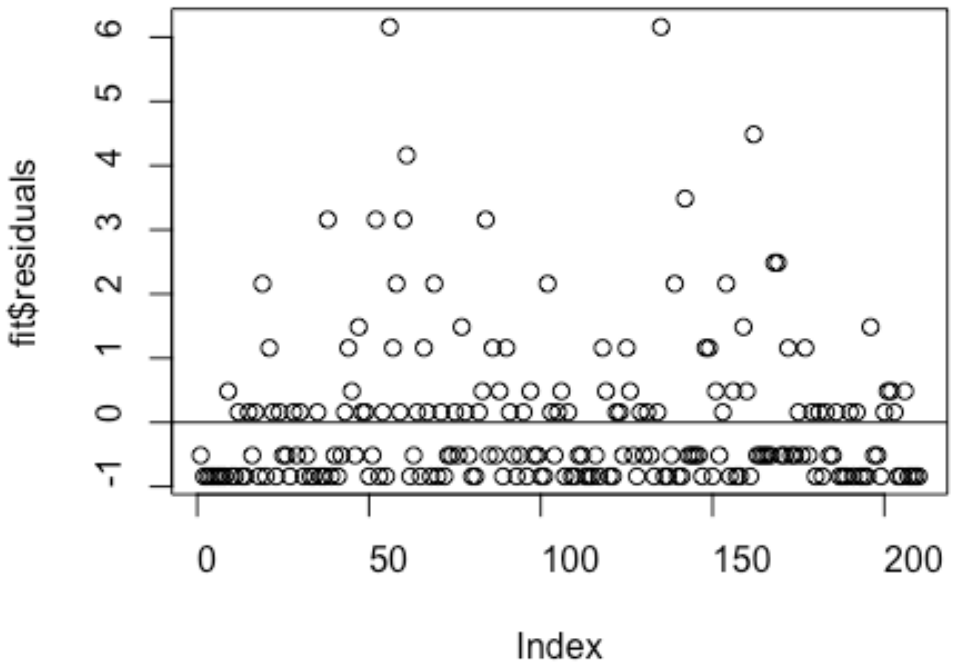
Even though each critical area has a negative impact on the positive customer satisfactions (Table 33), it is possible to identify some outcomes:

- the estimated intercept results to be equal to 1,9899. This means that, on average, the expected positive user satisfaction is equal to 1,9899 whenever the analysed content does not include any (graphical) elements related to the "Environment", "Restaurant" and "Other relevant level-category" categories;
- considering all critical areas, the one that generates the most positive (albeit negative) satisfaction to users is the "Other relevant level-category" area, followed by the "Wellness" and "Environment" areas;
- when analysing posts in which the "Wellness" and "Other relevant level-category" areas are absent, the estimated model is Y=1.9899 -0.1378 Environment area, as X2 and X3 are equal to 0. As a consequence, whenever a post includes some elements related to the "Environment" area, the expected positive user satisfaction increases to - 0,1378 on average when the variable "Environment" area (X1) increases of one unit. Instead, the positive user satisfaction when the "Wellness" and "Other relevant level-category" areas are present is Y=1.9899 -

0.1378 Environment area - 0.2913Wellness area - 0.3698 Other relevant level-category area;

- while maintaining constant the effects of the presence or absence of the "Environment" and "Other relevant level-category" areas, the positive satisfaction of users with this kind of posts related to the "Wellness" area is equal to -0,2913, corresponding to an average increase of -0,2913 on positive user satisfaction whenever the "Wellness" area (X2) increases of one unit;
- when branded content does not feature level-category related to the "Environment", "Wellness" and "Restaurant" areas, the positive satisfaction of users is equal to 1,8406 (Table 34). With the presence of the "Other relevant level-category" area the expected positive satisfaction changes of -0,3267 when the independent variable ("Other relevant level-category" area) changes positively of one unit;

Comparing the first regression analysis with the third one (without the "Restaurant", "Wellness" and "Environment" areas), the model becomes more adequate because the p-values of the "Other relevant level-category" area is more or less close to 0, precisely 0,0629, which means that this area approximately is statistically significant.. Although it has to be considered statistically valid, the "Other relevant level-category" category decreases positive user satisfaction among branded contents, since its estimated coefficient corresponds to -0.3267.



Graph 1: The scatter plot residuals of positive satisfactions with "Other relevant level-category" area

As shown in the graph above, the remaining users positive satisfactions confirm that the analysis model is relatively good for the analysed data because the residuals (points) are distributed close to the constant 0. However, the lack of homogeneity of the points suggests that the critical category ("Other relevant level-category) is not strictly related to a positive user satisfaction.

3.2.3 Neutral Customer Satisfaction Analysis

In the second regression analysis, the purpose is to establish whether the same areas (categories) have a different impact on neutral users' satisfaction degree. As for the positive satisfaction analysis, in the second regression model the dependent variable (Y) takes a value equal to the number of comments found among 511 posts. The number of total neutral comments is 344, which is slightly smaller than the amount of positive

comments (370). In addition, only 188 posts generated a neutral satisfaction of users. Keeping in mind how neutral comments have been classified, the dummy variables are:

Y	Environment	Wellness	Restaurant	Other Relevant topics
1	1	0	0	1
1	0	0	1	0
1	0	1	0	0
1	1	1	0	0
2	1	0	0	0
1	0	0	0	1
2	0	0	0	1
3	0	0	0	1
1	0	0	0	1
1	1	1	0	0
1	1	0	0	0
1	1	0	0	0
2	1	0	0	0
1	1	0	0	0
1	0	0	0	1
1	0	0	1	0
1	1	0	0	0
1	0	0	0	1
3	1	1	0	0
1	1	0	0	0
1	0	1	0	0
1	1	0	0	0
2	1	0	0	1
2	1	0	0	0
1	0	0	1	0
1	1	0	0	1
1	1	0	0	0
1	1	0	0	1
1	1	0	0	1
2	1	0	0	1
1	1	0	0	0
2	1	1	0	0
4	1	0	0	0
1	0	1	0	0
1	1	0	0	1
2	0	1	0	1
2	0	0	1	0
5	0	1	1	0

Table 35: A part of dummy variables of neutral satisfaction

Considering the collected data of the table above, the estimated regression model of neutral users' satisfaction is:

Y= 1.569562 + 0.307268 Environment area + 0.146670 Wellness area + 0.554729Restaurant area - 0.007578 Other relevant level-category area

	coefficients	Std. error	t-value	p-value
Intercept	1.569562	0.260324	6.029	8.89e-09 ***
X1	0.307268	0.257164	1.195	0.234
X2	0.146670	0.300761	0.488	0.626
X3	0.554729	0.368246	1.506	0.134
X4	-0.007578	0.244373	-0.031	0.975

Table 36: The coefficients of the neutral satisfaction analysis

Although this model does not perfectly represent the analysed data and it is not the best pattern for the representation of all different areas, it is possible to notice that the only area that shows a negative feedback on the neutral degree of users' satisfaction is the "Other relevant level-category" area as provided by its value of -0,007578. In addition, the "Restaurant" area is the one that triggers the most neutral user satisfaction, as it corresponds to 0,554729. The second most relevant area is the "Environment" area, resulting to 0,307268, followed by the "Wellness" area with an estimated coefficient of 0,146670. Since the model just analysed cannot be considered statistically valid, and therefore significant for purpose of the analysis, in order to implement it, the variable "Other relevant level-category" needs to be removed due to the fact that it is irrelevant for the analysis. Thus, the following estimated model does not consider the irrelevant variable:

Y= 1.5649 + 0.3095 Environment area + 0.1488 Wellness area + 0.5584 Restaurant area

Although the updated analysis ignores the irrelevant variable ("Other relevant level-category"), the new model still does not convey useful information and outcomes because some p-values are still far from the 0. As a consequence, the analysis cannot reject the different null hypothesis of $\beta 0=0$, $\beta 1=0$, $\beta 2=0$, $\beta 3=0$ and $\beta 4=0$. Again, the following analysis ignores another irrelevant variable, which is the "Wellness" area, with a p-value of 0,626. The updated estimated model is:

