

# Determinants of the Digital Purchase Process and Their Impact on the Sales of Business Organizations

Eman Wadie Abdel Halim

**Abstract:** *Clients' sharing in and their interaction with digital marketing campaigns launched by business corporations through the social media is cost-effective and raises the return on investment of these corporations. Through this easy means of communication, it becomes possible to reach the client at the adequate time and place, in line with the client's demographic specifications. Digital marketing depends on four main pillars: Content, Data, Technology and Clients. This study was able to determine the principal factors influencing the digital purchase decision or the "7" S namely: Speed of communication – The offered Service – The various Social media - The Company's Site and the other Sites chosen to display the product –The Sort of goods and services offered for sale – The diversity and modernity of the goods and services offered for Sale – Specific data and information about the advertised product/service. This research paper was also keen to investigate the impact of the frequency of clients' visits and data collection via the social media on increasing the company's sales in general, through a case-study.*

**Keywords:** Digital purchase decision, digital marketing, visits to the company's site, clients' demographic specifications according to the social media, clients' epoch

## 1. Introduction

Digital marketing is a widely-used means of communication for promoting products and services through reaching the consumers who are using compatible digital devices. Digital marketing goes beyond e-marketing as it relies on the digital media which include modern digital processes and activities through which the advertizing content can be developed, disseminated and received, while using internet-connected devices, in an interactive process between the sender and the receiver.

The advantage of digital marketing is that it provides the receiver to some extent with a selective control over the kind of chosen information. It is now possible for individuals to participate in the content addressed to them through interacting more actively with the displayed information. The user of the social media has become the chief editor of the magazine of his/her choice (Facebook, various kinds of messages, videotext, digital T.V., etc.).

Marketers can use the social media to disseminate and distribute their advertizing messages to their targeted clients without having to resort to publishers or distributors. Via this type of communication, corporations can reach their targeted clients' category and provide them with all the information related to the offered product or service. Furthermore, they are able to follow-up the comments and opinions of the users. Hence, the difficulties and obstacles impeding communication between senders and receivers have been greatly reduced.

Potential clients of digital marketing corporations do not only rely on the information provided by the sellers concerning their trademark and market expansion; they are able to follow-up news and opinions about the product disseminated through the media, friends, family members, forums, etc. Moreover, they can easily obtain information concerning the marketing corporation and its competitors, to help them make the right purchasing decision through choosing between the available alternatives. Hence, corporations can realize higher levels of customer loyalty

and satisfaction. (See: Watson et al. 2005; and Sheth et al., 2002).

Chaffey and Smith, 2008 and Gieste and Gote, 2000, confirm that the client's information satisfaction (CIS) can be deduced through a number of emotional responses of various intensity, which may be noticed before and after the purchasing process; actually the client strives to collect certain pivotal features and important information in order to make the right purchasing decision, such as: The applied selling activities and procedures; the information displayed on the company's website; clients' support system, after-sales services, and information about the company's status and reputation.

## Previous studies

This part is briefly tackled based on three axes to serve the research paper objectives as follows:

- The concept of digital marketing;
- The relation between digital marketing and the social media; and
- The impact of digital marketing on the sender (the advertizing company) and the receiver (actual and potential clients).

One of the first studies concerned with digital marketing is that of G. Rezza Kiani, 1991, which shed the light on the opportunities provided to marketers by the internet. Kiani considered the web a tool for a double-way communication model which can be implemented through business corporations' management of their website. He also predicted the opportunities supporting the marketers' objectives in the modern- anticipated at that time - marketing environment. The researcher foresaw the possibility of establishing an outstanding means of communication between the company and its clients via the company's website, the new mobile phone applications and different mediums and channels which were going to play a crucial role in the modern marketing environment.

**Chaffey, 2002**, stressed the important role of digital marketing, through using data bases, wireless networks and digital television, in determining clients' personal characteristics, behavior, motives and degree of loyalty, in order to increase the capacity of the organization in providing supporting services for the integral marketing communication process as well as electronic services compatible with clients' individual needs.

The study of **Royo et al., 2011**, indicated that using electronic sites enables the company to attract the targeted category of clients through collecting geographic and demographic information about the visitors of the site (age group, residing address, gender, income level, profession); although many visitors of the companies' websites hesitate to give private details about themselves in view of maintaining their privacy and security.

