





The Influence of the Image and Photography of E- Commerce Products on the Purchase Decision of Online Consumers

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Abstract. This work had as main objective to understand the importance of photography for online sales, as well as to verify the power of the image in the decision of a purchase, regarding the attraction and loyalty of customers, especially through social networks and online sales platforms, which are today one of the main tools for sales from e-commerce. Regarding methodology, a questionnaire was conducted, consisting of 32 questions, through Google Forms, in order to collect the opinion about the influence of photography in e-commerce. An initial pre-test was made and, once approved, it was shared in November and December 2021, through a convenience sample, using the following social networks: WhatsApp, Facebook and Instagram. A 217 response was obtained, with the data allowing the conclusion that photography plays an important role when consumers seek to buy over the internet; that image is important in the online purchase decision; that photography in e-commerce acts as an important tool in attracting and retaining customers. The experience of e-commerce even after the pandemic increases more and more, in view of the immersion of society in the virtual world. Photography is a powerful tool for transmitting emotions, also adding emotional factors to advertisements, and through this, conquering intangible values to the product or service.

Keywords: Photography · Image · e-Commerce · Social networks · Consumer behaviour

1 Introduction

E-commerce, mainly through the use of social networks, is a very efficient strategy when it comes to communication and promotion of products (Thaichon et al. 2021; Wagner et al. 2021) mostly free of charge, allowing a quick and easy access to a population that regularly uses these networks (Upadhyay et al. 2022), viewing hundreds of products daily. As a result of this observation, many businessmen and entrepreneurs have begun to

invest more in social networks and online platforms for the dissemination and promotion of their products and services.

In this sense, this article aims to identify the importance of image and photography in e-commerce and its influence on the purchase decision. On the other hand, and in specific terms, it seeks to evaluate the importance of the quality of the photograph to make the purchase; the importance of editing, props and quantity of photographs in the sale of the product or service; the importance of reality transmitted through photography; the importance of evaluation in the sales process.

We begin by reviewing the literature on online consumer behavior and the importance of social networks in e-commerce, as well as the use of technical and editing devices to create images and photos that provide a favorable and conducive environment for online shopping. After that, the framework and the methodological process of the research are presented, namely the questionnaire design and its availability through google forms, followed by the analysis and discussion of the results.

2 Theoretical Background

Online consumer behavior is characterized by the mental and emotional activities performed in the selection, purchase, and use of products or services for the satisfaction of needs and wants. There are several internal and external factors that influence consumer buying behavior among them are cultural factors, social factors, personal factors and psychological factors (Soloman, 2019).

The human being in the condition of customer, acts driven more by emotion, more than by reason at the time of consuming, acquiring, some product. In this sense, people are mostly seduced by what they see, through their interpretation and use of images they undergo constant changes, and in this way, the transmission of symbolic images to consumption is characteristic of contemporary culture, where everything is commodified. The meanings change and the artistic vision of the photographer adapts to reality.

The customer in online shopping does not consider important the presence of entertainment elements, in his experience, through the website (Ertemel et al. 2021). Confidentiality and reliability, on the other hand, are of great importance, since the online consumer is particularly concerned about sharing personal data (Zaid and Patwayati, 2021). Information prior to the purchase, about the correct procedure to make it, or if it was really well done are, as well as security, factors valued by the online consumer (Upadhyay et al. 2022).

According to Cardoso and Sissi (2021) customers have the facility to find products without leaving home, then it is necessary to remember that the competition also has this facility, and that the customer will choose the product that is better presented. In this sense, professional photography assumes a prominent role. Thus, it is essential to develop strategies for attracting and winning over customers, seeking their attention and trust. In this sense, all brands that want to enter the online market must have a different strategy and respect the main influences of the online market such as trends, legislation and consumer confidence.

2.1 Photography and Ecommerce

The inclusion of filming and photographing devices in mobile equipment simultaneously with the spread of the internet have contributed to an increasingly present proximity in the relationship between photography and online commerce. According to Rejan and Neves (2018), based on the works of Hoffman and Oliveira (2015), modernity implied modifications in the action of photographing. The diffusion of photography in popular media reached its apex after the advent of the internet and, with the creation of digital culture, there was the inclusion of the camera to mobile devices, which brought great influence on the change of the photographic process.