Y= 1.6240+ 0.2635 Environment area + 0.5150 Restaurant area

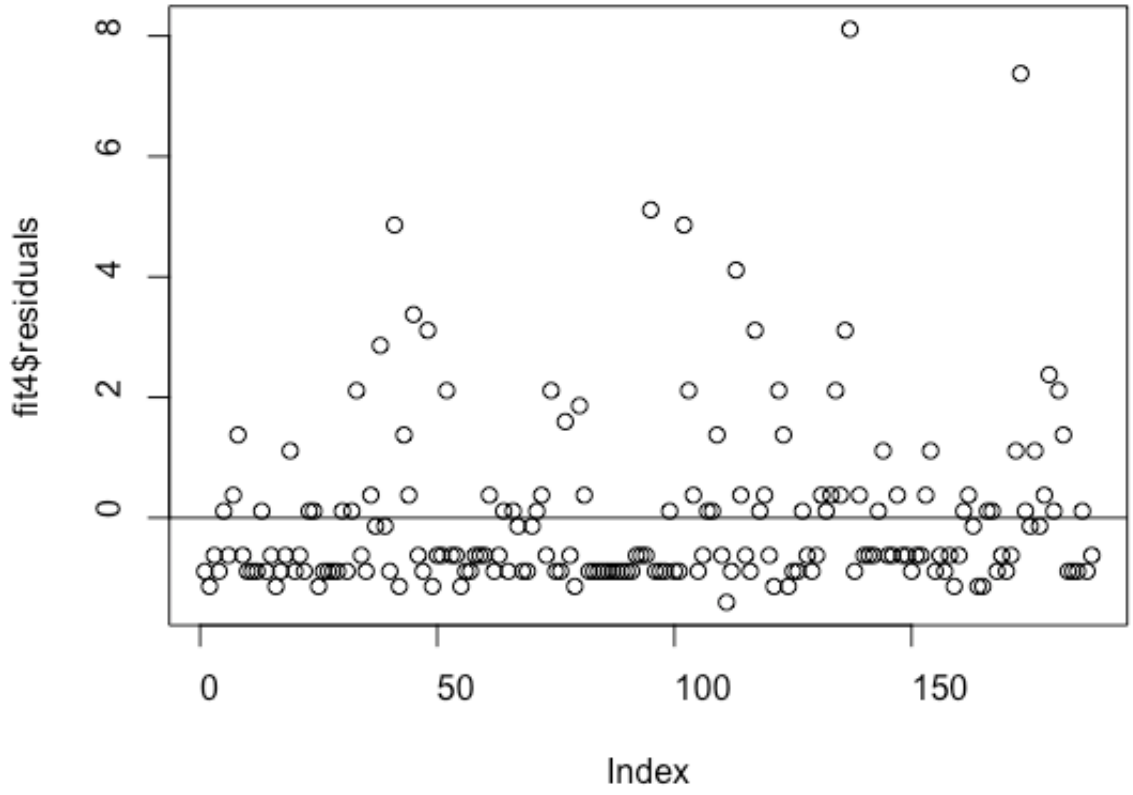
	coefficients	Std. error	t-value	p-value
Intercept	1.6240	0.1769	9.178	<2e-16 ***
X1	0.2635	0.2284	1.154	0.250
X3	0.5150	0.3360	1.533	0.127

Table 37: The coefficients of the neutral satisfaction regression analysis without X2 and X4

This estimated model seems to be more statistically relevant for the collected data due to the fact that the different p-values of the coefficients are close to 0. Although the last estimated model is completely different from the first and second one, the most relevant category which triggers a higher neutral user satisfaction is the "Restaurant" area (category), since the coefficient of that area is 0,5150, against the coefficient of the "Environment" area which corresponds to 0,2635. So, the analysis of neutral satisfaction degree of users suggests that:

- Considering posts without the presence of the "Environment" area, the estimated model is: Y=1,6240 + 0,5150 Restaurant area. Instead, the neutral user satisfaction with the presence of the "Environment" area is: Y= 1,6240 +0,5150 Restaurant area + 0,2635 Environment area;
- While maintaining constant the effects of the presence or absence of the "Environment" area, the neutral satisfaction of users who interact with posts related to the "Restaurant" area is equal to 0,5150. This outcome means that the expected (on average) neutral users' satisfaction is equal to 0,5150 whenever the X ("Restaurant" area) increases of one unit;
- When the effect of the presence or absence of the "Restaurant" area is equal to 0, posts related to the "Environment" area generate a neutral satisfaction of users of 0,2635. As a consequence, on average the expected neutral user satisfaction increases of 0,2635 whenever the independent variable (X1) changes positively of one unit;
- Whenever a post does not refer to the "Restaurant" or "Environment" areas, on average the expected neutral user satisfaction is equal to 1,6240 (represented by the value taken by the estimated intercept).

All in all, the neutral user satisfaction degree is mainly characterized by posts which regard to the "Restaurant" area, such as food, breakfast, staff, etc. In order to best represent the aforementioned neutral regression analysis, Graph 2 shows how the estimated different areas differ from the observed values. Although the last estimated model includes the most relevant variables to conduct the analysis, focusing on each p-value taken by the estimated coefficients (X1 and X2), the study of neutral user satisfactions does not give any interesting outcomes. This is explained by the following graph. The lack of heterogeneity in the residuals confirms the irrelevance of the study for the collected data.



Graph 2: The scatter plot residuals of neutral satisfaction

3.2.4 Customers Reactions Analysis

While the first and second analysis were focused on the customers' (users') satisfaction related to several contents shared by different organizations, the following analysis focuses on the other research question as anticipated in the introduction paragraph

(4.4): customers' reactions. This analysis is slightly different from the previous one as it does not consider and identify positive and neutral satisfactions but relies on a broader metric. Although the customer satisfaction degree (positive and neutral) have shown critical but not exhaustive outcomes (due to the data and model used), the customers' reactions analysis is another important analytical index which can be adopted by any organization active on social media platforms (with a business account and many posts shared on its wall) that wish to best implement their communication strategy. Therefore, in this analysis the regression model is slightly different. It does not identify and consider only posts which generated a neutral or positive comment, but the dependent variable (Y) considers instead any kind of shared posts, as the customers' reactions analysis includes likes and comments generated by branded contents. In a sample of 511 shared posts, each one has received at least a comment or a like.

According to the data collected, the multiple regression model can be represented as follows:

- Y: the dependent variable is represented by the sum of likes and comments obtained by each post. So, the customers' reaction study does not exclude any post, because in the sample every post has generated at least one reaction (like/comment). For this reason, the study does not require any classification of comments;
- X1*i*-XN*i*: the independent variables are represented by specific macro-categories (areas), identified in the same way as in the previous studies, as follows:
    - Positive level-category: I consider a topic as positive and valid for the analysis when it is found at least 9 times in the whole sample, which in percentage means that a positive topic is considered as valid and therefore included when it represents at least 5% of the total quantity (9/162). The choice of setting 5% as a threshold for a topic to be considered as relevant is based on the fact that usually in these types of analysis (Ordinary Least Squares) a small value tending towards zero but different from 0 is used to verify the significance of the data;
    - Negative level-category: the absence of negative level-category is the peculiarity of the collected data;
    - Not considered level-category (NC): considering the amount of gathered data, level-category which appear 1 to 8 times in the whole sample are not

treated because they could falsify the analysis, as well as the outcomes. Therefore, these level-category are removed in this study.

Table 38 shows the rules to define the different level-category:

Topic	Percentage
Positive (valid)	>= 5%
Negative	Absent
Not Considered	>= 0 % < 5 %

Table 38: The conditions of level-category

Since the level-category among the sample are many, I used the same criteria described in the customers satisfaction studies to select and assign the critical level-category to a specific area (category), in particular:

Other relevant Level-category Area
People 89
Notice 43
Tables 14
Hands 14
Pet 22
Sport 10
Christmas decorations 9

Wellness Area
Design 60
Wood 60
Bedroom 36
Relax 36
Pool 22
Spa 10

Restaurant Area
Food 44
Restaurant 26
Breakfast 20
Staff 20
Dinner 13
Wine Bottles 10
Room 10

Environment Area
Mountains 156
Snow 115
Landscape 106
View 80
Nature 52
Outside View 43
Hotel 39
Village 27
Trees 16
Street 13
Church 10

Table 39: The four macro-areas of level-category

The macro-areas are the same as identified in the previous analyses, that is: “Other relevant level-category”, “Wellness”, “Environment” and “Restaurant” areas.
Since the following analysis focuses on the same collected data characteristics as the ones in the customers satisfaction investigation, it is necessary to construct dummy variables in order to conduct a proper analysis, as shown in the following table.

X1	Environment Area
X2	Restaurant Area
X3	Wellness Area
X4	Other relevant level-category Area

Table 40: Independent variables of user reactions

Considering that a dummy variable is characterized by unknow coefficients, the regression model has to be estimated as follows:

$$Y = \beta 0 + \beta 1 Environment\ Area + \beta 2 Restaurant\ Area + \beta 3 Wellness\ Area + \beta 4\ Other\ Relevant\ Topics\ Area$$

Where:

- Y is the number of user reactions (like and comments) examined in each post;
- β0 is the intercept;
- β1 is the inclination of the value of user reactions with respect to the presence of the “Environment” area, while maintaining the effect of the presence of the “Restaurant”, “Wellness” and “Other relevant level-category” areas constant;
- β2 the inclination of the value of user reactions with respect to the presence of the “Restaurant” area, while maintaining the effect of the presence of the “Environment”, “Wellness” and “Other relevant level-category” areas constant;
- β3 the inclination of the value of user reactions with respect to the presence of the “Wellness” area, while maintaining the effect of the presence of the “Environment”, “Restaurant” and “Other relevant level-category” areas constant;

- β4 is the inclination of the value of user reactions with respect to the presence of the "Other relevant level-category" area, while maintaining the effect of the presence of the "Environment", "Restaurant" and "Wellness" areas constant;

In order to perform the user reactions analysis, the different dummy variables are classified by the 4 macro-areas, in which each dummy variable assumes value 1 when each identified area occurs, and they assume 0 value otherwise. Table 41 displays a part of the whole analysis.