**Smitha Rao et al., 2016**, underscores the fact that the marketer's objective in modern times- via targeting the customer in a personal manner- is to satisfy the customer's needs, and not only to sell to him/her the available products. Therefore, it is important for the company to analyze customers' behavior through obtaining their personal data and demographic characteristics, in order to be able to target potential clients. Hence, the company is called to offer more and more marketing solutions in view of realizing its marketing goals. Moreover, using the social media helps the company to determine clients' needs.

**Giese, 2000**, discovered that clients' information satisfaction (CIS) can be translated - through digital marketing - into a number of responses of varying intensity following the product consumption or using the service. These responses must be backed-up by essential aspects such as: Assessing clients' interaction through following-up their comments; the information systems available in the websites; the number of visits and the expressed admiration of the clients; the volume of sales' activities; digital products/ services; clients' support systems, after-sales service; etc. This is one of the advantages of the social media. The client may gather more information about the product through browsing and searching the company's website and the web. Increased clients' information satisfaction will eventually increase the company's sales. (**Court et al., 2009**)

The study of **Fang, 2015**, shows that the rates of clients' online reviews and clicking (CPC= cost per click) influence the return on investment of the current sellers during the maturity phase of the product at a ratio that equals double that ratio in the case of new sellers. Increased page review rates have also an impact on new purchasers during the product launching and appearance phase at a ratio that equals three times the ratio for current purchasers. The appearance rates of the product have a positive effect on its pricing thus providing it with a highly competitive advantage and encouraging the clients to purchase it.

**Mayzlin (2006)** studied the important relationship between online reviews and sales, using online book reviews. The researchers found that online reviews are generally positive and that these reviews can increase a

book sales' rank; but that negative reviews have a stronger impact than positive ones.

In the study of **Dominic, 2016**, the researcher criticizes the pay-per-click (PPC) system. He insists on the need to understand the consumer's behavior and to follow-up his/her measurement instead of following-up the "last click" models. Thus, this paper presents lift-testing as a methodology that allows for the building and validation of a robust cross-channel digital measurement framework. Examples are provided to show how lift-testing can be used to drive more accurate spending decisions than last-click models; as well as how it can be used for both between- and within-channel optimization. This paper also calls for a shift in mindset within digital marketing analysis to ensure a focus on true incremental impact from both advertisers and publishers.

On the other hand, the study of **M. Com., M. Phil, ..., 2016**, points out that there are many contemporary challenges that need to be confronted and dealt with by business organizations. Examples are: The need to create adequate awareness for the clients using the digital service; to satisfy their requirements and expectations; to attract visitors and interested users of this technique on an ongoing basis; as well as classifying clients into categories and using promotional methods and adequate offers to effectively target the clients' category specified in the marketing plan.

It is now possible to reach the client in a more specialized and accurate way. However, achieving clients' satisfaction through addressing them with appealing marketing policies has become the greatest challenge facing marketers; besides the basic challenge consisting in the need to keep-up with the constant development of the modern social media (such as: Twitter, Facebook, and other newly-developed systems) and to use them for realizing the marketing objectives of the organization.

Furthermore, it is important to create a new category of potential clients while keeping the present clients in order to increase the organization's revenues and profits. Another concern should be keeping-up with the latest marketing trends, devising marketing policies and organizing marketing highly-effective campaigns o that cater to the clients' needs at the local, regional and global levels.

Briefly, the real challenge, as underlined by the two co-authors, is how to unify marketing processes while targeting clients of different environments and cultures. Another crucial success factor is providing quick performance and easy access to the internet. When the potential client is faced with impediments or slowness in loading the company's site or in achieving the purchase transaction, he might consider digital marketing as a disadvantageous process for the users.

Another problem consists in the divide between the device and the physical personality of the user. When the device used to browse the website is changed, it becomes difficult to keep the customer's specific cookies.

The challenge here is to uniquely identify the customer and to engage the interaction in a personalized way. A new technology other than cookies to identify the client could be envisaged.

In addition, users express rising security and privacy concerns against the invasion of their privacy through following-up their personal data and demographic characteristics via the social media and continuously watching their online browsing behavior. Therefore, certain customers called for downloading applications on their devices to protect themselves against marketers' advertisements and their constant peering!

Clients are also increasingly concerned about being exposed to fraudulent practices as they use their credit cards for online payment.