In a complementary way, the use of photography continues to be a factor of impact and differentiation in the relationship between the consumer and the market, because, as mentioned (Montenegro, 2021), companies use information technology to interconnect and exchange information and data, reducing costs, improving productivity and increasing customer loyalty.

Regarding the relationship between customers and technology, Mariano et al. (2015) refer that with the development of technology and the internet, the use of the digital space to carry out market transactions is getting bigger and more frequent, connecting buyers directly with companies and totally changing the way companies relate to customers and vice versa, creating new values and relationships. With the purpose of placing products and services in the fastest and most interactive way to a larger number of customers, in the various locations of the world, websites are seen as a crucial point of competition among competitors. It is through the website, that the brand conveys and applies its communication and advertising objectives. The website is the core of e-commerce, that is, where it will have to focus its efforts to retain consumers (products (Thaichon et al. 2021; Wagner et al. 2021)). According to Pontes, (2018), e-commerce, emerges with the advances in technology that drive changes at various levels, creating new paradigms of purchase. With the popularity of the internet, more and more companies and individuals have joined e-commerce, which is reflected in the high number of sellers and buyers interacting for transactions on the website.

Photography has the power to relive moments, to bring old emotions to the surface, thus making it one of the best forms of visual communication. Photography does not only imply reflecting on a certain type of image or on a system of symbolic exchanges, such reflection requires a better analysis because photography has always proved to be an agent for shaping reality, in a process of assembly and selection, in which the world reveals itself to be “similar” and “different” at the same time. The new language of photography has brought about a real revolution in the digital world and has become a strong business tool, a different aspect in the past, where photography had the objective of showing products, while nowadays it seeks to influence people.

Photography is not only an image, but an image-act, and this “act” is not only limited to the gesture of the production of the image itself, but also includes the act of its reception and contemplation, in short as inseparable from its whole enunciation, as an image experience, as a totally programmatic goal (Rejan and Neves, 2018).

2.2 Social Networks and e-commerce

Regarding the use of photography on social media, we can see that Instagram is a very important sharing platform that engages consumers (Almeida, 2021). According to Pereira (2014). “It is an application that allows users to take photos, apply filters and effects, and share them on a variety of social networks, such as Twitter and Facebook. The Instagram application was born with the purpose of encouraging the production and editing of digital photographs through mobile phones (Melo, 2019), allowing a new dynamic in the relationship of the individual with the image, in the sharing and dissemination of photographic content through virtual means (Lima, 2014).

Regarding the use of Instagram in the relationship with the consumer, we can verify that the buying experience begins, most of the time, in the search made in social networks, through impactful images and with visual impact (Melo, 2019). Fashion represents for the individual, its visual character, with valuable images and good appearances, tools with the visual features such as those of Instagram allow “ordinary” people to approach the public, create trust and empathy with the real stories of their daily lives and gain many followers (Pinto, 2018).

3 Methodology

To carry out this work, a literature review was conducted on this object of study, through the exploration of the thematic collection available scientific databases, seeking to systematize a set of ideals, studies and relevant considerations about this area of knowledge and that allowed to define the conceptual and methodological framework of the research (Malhotra, 2019).

As previously mentioned, the overall objective of this research is to understand the importance of photography in online sales (e-commerce), and in particular, verify the power of the image in the decision of a purchase, regarding the attraction and loyalty of customers, mainly through social networks and online sales platforms.

Thus, the following research questions were defined: (1) Do image and photography influence the purchase decision? (2) Does the quality of photography facilitate brand memorization? (3) Do props and textual information support online sales? (4) Does the amount of photography help create a favorable image and confidence in the product? (5) Does excessive editing take away veracity and diminish credibility to the product? (6) Does the congruence between the advertised image and the actual product (verified upon receipt of the product) promote loyalty and repeat purchase?

In order to answer the objectives and research questions, we developed an exploratory study with descriptive design (Pestana and Gageiro, 2014; Malhotra, 2019), using the questionnaire as an instrument to collect information. The questionnaire, composed of 32 questions, was developed through Google forms, and was structured in four blocks: 4 questions on socio-demographic data (gender, age, marital status, education), 11 questions on the importance of image and photography (using a 5-point Likert scale, where 1 was strongly disagree and 5 strongly agree), 4 questions on technical issues (yes/no dichotomous scale), and 4 multiple choice.