Y	X1 Envrinoment Area	X2 Wellness Area	X3 Restaurant Area	X4 Other relevant topics Area
31	0	0	1	0
47	0	1	0	0
42	1	0	0	1
28	0	0	1	0
32	0	0	1	0
56	1	1	0	1
59	0	1	0	0
58	0	1	0	1
52	0	1	0	0
30	1	1	0	0
52	1	1	0	0
49	1	0	0	1
65	1	0	0	0
66	1	0	0	0
49	0	1	0	0
27	0	1	0	0
31	0	0	1	0
75	1	0	0	0
47	1	0	0	0
68	1	0	0	0
38	0	1	1	0
55	0	1	0	0
41	0	1	0	0
52	1	1	0	0
38	0	1	0	0
64	0	1	0	1
20	0	0	0	1
78	0	1	0	0
55	1	0	0	0
102	1	0	0	0
79	1	0	0	0
85	1	1	0	1
29	0	0	1	0
42	0	0	1	0
38	0	0	1	0
45	0	1	0	0

Table 41: A part of dummy variables of user reactions

The study aims to establish whether any critical categories (areas) have a more significant impact than others. In this analysis, the sample is larger than in the previous one, in fact it counts 511 observations against 188 (neutral satisfaction) and 210 (positive satisfaction) observations. Through the OLS framework, the estimated regression model is:

Y= 172,78 + 104,33 Environment Area + 14,19 Wellness Area -14,87 Restaurant Area +39,22 Other Relevant level-category Area

	coefficients	Std. error	t-value	p-value
Intercept	172,78	46,55	3,712	0.000229 ***
X1	104,33	46,57	2,240	0.025508 *
X2	14,19	52,75	0,269	0,788038
X3	-14,87	60,71	-0,245	0,806664
X4	39,22	44,59	0,880	0,379492

Table 42: The coefficients of the user reactions analysis

As shown by the table above, the only critical area which has a negative impact on the user reactions is the "Restaurant" area, with a coefficient of -14,87. The most performant area which triggers a higher level of user reactions is the "Environment" one, since it is equal to 104,33. Although the model just presented provides some interesting positive results, other critical outcomes need to be acknowledged. In particular, the high p-value of the "Wellness" and "Restaurant" areas suggest that, for this kind of analysis model, the data is irrelevant, due to the fact that each p-value is very far from 0.

Thus, the estimated coefficients of X2 and X3 have to be removed in order to best implement the user reactions analysis. Using the backward elimination pattern, the following new estimated model does not include irrelevant areas:

Y= 174,08+103,99 Environment area+38,74 Other relevant level-category area

The model still seems to be irrelevant because the value of the adjusted R-squared results is too close to 0 (that is 0,005083), which means that this kind of model fits with the collected data for 5%. In addition, the p-value of the "Other relevant level-category" area is not close to 0, since it corresponds to 0,3728, which leads to accept the null hypothesis Ho: $\beta 4 = 0$ and to not include this area in the study.

The adapted user reactions analysis makes use of only one variable, the "Environment" area, which is statistically significant. As a consequence, the best estimated model is:

Y= 190,98 + 98,46 Environment area

	coefficients	Std. error	t-value	p-value
Intercept	190,98	29,05	6,574	1.22e-10 ***
X1	98,46	41,37	2,380	0.0177 *

Table 43:The coefficients of the user reactions analysis without X2, X3 and X4

Taking into account the data above, it is possible to affirm that the model analysis with one single critical area (Environment) is significant for the collected data. This statement is also confirmed by the p-value of 0,0177.

As a consequence, it is possible to sustain some relevant assertions:

- Considering the value of the intercept (constant), on average, the expected value of Y (user reactions), whenever the "Environment" area is equal to 0 (posts do not relate to the "Environment" area), is equal to 190,98;
- The relevant "Environment" area suggests that for each increase of one unit of X, on average, the predicted change on user reactions (Y) is equal to the value of the coefficient ($\beta 1$) of the "Environment" area, which is 98,46. In fact, the "Environment" area has a relevant impact on user reactions as it influences the expected change of user reactions for more than half the value of the constant, which indicates the value of the expected user reactions would be without the presence of the "Environment" area on posts;
- In summary, the model used for the user reactions analysis with the collected data related to the "Wellness", "Restaurant" and "Other relevant level-category" areas result to be insignificant, consequently these areas do not suggest any interesting outcomes or information about the user reactions.

Once the analysis on Instagram as well as the positive and neutral user satisfaction and user reactions analyses have been performed, some interesting outcomes can be highlighted. Before presenting them, it is necessary to mention that the analyses are characterized by particular (real) collected data which were not always relevant to the analysis model used. The interesting impacts are:

1. The communication strategy which obtains a higher positive engagement of users is the one that includes the "Other level-category" area. Although the quality of data is limited and negative because each estimated coefficient ($\beta 1, \beta 2 , \beta 4$) takes

a negative value, the least negative and the most significant value is represented by the coefficient of the "Other relevant level-category" area (-0.3698) followed by the coefficient of the "Wellness" area (-0,2913). Analysing the first estimated model (positive user satisfaction), it is possible to notice that in the hospitality sector, communication strategies based on posts related to different elements such as people, pets, sports or service communications of hotels will generate a lower effect of positive user satisfaction as the value of estimated coefficient of the "Other relevant level-category" area takes a negative value, so this kind of branded content decreases positive user satisfaction;

2. Considering the neutral user satisfactions, the estimated model does not provide any useful information about the satisfaction of users. All different insignificant outcomes have been approved by each p-values of the estimated coefficients, which are very far from 0. Without taking into account the validity of the estimated model with the collected data, the communication strategy which best performed is the one related to the "Restaurant" area, because it presents the highest estimated coefficient. The other areas which trigger some neutral user satisfaction is the "Environment" area since the predicted coefficient is 0,2635.
   So, in order to best implement hotel communication strategies, branded contents should be based on different level-category;
3. Analysing the whole sample, it is useful to consider that among 511 analysed posts, only 211 posts generated a positive user satisfaction. Instead, posts which triggered a neutral user satisfaction were only 188. This means that the different communication strategies with elements related to the "Environment", "Wellness", "Restaurant" and "Other relevant level-category" categories are not so efficient since they arouse positive satisfaction for less than half of the whole sample. The inefficiency of these communication strategies is also confirmed by neutral user satisfaction: they have generated 188 neutral user satisfaction, which only corresponds to 36% of the whole sample. This outcome leads to two opposite conclusions:
   - The number of positive comments is higher than the number of the neutral ones. As a matter of fact, among the sample, more than 50% of the total comments are positive;
   - In order to obtain more positive satisfactions from users, marketers and social media managers need to change some graphical elements in their

posts, since the critical areas have generated neutral comments for almost 40% of the analysed content which is a bad enough result if companies desire to obtain a higher positive user satisfaction ;

3. The broader study conducted on Instagram provides other interesting results. To induce users to perform liking and commenting actions, different hotels have to concentrate on posts which describe, show and relate to the “Environment” area, such as posts showing a landscape, snowy mountains, the outside view of the hotel and posts related to the nature. This statement is confirmed by the estimated coefficient of the “Environment” area which is equal to 98,46. Considering the value of the estimated constant (190,98), the “Environment” area has an important (positive) impact on user reactions because the value of the estimated coefficient of the “Environment” area takes a value higher than half of the estimated value of the intercept of user reaction. As a result, the “Environment” area triggers a strong user reaction;
4. Comparing the estimated intercepts of neutral and positive user satisfaction, it can be expected that posts presenting all aforementioned features will generate a higher positive user satisfaction than a neutral satisfaction degree. The estimated constant of the positive reaction analysis, which is equal to 1.9899 against the estimated neutral intercept of 1,6240 supports the findings just presented.

3.3 The model of analysis: Facebook

Once the two main research questions have been accomplished on Instagram, in this section, the analysis focuses on another important social network, precisely Facebook. The study conducted in this social media platform is slightly different from studies executed on Instagram. This is due to the fact that on Facebook, I had the possibility to perform a more precisely and clear studies by using the software of Facebook, called the Business Manager. It allows me to find out deeply information about users' experience on Facebook.

Although this analysis could be more accurate than the previous one, unfortunately collected data on Facebook is much more limited than on Instagram because the data gathering counts only 50 posts. In fact, as explained in the previous paragraphs, the limits of Facebook analysis are related to the quantity of data, while on Instagram, the weaknesses of studies concern about to the quality of data, in particular to the restricted KPI. Despite the number of analysed posts is limited, the Business Manager gives more interesting KPI and allows me to uncover important outcomes about user experience. According to these considerations, the study on Facebook relies on two distinct aims: the first one is represented by another critical index for organizations, which is the reaching users.

Considering that in the previous analyses the main aims were to discover potential outcomes of shared contents in terms of user satisfaction and user reactions, in this investigation the aims are to exploit if some related elements of examined posts have a relevant impact on reaching users.

Furthermore, the second objective focuses on a comparison between the effects of several posts in the form of video and the effects of several posts in form of image. The latter investigates how interactions differ significantly between video and image.