The researchers strongly advised marketers to resort to the efficient management of their clients' databases including recording, saving and revising all the data resulting from the clients' clicks of online reviewing, purchase and follow-up. This would necessitate the expansion and upgrading of the organization's information system in line with the huge expansion of the available data and information, on one hand and the rapid technological progress, on the other hand. Through improved technological processes, the organization can provide greater reliability, security and credibility to the clients, which will be positively reflected on their digital purchase decisions.

**Aaker et al., 2015**, confirmed that one of the most important elements of long-term strategic action for business organizations is using their own applications to cater to their clients' interests. Such applications clearly impact the image of the organization's trademark and relationship with its clients and help the organization to realize competitive advantages. Hence, clients' review of the products and services offered by the organization becomes a pleasant and interesting experience. This can be achieved by the organization through encouraging new applications and providing an information mechanism able to respond to the clients' ideas, while avoiding what may cause their disappointment or arouse their reservation regarding purchasing the product through the digital marketing procedure.

**Venkatesh et al., 2016** consider that the digital marketing process includes planning and implementing all marketing activities via mobile phones throughout the purchasing process, starting from the first shopping motives, passing by purchasing, consuming and repurchasing the product, and ending with recommending the product to others.

The study gave as a model a digital marketing process connecting between four main elements: The shopper, the marketer, the organization and the technology of smart mobile phones. The study explains how the purchasing process can be made an easier, a more understanding and more credible experience as well as a less disappointing one.

In addition, the study refers to a research paper published in the Harvard Business Review, 2012, in which the researchers confirm that having a site on the web or on other electronic platforms such as Facebook greatly increases the possibility of disseminating information about the advantages and benefits of the product.

Through the offers provided from the organization to individual clients (B2C) or from one organization to another (B2B), clients – whether individuals or corporations – can readily obtain all the data and information they need, by simply browsing the site of the marketer or interacting with the marketing organization. Such a quick response to the queries and concerns of the client represents a distinguished client service which will positively influence purchasing rates at the ratio of 86%, as determined by the study; while product recommendation by actual purchasers will probably reach 115%.

Indeed one of the most advantageous features of digital marketing is saving the time of going from one shop to another in quest of the desired product. The almost instantaneous availability of information about the product has led many clients to choose shopping through the digital channels. Hence the studies of **Watson et al., 2002, and Sheth, 2005**, underscore that marketing through the social media allows business organizations to reach out for clients who would not otherwise be available due to the time and space restricting physical distribution channels; whereas through the social media, business companies can effectively reach their target audience and at a low cost.

**Sarah et al., 2014**, on the other hand, focused on the four stages of the digital marketing journey as follows:

**Stage A:** Waking up to the journey and starting out;

**Stage B:** Identifying the travel essentials;

**Stage C:** Travelling companions and communities; and

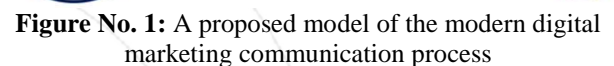
**Stage D:** Reflections and a postcard home.

The marketing organization must have a strategic view of the future, in order to keep-up with the state-of-the art technologies and the changing time concepts. The marketers have to implement modern marketing methods based on constantly updating the displayed data and information about the product through the website of the organization or the digital communication sites, thus greatly reducing the anxiety of the potential consumers who depend on such data and information for making the purchase decision.

The study of **Afrina Yasmin, Sadia et al., 2015**, indicates that the digital channel has become nowadays an essential part of the marketing strategy of numerous enterprises, even small ones, as it represents an inexpensive and highly effective way of marketing goods and services. The researchers conclude that digital marketing has succeeded in giving utmost priority to the users' needs. However the goals of digital marketing cannot be achieved without trial and error endeavors. The marketing organization must create innovative experiments for their clients and devise specific strategies for using the selected mass media and social media, in order to determine the best way to improve the performance of digital marketing in the future.



It is noteworthy that the digital marketing process takes place within the external environment and influences and is influenced by that environment. External factors influencing digital marketing include for example: Governmental policies towards using the internet; the available means of payment; the speed of the internet; the extent to which the communications environment has been developed; as these factors differ from one country to another.



Similarly, the two papers of: **Afrina et al., 2015**, and **Hima, 2016**, highlighted the following success factors:

- The need to continuously inform the customer about the company's new products and services;
- Analyzing customers' participation in the company's different activities and their interaction with the messages displayed on the company's website or through the social media;
- Clarifying all the information provided to customers; and
- Declaring prices and promotional offers to facilitate the comparison between the company's products and competing products.