A pre-test was conducted with 12 consumers, seeking to eliminate typos, and reorganize the structure of the questionnaire (Pestana and Gageiro, 2014; Malhotra, 2019), improving the questions presented and the most relevant considerations for the understanding of this theme.

After being approved it was shared, in the months of November and December 2021, through a convenience sample (Malhotra, 2019) using the following social networks, WhatsApp, Facebook and Instagram. We obtained 217 valid responses, which is considered an acceptable number that allows the analysis and statistical treatment of the data.

4 Results

As can be seen in the Table 1, the respondents were mostly female (84.3%), with 34 male respondents (15.7%). In terms of age, it can be seen that the “26–35 years old” age group had 74 respondents (34.1%), followed by the “18–25 years old” age group (29.5%), then the “36–45 years old” age group (22.1%), and there were few respondents below the age of 18 (1.8%) and above the age of 55 (2.3%).

The vast majority of respondents are single (65.9%), with 66 married (30.4%) and eight divorced (3.7%). Regarding academic qualifications, it appears that most respondents have a high school degree (54.8%). This is followed by respondents with a Bachelor’s degree (20.7%) and a 3rd cycle degree (10.1%).

Table 1. Sample

		F	%
Gender	Male	34	15,7
	Female	183	84,3
Age groups	< 18 years	4	1,8
	18–25 years	64	29,5
	26–35 years	74	34,1
	36–45 years	48	22,1
	46–55 years	22	10,1
	> 55 years	5	2,3
Marital status	Single	143	65,9
	Married	66	30,4
	Divorced	8	3,7
Qualification	2nd cycle	2	,9
	3rd cycle	22	10,1

(continued)

Table 1. (continued)

		F	%
	Secondary education	119	54,8
	Bachalaureate	10	4,6
	Graduation	45	20,7
	Masters	19	8,8

The scale shows good internal consistency, having obtained a Cronbach's alpha of 803.

Overall the respondents agreed with the prepositions presented, with percentages of total agreement higher than 44% (Table 2). If we take into account that the values of disagreement are very low, it is possible to conclude that respondents recognize the value and importance of image and photography in the commercial initiatives of online companies.

Table 2. Frequencies

Items	Strongly disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly agree 5	M	SD
	F (%)	F (%)	F (%)	F (%)	F (%)		
A quality image conveys credibility		2 (0,9)	21 (9,7)	45 (20,7)	149 (68,7)	4,58	,698
The quality of the photograph has power in the purchase decision		1 (0,5)	11 (5,1)	49 (22,6)	156 (71,9)	4,66	,597
A salesperson who presents a quality photograph is more likely to be remembered by the customer	1 (0,5)		6 (2,8)	51 (23,5)	159 (73,3)	4,69	,570

(continued)

Table 2. (continued)

Items	Strongly disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly agree 5	M	SD
	F (%)	F (%)	F (%)	F (%)	F (%)		
When the product reaches the consumer and is the same as in the photograph, this leads the consumer to repeat the experience again			5 (2,3)	21 (9,7)	191 (88)	4,86	,408
The color of the photograph influences the purchase	1 (0,5)	3 (1,4)	19 (8,8)	64 (29,5)	130 (59,9)	4,47	,753
Lighting influences the quality of the photograph and consequently the purchase of the article	1 (0,5)		10 (4,6)	62 (28,6)	144 (66,4)	4,61	,600
It is important to follow a photographic composition	1 (0,5)		29 (13,4)	72 (33,2)	115 (53)	4,39	,732
Image focus is important in photography			7 (3,2)	47 (21,7)	163 (75,1)	4,72	,518
Textual information is important when purchasing the article	1 (0,5)		16 (7,4)	55 (25,3)	144 (66,4)	4,58	,649
The use of props supports the sale of the product	2 (0,9)	6 (2,8)	41 (18,9)	72 (33,2)	96 (44,2)	4,18	,893

(continued)