3.3.1 Reached people analysis

The choice to perform other two different analysis on Facebook is due to the fact that the quality of the available key performance indicators is very high. As described in the previous paragraph (4.3), the KPI offered by Facebook are different:

- Reached people: this metric quantifies exactly how many people saw the post on their Facebook wall without taking any action on it;
- Reactions, comments and shares: this metric includes likes, comments and shares about the original post and all reactions occurred through brand contents re-shared by users;
- Click on post: this metric indicates how many users click on the post. In this key performance indicators are included both users who click on the post and those who click on the title or if present on the link of it;
- Interactions: this metric comprises all reactions and clicks on post.

According to these relevant key performance indicators, the first multiple regression model can be represented as follows:

- Y: Reached people: the dependent variable is represented by the number of users reached by each post. As explained before, the KPI "Reached people" does not include any kind of user action, but it measures effectively how many users see a post in their (Facebook) wall.
- X1*i*-*XNi*: the independent variables of the reached people analysis are represented by the different critical areas identified among the sample. As noted in the previous paragraph, the amount of analysed posts is equal to 50, on a period included between July 2018 and February 2020. For this reason, I could expect more limited data in terms of discovered level-category as the collected data only refer to one hotel, the Monaco Sport Hotel.

As on Instagram, in order to best perform the analytical study, some criteria have been defined to group and consider the different identified level-category:

  - Positive level-category: I consider a level-category as positive and valid for the analysis when it is found at least 2,25 (3) times in the whole sample, which in percentage means that a positive topic is considered as valid and therefore included when it represents at least 5% of the total quantity (2,25/45). The choice of setting 5% as a threshold for a level-category to be considered as relevant is based on the fact that usually in these types of analysis (Ordinary Least Squares) a small value tending towards zero but different from 0 is used to verify the significance of the data;

- Negative level-category: considering the peculiarity of the data, there are no negative level-category;
- Not considered level-category (NC): given that the amount of gathered data is limited, level-category which count from 1 to 2 times in the whole sample are not treated because they distort the analysis, as well as the results. Therefore, these level-category are excluded from the study.

The following table synthesizes the aforementioned criteria:

Topic	Percentage
Positive (valid)	>= 5%
Negative	Absent
Not Considered	>= 0 % < 5 %

Table 44: The criteria of level-category of reached people analysis

Once the criteria to differentiate positive, neutral and negative level-category have been defined, in order to fit the reached people analysis, some rules have been specified to group most relevant level-category inside different macro-categories. Through this study, the aim is to understand if particular macro-categories (macro-areas) affect positively the performance of posts, in terms of number of reached people. So, as performed on Instagram, using the same subjective evaluations, I identified the relevant level-category and divided them into the following macro-areas (categories):

- Inside the "Environment" area, the relevant level-category are mountains (9), landscape and hotel (7) and outside view (5);

Environment Area
Mountains 9 Landscape 7 Hotel 7 Outside View 5

Table 45: Environment area of reached people analysis

- The “Restaurant” area includes each relevant level-category which refers to the restaurant field as well as food (13), restaurant (20), wine bottles (9) and dessert (4)

Restaurant Area
Food 13
Restaurant 20
Wine bottles 9
Dessert 4

Table 46: Restaurant Area of reached people analysis

- The last identified macro-area of reached people analysis is the “Other relevant level-category” area which includes notice (6) and people (9);

Other relevant level-category area
Notice 6
People 9

Table 47: Other relevant level-category area of reached people analysis

As it is possible to see, in the Facebook analysis, level-category are less than keywords identified on Instagram. As a result, for the sample 50 of analysed posts, only 10 relevant level-category have been identified, and then divided them into 3 macro-areas.
In addition, a difference between Facebook and Instagram studies is represented by the number of independent variables. In fact, this study is characterized by 3 independent variables, which are the 3 macro-categories, while the independent variables of Instagram researches are 4 (“Environment”, “Wellness”, “Restaurant” and “Other relevant level-category” areas).

Despite these differences among these social media platforms, the reached people analysis focuses on qualitative variables, as happened on Instagram. Keeping in mind these considerations, the regression model should be applied is that of dummy variables. Table 48 indicates the 3 dummy variables constructed for the analysis.

X1	Environment Area
X2	Restaurant Area
X3	Other relevant level-category Area

Table 48: Independent variables of reached people analysis

Once the different dummy variables have been identified, and since the coefficients of each variable are unknow, the proper estimated regression model is characterized by:

$$Y = \beta 0 + \beta 1 Environment\ Area + \beta 2 Restaurant\ Area + \beta 3\ Other\ Relevant\ topics\ area$$

Where:

- Y is the number of users reached in each post;
- β0 is the intercept;
- β1 is the inclination of the value of reached people with respect to the presence of the "Environment" area while maintaining the effect of the presence of the "Restaurant" and "Other relevant level-category" areas constant;
- β2 the inclination of the value of reached people with respect to the presence of the "Restaurant" area while maintaining the effect of the presence of the "Environment" and "Other relevant level-category" areas constant;
- β3 the inclination of the value of reached people with respect to the presence of the "Other relevant level-category" area while maintaining the effect of the presence of the "Environment" and "Restaurant" areas constant;

Now, the analysis is conducted with the aim of verifying whether some of the critical areas have a certain impact on the achievement of people.

Taking into account the artificial dummy variables, they assume value 1 when a specific area occurs among units of observation, otherwise 0. Table 49 presents a part of the dataset of the regression (dummy) model:

Y	Environment Area	Restaurant Area	Otherrelevant topics Area
521	1	0	0
1666	0	1	0
1193	1	0	0
1404	1	1	0
509	1	0	1
509	0	0	0
1345	0	1	0
512	0	1	0
608	0	1	0
563	0	1	0
530	0	1	0
621	0	1	0
958	0	1	0
642	0	0	1
650	1	1	0
667	1	0	0
537	0	1	0
597	0	1	0
915	0	0	1
561	0	0	0
1972	0	1	0
601	0	0	0
552	0	1	1

Table 49: A part of dataset of reached people analysis

The reached people analysis relies on the three macro-areas and aims to define whether the critical areas have any positive, neutral or negative impact on the success of each post. Through the regression model OLS, the estimated regression model is:

Y= 1048,52 - 213,53 Environment Area - 96,03 Restaurant Area + 56,73 Other relevant level-category Area

	coefficients	Std. error	t-value	p-value
Intercept	1048,52	178,89	5.861	4.67e-07 ***
X1	-213,53	213,82	-0,999	0,323
X2	-96,03	191,32	-0,502	0,618
X3	56,73	185,28	0,306	0,761

Table 50: The coefficients of the reached people analysis

Considering the table above, it is interesting to notice how the only critical area which triggers a positive impact on the dependent variable (Y) is the "Other relevant level-category" area since it corresponds to 56,73. However, this critical assumption has to be considered only partially valid because of the regression model does not fit completely with the collected data. This is due to the fact that the different p-values confirm the untruthfulness of the model: the p-values of the "Restaurant" and "Other relevant level-category" areas are very far from 0, in fact they are respectively equal to 0,618 (X2) and 0,761 (X3). Furthermore, in order to get the best results from the collected data with the OLS regression model, the irrelevant dummy variables are removed through the backward elimination process.

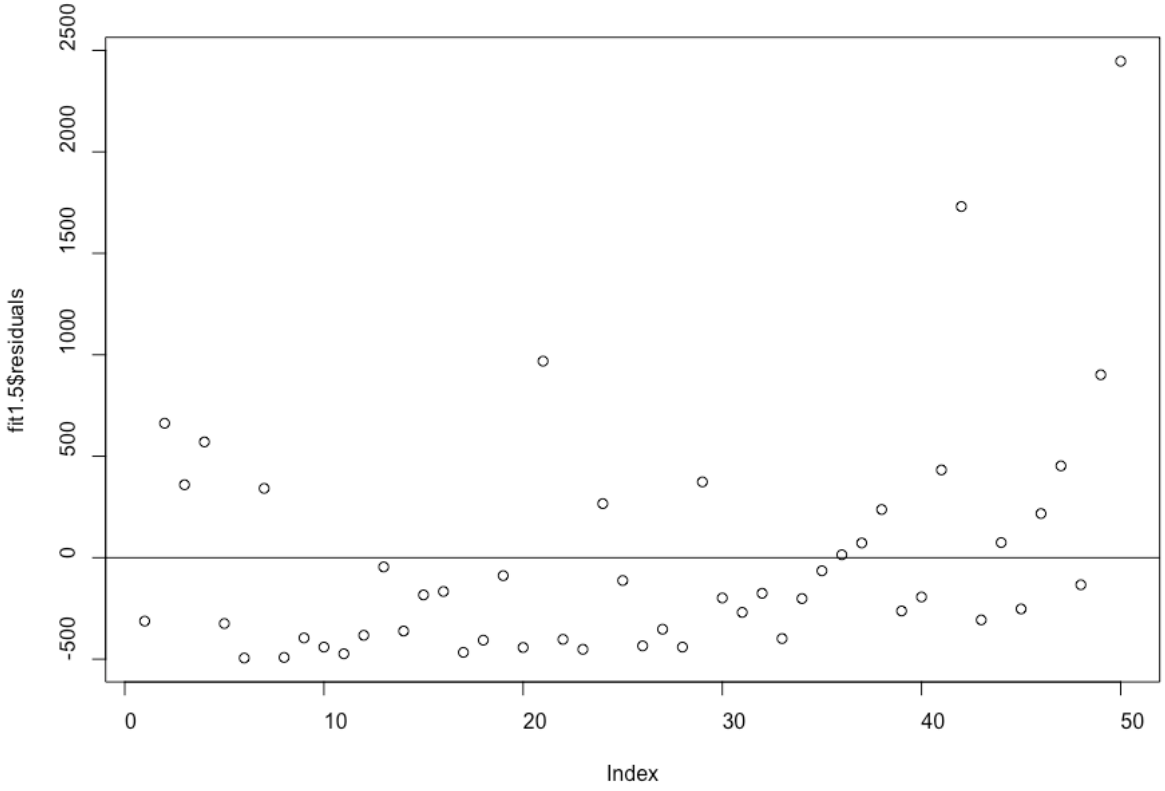
The new estimated model is the following:

Y= 1003,42 -169,99 Environment Area

Although the aim is to best implement the collected data by removing the irrelevant variables, the updated estimated model does not turn out to be exactly exhaustive. This is also confirmed by the adjusted R-squared which is negative, precisely -0.002762, and that explains the limits of the model with respect to the data collected for the analysis.

The only significant result is represented by the intercept because its p-value is very close to 0. As a consequence, a post that does not concern about the "Environment", "Restaurant" and "Other relevant level-category" areas, will reach 1003,42 people on average.

The following scatter plot exhibits the residuals of the collected data with the fitted values.



Graph 3: The scatter plot residuals of reached people analysis with the "Environment" area

The considerable distance between the different points in the graph and the distance between them with the constant line 0 demonstrates the lack of reliability of the model for this kind of collected data.

As we have seen, this study does not convey any relevant information about the impact of critical areas on reached users.

3.3.2 Analysis of videos: user interactions on Facebook

Since in the first analysis the study deals with the impacts of critical areas on users, this investigation focuses on user experience occurred on posts. This is allowed because through the Business Manager, it is possible to include the interactions metric as a variable for this analysis. As explained before, the interactions metric allows managers to get important insights about user experience because it measures every action taken by users on posts (likes, comments, shares and click on posts).

For this analysis, the aim is to make a comparison between video contents and image contents shared by the same hotel, "Monaco Sport Hotel" in order to understand how users interact differently between the two form of post (video and image).
Although there is no clear and specific theory that states which type of post is better than the other because there are several elements which have to be considered as subjective for each organization (business target, business strategy, business tool, business resources etc.), there are some theories with different point of view: some theories give importance to the quality of video/image, others affirm that with a lower quality of content, a video post is more performing and still others sustain that with higher quality of content the image post is better than video post[37].

Since the study tries to determine which is the best performance type of specific organization contents (Monaco Sport Hotel), the user interactions analysis is conducted through two separated models:

- The first one is the linear regression model which includes the number of people reached by different analysed posts (images) and the number of user interactions that each post has generated;
- the second linear regression pattern analyses the relationship between the reached people and user interactions of several post in the form of video, trying to uncover differences or similarities between the two different types of shared contents;

Even though the comparison between video and image contents can be considered an interesting analysis, it is essential to state that the same study presents particular limits, due to the minimal (quantity) data:

  - the sample of type content image results to be 50;
  - the analysis of video contents relies on sample of 27 posts;

So, taking in mind the aforementioned criteria and assumptions about the collected data, the linear regression analysis (OLS) is characterized as follow:

- Y: Reached people: the dependent variable is represented by the number of users reached by each post;

[37] https://www.archimedia.it/blog/facebook-ads-meglio-usare-video-o-immagini

- X: the independent variable is represented by the interaction metric;

Considering that the coefficients of the variables are unknown, the estimated regression model is:

$$Y = \beta 0 + \beta 1 X 1$$

Where:

- Y is the number of users reached by each post;
- β0 is the intercept;
- β1 is the inclination of the value of reached people with respect to the users' interactions;

Table 51 groups the collected data for the analysis of images:

Y	Interactions
521	42
1666	258
1193	156
1404	168
509	56
509	50
1345	145
512	71
608	85
563	47
530	57
621	73
958	64
642	53
650	127
667	57
537	49
597	60
915	80
561	24
1972	76
601	54
552	87
1100	420
721	79
569	53
651	73
563	63
1207	305
635	75
734	118
658	27
605	9
632	11
939	75
1018	179
1076	226
1071	154

Table 51: A part of collected data (images) of user interaction

The first estimated model relates to the analysis of the type of content "image":

Y= 496,3161 + 3,8007 X

From a first evaluation, the estimated model can be evaluated as positive pattern because the estimated coefficient β1 is 3,8007. This means that the user interactions

affect positively the increase of reached people. In particular, the expected coefficient β1 influences the reached people of 3,8007: it means that for an increase of one unit on x, on average the expected reached people metric increases of 3,8007. Furthermore, whenever users do not take any action on post, the expected number of reach people is equal to 496,3161 as expressed by the constant (intercept) β0. The following table shows the different features of the estimated coefficients.

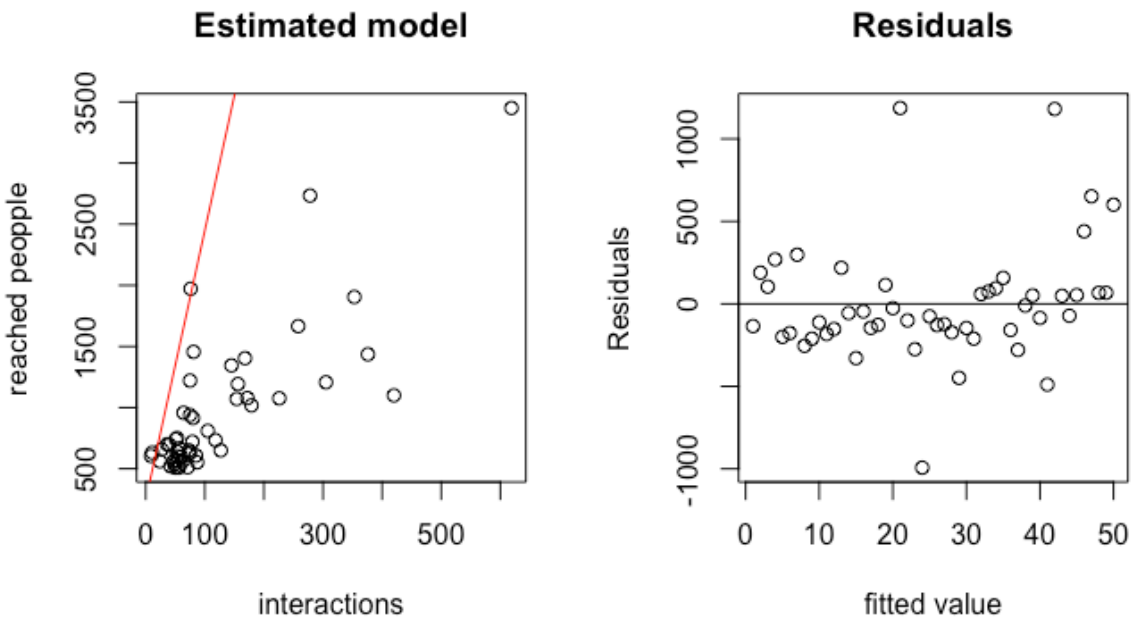
	coefficients	Std. error	t-value	p-value
Intercept	496,3161	73,1058	6,789	1.55e-08 ***
X	3.801	0.4316	8.806	1.37e-11 ***
Adjusted R-squared	0.6097			

Table 52: The coefficients of the user interactions analysis of images post

The table above confirms the validity of the model used to perform the analysis. In fact, it is also certified by the p-values of intercept and X which are very close to zero. Moreover, the adjusted R-squared suggests that the OLS model fits with the considered data for 60%, which is a good percentage to consider this analysis as significant.

In other words, the following graph demonstrates a good relationship between reached people and user interactions since the different points in the graph are fairly evenly spaced.

In addition, the left side of the next graph confirms the positive relationship between reached people and user interactions. This is explained by the behaviour of red estimated line because whenever the interactions increase, there is also a growth of reached people.



Graph 4: The scatter plot residuals of user interactions analysis and the estimated model of images

As shown by the right side (scatter plot) of graph above, the different residuals near to zero confirm the validity of model with the collected data.
Moreover, the correlation index between the number of reached people and the number of user interactions of images results to be 0.7859035, which indicates a narrow connection between the two variables.