Table 2. (continued)

Items	Strongly disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly agree 5	M	SD
	F (%)	F (%)	F (%)	F (%)	F (%)		
The number of product photographs is important	2 (0,9)	5 (2,3)	38 (17,5)	65 (30)	107 (49,3)	4,25	,885

Thus, respondents agree that a quality image conveys credibility ($M^1 = 4.58$; $SD^2: 0.698$), the quality of the photograph influences the purchase decision ($M = 4.66$; $SD = 0.597$) and memorization ($M = 4.69$; $SD = 0.570$) and upon receipt of the product, checking the correspondence with the advertised image promotes repeat purchase ($M = 4.86$; $SD = 0.408$).

Similarly, respondents agree that color of the photograph influences the act of purchase ($M = 4.47$, $SD = 0.753$), lighting has an influence on the quality of the photograph and, consequently, on the purchase of the product ($M = 4.61$; $SD = 0.6$), being important to follow a photographic composition ($M = 4.39$; $SD = 0.732$) where, in complementary terms, the textual information ($M = 4.58$; $SD = 0.649$) and the use of props ($M = 4.18$; $SD = 0.893$) support the sale of the product.

It should also be noted that respondents consider that the focus of the image ($M = 4.72$; $SD = 0.518$) and the amount of product photos ($M = 4.25$; $SD = 0.885$) are important in selling products online.

As shown in the following Table 3, respondents recognize the importance of technology and image professionals that allow the consumer to make a good evaluation of the product and support it in the purchase decision, and photography is fundamental in the purchase decision (76.5%).

Thus, 208 respondents (95.6%) consider important to invest in image professionals (photography) who use appropriate technology (tripod, light sources) to maintain a quality to the reality of the product (74.2%), because the use of flash influences the quality of photography (85.7%) and the use of image editors (57.6%) is important in the purchase decision.

However, respondents consider that excessive editing takes away from the veracity of the product (76%).

Therefore, the majority of respondents consider that on platforms like AliExpress (online shopping platform) it is important to see the evaluation of products by customers to help the purchase of others (81.1%).

¹ M = Mean.

² SD = Standard Deviation.

Table 3. Frequencies

Items	Yes 1	No 2	Other 3
	F (%)	F (%)	F (%)
Is it important to invest in a professional?	208 (95,6)	6 (2,8)	3 (1,4)
In order to maintain a quality to the reality of the product will it be necessary to use a tripod, light sources (lamps, soft box...)?	161 (74,2)	50 (23)	6 (2,8)
Does the use of flash influence the quality of the photo?	186 (85,7)	24 (11,1)	7 (3,2)
Is the use of image editors an important factor in the purchase decision?	125 (57,6)	38 (17,5)	15 (6,9)
Is photography fundamental in the buying decision	166 (76,5)	7 (3,2)	11 (5,1)
Does excessive editing take away from the	165 (76)	7 (3,2)	11 (5,1)
On platforms like AliExpress (online shopping platform) is it important to see customer reviews of products to help others buy?	176 (81,1)	2 (0,9)	-

For 170 respondents (78.3%) it is necessary for the photography to convey the “story” of the brand to captivate the consumer (Table 4) so the scenarios (Table 5) not only help in selling the product but also demonstrate the product in a real environment (53%).

Table 4. Is it necessary for photography to convey the “story” of the brand to captivate the consumer?

Items	F	%
Yes, so that the customer has more confidence in his purchase	170	78,3
No, the history” of the brand has no influence on the purchase	39	17,1

Table 5. Does the use of scenery influence the sale of the product?

Items	F	%
The scenarios not only help in selling the product but also demonstrate the product in a real environment.	115	53,0
The scenario has no influence whatsoever on the moment of purchase.	6	2,8
Depending on the type of product the setting can be an asset or not.	86	39,6
Depending on the emotional state of the buyer the scenario can lead to the creation of a stronger connection with the brand.	10	4,6

To achieve high photo quality, respondents consider that a good camera achieves better results (80.2%), although some (19.8%) say that there are other similar alternatives to achieve good results (Table 6).

Table 6. Do you think the brand of the camera influences the quality of the photo?