Considering that the previous analysis refers to posts shared via image, the next study focuses on the shared posts in the form of video. As anticipated before, this analysis is characterized by a smaller sample (27) as shown in the following table:

Y	interactions
5441	191
6831	362
4514	157
687	134
1073	79
719	25
564	11
2993	138
628	21
727	25
3592	150
2673	136
4011	154
3890	155
4763	160
850	31
2015	94
800	28
3012	135
3000	133
3329	140
3897	153
4154	155
4785	161
5043	178
3578	147
5201	202

Table 53: The collected data (video) of user interactions

The estimated regression model (OLS) of video analysis is:

$$Y = 242.952 + 22.058\ X$$

	coefficients	Std. error	t-value	p-value
Intercept	242,952	299.762	0.81	0.425
X	22.058	2,036	10,83	6.23e-11 ***
Adjusted R-squared	0.8173			

Table 54: The coefficients of the user interactions of video analysis

Analysing the table above, it is significant to note that for this kind of post (video), the interactions of users have a greater impact than interactions generated by post images because the estimated coefficient of user interactions is equal to 22,058. The adequacy of the model is confirmed by the value of adjusted R-squared since it fits for 81% of the model. Considering the limited sample, the intercept results to be 242,952 which means that whenever a post does not receive any interactions, on average the number of

reached people by post in the shape of video is expected to be 242,952. Even though the adjusted R-squared makes valid the estimated model, the p-value of intercept is slightly far to zero, since it counts 0,425. For this reason, the estimated constant is unsignificant for the model, thus it does not allow to reject the null hypothesis $\beta 0 = 0$.
Furthermore, for an increase of one unit of user interactions (x), it can be expected that the increase (on average) of the number of reached people who see a video, is equal to 22,058. Comparing the expected value change of reached people (22,058) to the previous analysis of images, the estimated coefficient $\beta 1$ is larger than the former. In other words, the interactions occurred on video post, further increase (on average) the number of reached people.
Likewise, if the two intercepts are compared, it is important to underline that the expected increase of reached people, without considering any actions taken by users on the images posts is higher than the expected number of reached people in the video analysis. This is because the intercept of images analysis is 496,3161 against to the constant of video analysis which is 242,952.

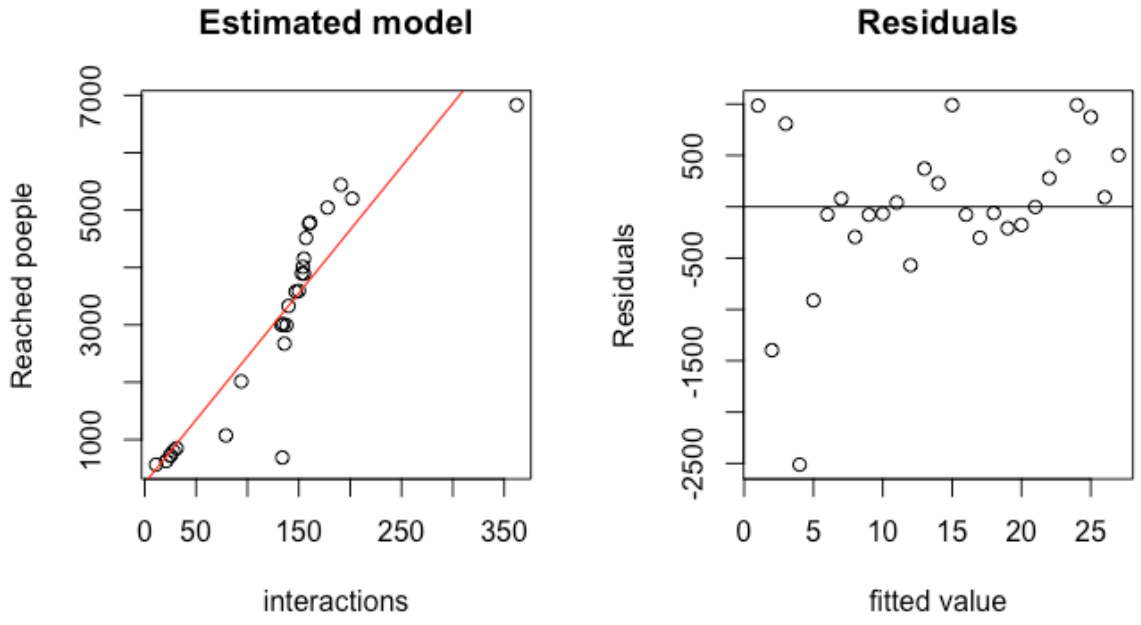
So, the just presented outcome can be defined as interesting. Although the user interactions occurred in the video posts have a stronger impact than interactions on images, it could be expected that also the estimated intercept on video would assume more impact than intercept on image posts. Instead, the intercepts behave in reverse because without any user interactions the expected increase of reached people for image post is higher (496,3161) than the expected increase for video post (242,952).

On the one hand, if this latter outcome could be relevant, on the other hand the same result could be not so exhaustive for two important reasons: the first one is that the comparison between video post and video image took place between two different samples in terms of number of analysed contents; the second one is due to the fact that the estimated intercept β0 of video analysis is not significant for the used model. Thus, these motives can be critical factors of distorting outcome.

In any case, through the study I have analysed how different types of branded contents (video and image) differ significantly to each other in terms of reached users and their interactions.

To sum up, the different user interactions on posts in the form of videos impact more deeply than interactions on branded contents published in the form of images as the estimated coefficients of interactions in the video contents is bigger than the ones on the pictures.
In fact, the estimated interactions of video post are equal to 22,058 against to the coefficient of interactions of image analysis which is 3,801.

So, without considering the different theories previously described (quality of images or video) and the several elements of each organization (as well as business strategy, business tools, business resources) a communication strategy by means of videos allows an organization to obtain a more effective strategic communication in terms of reached people and user interactions. Even if the communication strategy through contents in the form of video generate a higher number of reached users, also communication via images trigger positive effects.
The following graph shows the estimated regression model and the residuals of video analysis.



Graph 5: The estimated model and residuals of user interactions of videos

As described by the left side of the graph above, precisely by the estimated regression line, considering the fact that the different points are distributed very closed to the estimated red line, it is possible to sustain a strong positive relationship between the interactions of users and the number of reached people. As a consequence, the overall trend of the estimated model is represented by a joint growth between the reached people and the user interactions. In addition, the correlation index equal to 0, 9079462 confirms a higher positive relationship between the number of reached people and the interactions of users.

Furthermore, on the right side of the graph 5, the representation of residuals demonstrates more or less the credibility of the model because most of the residuals are around the constant 0.

3.4 Analysis of video: users like and comments on Instagram

Since the previous study has been conducted on Facebook to determine if there is a relationship between the user interactions and the reached people and how much these interactions positively affect users, the following study focuses on the social media Instagram. In particular, on Instagram analysis, the purpose is to determine and identify if there is a relationship between user actions in terms of comments and likes and the number of people who see a video.

As anticipated before, this study is characterized by the comparison between several videos which received a specific action of users and several videos which generated another action by users. This study also makes use of two analyses with specific features, in particular:

- The first analysis is characterized by the number of video view and the number of reactions which are comments and likes of users;
- The second study considers the same sample of videos, but it only focuses on the number of likes that each video receives.

By making a comparison between these two different analyses, the aim is to understand how much user comment action influences the number of video views with respect to the user like action. Although this exploration could be relevant, it is necessary to highlight that the study presents specific characteristics:

- The sample is limited because considering the same sample used before on Instagram analyses, only 8 hotels shared branded contents via video on their official page. As a result, the analysed videos are 27;
- I select a specific time period, from 1 January 2019 to February 2020 in order to identify all shared videos.

On the basis of the aforementioned criteria and assumptions about the collected data, the model to perform the analysis is the linear regression analysis (OLS). The estimated model is characterized by:

- Y: the dependent variable is represented by the number of views generated by each video;
- X: the independent variable is represented by the number of reactions in the first analysis and the number of likes in the second one;

Since the coefficients of the variables are unknown, the estimated regression model is:

$$Y = \beta 0 + \beta 1 X 1$$

Where:

- Y is the number of video views;
- β0 is the intercept;
- β1 is the inclination of the value of video view with respect to the user reactions (in the first study) and user like action (in the second one);

The collected data of the analysis of videos with the user reactions (first analysis) is:

Y	View
82	375
75	321
94	208
67	143
81	194
66	271
36	149
153	1072
79	371
67	263
46	162
63	408
94	389
165	768
59	225
54	254
156	1250
74	301
70	409
63	450
88	530
51	124
50	139
76	170
48	150
106	890
50	148

Table 55: The collected data of user reactions and view

Considering the OLS linear regression model, the first estimated model is:

$$Y = 41.45128 + 0.09807\ X$$

Analysing the estimated model above, it is useful to sustain that there is a positive relationship between the view of videos and the reactions of users because the estimated coefficient $\beta 1$ assumes positive sign and it is equal to 0,09807. Even though the estimated coefficient $\beta 1$ is limited, it suggests that whenever there is an increase of one unit in the variable x (commenting and liking video), on average the expected increase view of video is equal to 0,09807.