Items	F	%
Yes, a good machine can achieve better results	174	80,2
No, there are other similar alternatives to achieve good results	43	19,8

The vast majority of respondents (90.3%) consider that the photo is a key point in closing the sale online and therefore relevant in e-commerce, although for 15 respondents (6.9%) the photo may be a relevant point, but the textual information is more relevant (Table 7).

Table 7. Do you think it is relevant to have photographs in e-commerce?

Items	F	%
Without a doubt, photography is a key point in closing the sale online	196	90,3
There is no relationship between the photograph and the sale of the product	4	1,8
This may be a relevant point, but the textual information has greater relevance	15	6,9

Finally, in the case of seasonal products, 96 respondents (44.3%) consider it important and or very important ($M = 4.10$; $SD = 1.035$) that the photo is able to reflect the seasonality of the product (Table 8).

Table 8. Frequencies

Items	Nothing important 1	Little important 2	Neither little nor very important 3	Important 4	Very important 5	M	SD
	F (%)	F (%)	F (%)	F (%)	F (%)		
If the product is seasonal, how important is it for the photography to reflect the seasonality of the product?	6 (2,8)	1 (0,5)	22 (10,1)	42 (19,4)	54 (24,9)	4,10	1,035

Thus, the results of our study reinforce the conclusions already identified in the literature in similar studies, namely regarding the importance of the experience with the website (Ertemel et al. 2021; Upadhyay, et al. 2022), in which the image of the products presented (photography quality) on the website contributes to the formation of the company's brand image and can influence the purchase decision (Cardoso and Sissi, 2021).

Likewise, the integration of technologies (internet and mobile equipment) and media (text, videos and photographs) promotes interaction, involvement and relationship between the company and consumers, as evidenced in the literature (Hoffman and Oliveira, 2015; Rejan and Neves, 2018; Pinto, 2018; Melo, 2019).

This approach allows not only to reduce costs, but is also decisive in identifying and differentiating the brand (and the company), increasing productivity, retention and consumer loyalty (Montenegro, 2021; Thaichon et al. 2021; Wagner et al. 2021).

In line with the study by Rejan and Neves (2018), the data confirm the importance and value of photography in the reception and contemplation of images, allowing the best way to interpret the narrative and discourse of brands. In fact, photographs manage to create greater involvement and proximity to the consumer, as evidenced by Almeida (2021).

5 Conclusions

The development of this study has enabled an analysis of how photography is an important factor in e-commerce. The need for online sales and the demand for knowledge in e-commerce during the pandemic increased considerably. In view of this analysis of the results, professional photography is something indispensable when making a purchase and 60.3% of the respondents are motivated by photography in the purchase decision.

The respondents recognize the importance of technology and professional image professionals that allow the consumer to make a good evaluation of the product and support him in the purchase decision, and photography is fundamental in the purchase decision (76.5%).

The majority of respondents (95.6%) consider it important to invest in image professionals (photography) that allow them to maintain a quality to the reality of the product (74.2%), because the use of flash influences the quality of the photograph (85.7%) and the use of image editors (57.6%) is important in the buying decision. However, respondents consider that excessive editing takes away from the veracity of the product (76%).

The experience of e-commerce even after the pandemic increases more and more, in view of the immersion of society in the virtual world, most people (81.1%) have become accustomed to online shopping and, therefore, considering the facts and results presented, the investment in professional photography of products and services is essential for the success of sales and customer loyalty, ensuring customer satisfaction through strategic images.

In this sense, photography is a powerful tool for transmitting emotions, also adding emotional factors to advertisements, and through this, conquering intangible values to the product or service.

The results of this study can be of interest to all companies that are making the digital transition, namely regarding the use of photography and image to produce positive experiences for consumers. Likewise, companies that already use this media can improve their online communication strategies, giving greater importance to photography and its importance in transmitting the brand's personality and building the relationship with the customer.

This study had as main limitations the use of a convenience sample, mostly female, lacking a qualitative study for a better understanding of the theme.

Thus, it is recommended that, in future research, a larger sample is used, with a balance between genders, focusing on a specific group of consumers (for example, young people and/or young adults).

On the other hand, future studies should be deepened on the impact of photography in creating an online customer experience.

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