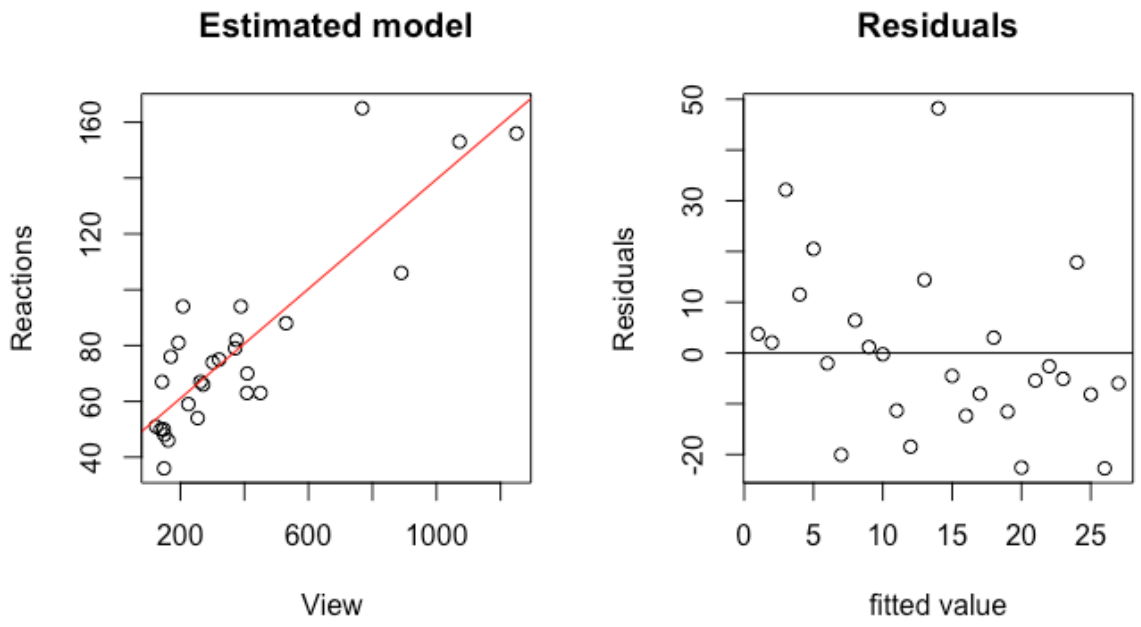
In addition, whenever there are not any user reactions, the expected video view is equal to the value of estimated intercept $\beta 0$, which is equal to 41,45128. The following table shows the features of the first estimated model.

	coefficients	Std. error	t-value	p-value
Intercept	41,45128	5.26625	7.871	3.16e-08 ***
X	0,09807	0.01113	8.815	3.84e-09 ***
Adjusted R-squared	0.7468			

Table 56: The coefficients of the user reactions of video

The table above highlights the validity of the model for the collected data. Since the p-values of the estimated coefficients are very closed to 0, precisely 3.16e-08 *** (intercept) and 3.84e-09 *** (X), I can affirm that the collected data is significant for the estimated model. For this reason, I can reject the null hypothesis $\beta 0 = 0$ and $\beta 1 = 0$. Moreover, the adjusted R-squared confirms that the model fits of almost 75% with the collected data.

The following graph shows the residuals of the estimated model and the estimated regression line (red), confirming the validity of data. In addition, analysing the different points on the scatter plot of residuals, I can approximately see a homogeneity of the points which are close to zero. As the following graph explains, it is possible to affirm that there is a strong good relationship between the view of the video and the interactions of users. This outcome is also demonstrated by the correlation index, which is 0.8698076.



Graph 6: The estimated model and residuals of user reactions of videos

We have just seen that the user reactions have somehow a positive impact on the video view. Now, the second analysis allows to determine if the simple action of liking a video has a different impact on its views. Apart from this, this study also explores indirectly the effects of commenting a video, since the user reactions is composed by like and comments. According to these assumptions, the collected data is:

Y	View
82	375
74	321
93	208
66	143
79	194
65	271
36	149
148	1072
77	371
65	263
46	162
56	408
93	389
160	768
59	225
54	254
153	1250
73	301
68	409
60	450
85	530
51	124
49	139
71	170
46	150
103	890
49	148

Table 57: The collected data of users like and view

As explained before, this last estimated model only includes the user like action (Y) with the relative view of each analysed video. Thus, the estimated model is:

$$Y = 40.76917 + 0{,}09475\ X$$

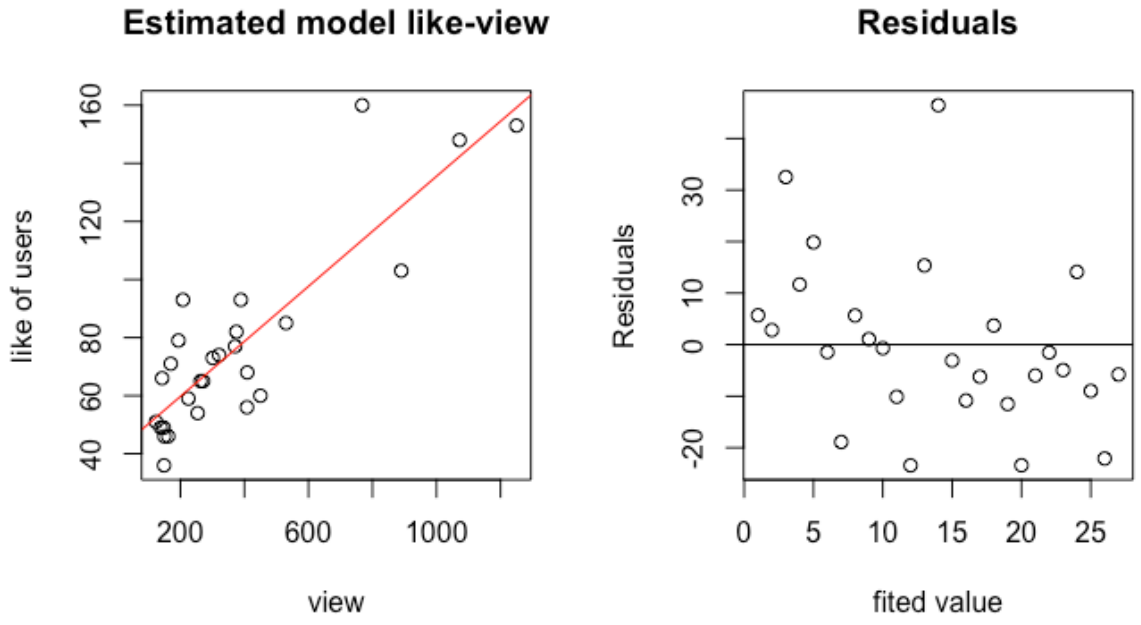
	coefficients	Std. error	t-value	p-value
Intercept	40.76917	7.831	7.871	3.46e-08 ***
X	0.09475	0.01100	8.615	5.93e-09 ***
Adjusted R-squared	0.738			

Table 58: The coefficients of the users like of video

As represented by the value of table above, the estimated model results to be valid. The estimated intercept is equal to 40,76917, which means that, on average, whenever the estimated coefficient $\beta 1$ is equal to 0, the expected view of video is 40,76917. The significance of constant estimated value is confirmed by its p-value which is 3.46e-08 ***. Comparing this outcome with the previous one, also the estimated coefficient $\beta 1$ changes. In fact, in this study the estimated coefficient of liking action is equal to 0,09475, which means that as an increase of one unit on x, on average, the predicted

increase of view is equal to 0,09475. Even if the expected coefficient $\beta 1$ assumes a limited value, also in this case there is a positive relationship between liking a video and video views. Furthermore, the collected data of our analysis fits almost 74% with the estimated model, as confirmed by the adjusted R-squared.

The next graph shows and proves the validity of the model, suggesting that like user actions have a positive impact on the views of video.



Graph 7: The estimated model and residuals of user like of videos

On the left side of graph just proposed, the estimated regression line is presented. Examining the trend of red line with the different points on the graph, we can notice that as views increase, also like users raise, which means that the two variables (like of users and view of video) are positively correlated, as also proved by the correlation index, that is 0.8648942.

Although the difference between this analysis and the previous study is limited, both of them prove the existence of a strong relationship between the video views and the user reactions, regardless of the fact that users comment or like the video.

Comparing the estimated results of user reactions and user likes with the view of videos, some interesting outcomes appear:

1. Users reactions (likes and comments) have a greater impact on the video views compared to users likes only. This result is demonstrated by the value taken by the estimated coefficient $\beta 1$. In fact, in the user reactions analysis, the estimated coefficient turns out to be higher (0,09807) than the coefficient of user likes (0,09475);
2. Whenever posts in the form of videos include both actions of users (liking and commenting), the expected average video views tends to be higher, in fact it corresponds to 41,45128, while the expected average of video views with user like action only is 40,76917;
3. The respective adjusted R-squared of the two analysis confirm the greater relevance of users' comments compared to users' likes. In fact, the adjusted R-squared of the user reactions analysis is higher (0,7468) than the adjusted R-squared of user likes (0,738), which means that the analysis model of user reactions (including comments) fits better than the user likes study;
4. Although the respective correlation indexes of both analyses demonstrate a positive relationship among video views, the user reactions and user likes, the correlation with user reactions is higher than the one with user likes. In other words, this means that commenting a video has greater impact on video views than liking it.

Without considering the features of the different social media platforms, organisations need to plan their social media activities carefully, because every element can be an essential factor for a successful communication.

So, in the different communication strategies adopted by the hospitality organizations, marketers can expect that, on Facebook:

- Posts in the form of videos generate the most interactions and therefore reach more people;
- Posts in the form of images receive positive user interaction too, which triggers the popularity of branded content (reached people);
- Organisations that want to implement their communication strategies have to focus in particular on posts in the form of videos if they want to expand their community on social media platforms.

Instead on Instagram:

- Posts showing graphical elements related to the "Other relevant level-category" area (people, notice, sports, pets) will lead to a decrease in positive user satisfaction;
- Branded contents featuring different elements related to the "Environment" area (landscapes, mountains, snow, views, nature) will trigger higher user reactions, regardless of the fact that users like or comment (positively, neutrally, negatively) on the posts;
- Posts in the form of videos which receive both like and comment actions have a greater impact on the video view rate than video posts that only get likes.

Conclusions

The analysis of most critical scientific literatures and Internet searches allow to exploit the main elements and properties of social media era.

The central role assumed by users on any social media platform is the key element which distinguishes social media era (web 2.0) from previous one (web 1.0). Taking into consideration the most exhaustive definition of social media which defined it as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" is interesting to highlight the importance of users' actions among social environment. The active users' participation of creating and exchanging information has characterized the social media era, occurred through the constant evolution of Internet (web 2.0). Thanks to the Internet, the social media platforms have become a critical element that influence and change people and organizations day by day. Considering the amount of time spent by users on social media (almost 2 hours per day) and the main reasons of participating on them, as well as the social presence and self-presentation motives (Kaplan, Haenlein), each social media platform has evolved into business communication strategy as a main promotional tool.

Being presence in the social media platforms enables companies to exploit new opportunities arising by monitoring what happens into the social media field. On the one hand, thanks to the ability to create long-term relationships among social media between like-minded users and organizations, companies can also take advantage by users who interact, exchange and promote brand information among their network. Thus, different users' actions could allow to achieve particular business objectives such as worth of mouth, brand awareness and brand engagement. Moreover, considering the aspects of social presence, self-presentation, uses-gratification and reasoned actions theories that affect users' behaviours on social media platform, they could lead to the creation of brand communities increasing both brand values and brand awareness.

In addition, through social media platforms, organizations are able to make competitors' analyses, exploit users' brands experiences and make a comparison to define strengths and weaknesses of brands.

On the other hand, due to the fact that users are able to interact and exchange information freely between like-minded users all around the world, companies are not able to monitor everything in the social media. In fact, they could face with several risks

which can occur on them such as technical (hacker attach), human (skills of employees), contents (lack of control), compliance (publisher abuse) and reputational (negative word of mouth) risks.

Taking into considerations the importance of social media activities (for users and organizations) and considering all aforementioned assumptions about risks and benefits of social media activities from a business perspective, companies have to consider social media activities as an integrative communication tool of their communication strategy, treating it as a traditional marketing communication vehicle. As a result, each online activity has to be monitored. As explained by different scientific literatures, there is no a standardize model to evaluate social media activities, because the choice of proper key performance indicators depends on the type of social media platforms in which companies decide to perform. Among different kind of social media (collaborative project, blog, micro-blogging, content communities, social network sites) some common quantitative key performance indicators are number of tags, numbers of followers, number of additional taggers (blog), numbers of fans of brands page, numbers of impressions, relevant positive and negative feedback through comments, posts on wall, posts re-shared or repost and number of users actions (social network). In addition, some scientific literatures identified some qualitative key performance indicators such as engagement rate, sentiment rate, recommendations and word of mouth, which refer to how users react to content published by companies on different platforms. Regardless of which key performance indicators companies can use, a constant monitoring and evaluation of all social media activities must be accomplished in order to obtain a successful social media business strategy.

Results and suggestions of empirical part

Based on the analyses performed, the final part of my thesis aims to understand the branded contents posted on two popular social media sites, Facebook and Instagram, exploring how consumers engage with the content and how it may influence consumers. Although on some studies it was not possible to uncover significant assumptions of user behaviours, I would like to stress once again, however, that social media activities assume a crucial role on business perspective and for this reason organizations should rigorously consider what really occurred in the social media environment.

For this research project, some data which should not be neglected, uncover significant assumptions of users' actions. Owing to inadequate controls, especially with respect to customers' satisfaction and customers' reactions, critical aspects are too often disregarded or underestimated, which instead, could be a business opportunity, especially on these two social media sites which have proven to be an effective and efficient way to interact with people.

The main objective of the empirical study is to convey some useful inputs and information to the hospitality industry, to create and implement its communication strategies effectively.

For the above-mentioned objective, the hospitality industry was observed for my studies: almost every hotel has an inexpensive brand presence on Facebook and/or Instagram which can be used to target, engage and increase consumers, generating revenue.

Firstly, effective strategic communication should be built taking into consideration the collected data on social media.

On Instagram, although the customer satisfactions analyses concentrate only on positive and neutral user satisfaction since the quality of the collected data does not present a negative satisfaction degree, it conveys interesting information about branded content which triggers a positive user satisfaction degree.

In fact, on the one hand, among all branded contents, those that graphically show elements related to the "Other relevant level-category" area generate a positive user satisfaction because the estimated coefficient of that area is statistically valid with the estimated model used (OLS) since its p-value is equal to 0.0629. On the other hand, analysing the value assumed by the estimated coefficient of that area ("Other relevant level-category"), it is necessary to notice that this category decreases the level of

positive user satisfaction since its value corresponds to - 0.3267. Therefore, according to the outcomes of the estimated model, organizations operating in the hospitality sector should not focus on branded contents featuring some level-category such as people, service communications, pets and Christmas decorations.

Moreover, with the aim to obtain a higher customers' reactions (likes and comments on branded content), hotels should focus on posts which present some elements related to the "Environment" category such as churches, hotels, landscapes, mountains, nature, the outside views, snow, streets and villages. This is explained by the positive estimated coefficient of "Environment" category which corresponds to 98,46 with a p-value of 0.0177 *, confirming the adequacy of the used model (OLS) with the collected data.
On Facebook, the analyses differ significantly from studies conducted on Instagram due to several reasons. On the one hand, on Facebook analyses, the Business Manager allows me to exploit more interesting key performance indicators, and then stronger outcomes about success of branded content. On the other hand, since the sample of branded content results to be limited, the regression model OLS does not convey any useful information about posts' performances in terms of reached people, according to the critical identified categories which are the "Environment", "Restaurant" and "Other relevant level-category" categories.
Therefore, considering the inadequacy of the used model with the collected data, another important study was conducted, providing important assumptions for hotels. As explained before, the Business Manager is a professional software which can monitor several users' experience and offer an interesting output of branded contents (videos and images) performances.
Consequently, the relevant study conducted on Facebook occurred throughout a comparison between branded contents in the form of images and branded contents in the form of video aiming to establish which of them is the most performing (in terms of reached people). The analysis demonstrates that the most performing branded contents which grasp more users are video contents. So, even if image contents have a positive relationship with the number of reached (people) users, hotels should concentrate more on video content to get a higher number of users.

Moreover, a similar analysis was conducted on Instagram. Since the software of Instagram does not clearly include key performance indicators as Business Manager, the

study of branded content in the form of video carried out through comparison among different videos aiming to uncover how different likes and comments user actions affect the number of video views. The findings on the users' reactions (comment and like) have a better impact on the video views with respect to the like users' action on them. Thus, marketers who manage social media activities sharing posts, can expect that branded video contents which trigger user reactions (like and comment) receive more views than video contents that generate only like users' action on them.

Summarizing, although not all analyses have demonstrated proper effects and assumptions, due to the inadequacy of the used model (Ordinary Least Squares) with the collected data and because some studies take a limited sample (in terms of branded content), the analyses conducted on Instagram and Facebook have suggested some interesting results, useful for future researches which could be related to the marketing communication strategy of the hospitality sector.

Index of Tables

Index of Figures

Index of Graphs

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Acknowledgements

At the end of my final paper and therefore of my university career, I think it should devote a part of it to the most important people of my life, who somehow allowed me to achieve this important personal goal.

I want to thank my supervisor Prof. Massimo Warglien, who during the drafting of my paper assisted me and suggested me the right way to finish my work.

I would like to thank my family for the values passed to me and that made me the man I am today. Thanks to my parents, Silvia and Andrea, who throughout the years, have always supported me in all my university-related choices but not only. My mother Silvia, force of nature, who has always taught me to never give up and with her affection and presence has always made me feel safe. My father Andrea, who despite the various obstacles encountered by me along the journey of life, has ever encouraged and directed me the "road" with wise suggestions.

I want to say thank you to my brothers Tommaso, Margherita and Alice for always being present in my life although we are not constantly physically close, but the potent bond that unites us demonstrates the love we feel among us. You are part of my soul.

I thank all my friends Andrea, Francesk, Labeat, Luca, Matteo, Mattia and Simone for being a part of my amazing life, thank you for creating such a great friendship lasting for so many years.

Special thanks to my best friend Davide, my adopted brother, who has always been there for me even in the most difficult moments. Over these years, the very strong bond between us has never changed.

I would like to thank my girlfriend and best friend Eva, who with her perseverance and sweetness has always supported me during tough times of daily life, wishing the best for me. Thank you for your love and being always present.

Finally, thanks to myself, to my willpower that allowed me to achieve unthinkable goals. This purpose is only the starting point to reach other satisfactions that this fantastic life reserves for me.

There is a driving force more powerful than steam, electricity and nuclear power: the will