The researchers defined the e-marketing process as a mixture of information management, public relations and after sales services. The major advantages of that process were determined as follows:

- The continuous interaction between the company and its clients; and,
- The rapid response to the clients' queries and requirements and the product or service adaptation accordingly.

The study of **Shankar et al., 2016**, also presented a model of the digital marketing process and determined its four basic elements as: The shopper, the employee, the organization and the applied technology.

The four stages of the digital marketing process as suggested by the study of **Sarah, 2014** were the following:

#### **Stage A: Waking-up to the journey and starting out**

In other words, the organization becomes aware of the need to initiate the digital marketing process and starts preparing for it.

#### **Stage B: Identifying the travel essentials**

In this stage, the main elements of the digital marketing process are identified (Content, Technology, Resources, etc.).

#### **Stage C: Travelling companions and communities**

It is then time to choose the company's communication channels and target audience.

#### **Stage D: Reflections and a postcard home**

This is the process evaluation stage; and recommendations for improvement must be sent to the company's administration for consideration and implementation.

## **2. The Study Objectives**

1. Determining the most important features and characteristics of the shoppers in order to increase the effectiveness of communication between the addresser (the organization) and the addressees (the targeted client categories) during the digital marketing process;

2. Determining the main factors of online shopping via the social media;
3. Determining the most important persons influencing the purchasing decision, and the most important impediments of online shopping;
4. Studying the frequency of the clients' visits and clients' collection of information about the company's products and services and the impact of such visits on increasing the sales volume; in view of setting up a model for assessing the change rate in the sales volume of business organizations and using simulation systems for rationalizing decisions in the future;
5. Stressing the role of marketing policies that rely on analyzing and reviewing the shoppers' reactions and the impact of such policies on increasing the sales volume.

### **The Study Hypotheses**

1. There is a relationship between certain demographic characteristics of the study sample (age category, level of education, income level) and shopping through the social media; and
2. The number of visits to the company's website does not influence its sales volume.

### **The Study Population and Sample**

**The Study Population:** The population of shoppers through the internet in general within the Greater Cairo Region, including the three governorates of: Cairo, Giza and El Qalyubia, which is considered one of the most civilized regions in the Arab Republic of Egypt.

The Central Agency for Public Mobilization and Statistics (CAPMAS) depicted a drop in illiteracy rates from 26.7% to 20.4% among the residents of urban regions [1].

It was also found that 46% of the families had a laptop and 43% were connected to the internet, with the majority dwelling in the Greater Cairo region. However, that population cannot be relied upon since it lacks a specific framework.

**The Study Sample:** According to the description of the research population, the best applicable method is to randomly choose the study sample. The study uses a simple random sample of 400 individuals while assuming that the sampling error is 0.05 when the population is equal to or greater than one hundred thousand individuals ( $N \geq 100000$ ).

### **Validity and credibility of the research instrument**

The research instrument was submitted for evaluation to a number of academics and digital marketing experts working in investment companies engaged in the manufacture of home electric appliances and it was somewhat modified according to their comments. A pilot study was conducted on a sample of the research population. The L. J. Cronbach's stability coefficient was calculated and was found:  $\alpha = 0.897$ ; the confidence was also calculated and it equaled 0.947; which means that the research instrument enjoys both stability and credibility.

**The Study Results**

The study results include the findings of the applied study and the results of testing the study hypotheses.

**First: Results of the Applied Study**

The researcher relied on the statistical description of the variables by calculating the mathematical mean and the coefficient of variation of the sample. In addition, the factor analysis gave the following results:

**1. Results of the Factor Analysis**

The research conducted a factor analysis in order to determine the factors influencing online shopping through the social media in general, as well as the relative importance of each factor. Varimax Rotation (according to the Principal Components method) was used and gave the following results.

**Table 1:** Results of the factor analysis using Varimax Rotation (according to the Principal Components method)

Factors Statement	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
1. Easy access to the product needed.				0.632				
2. Good communication between company and clients.				0.646				
3. Comments from previous customers about the product are available				0.523				
4. Availability of the product usage method/or product trial.				0.605				
5. Online shopping is more reliable and more trusted than traditional shopping methods.				0.661				
6. Product information can be obtained at any time of the day (24) hours (not related to specific shopping time).				0.707				
7. Following up the most recent product prices on daily basis.								
8. Product price		0.649						
9. Product guarantee		0.747						
10. Product delivery method		0.753						
11. After sales services		0.784						
12. Product selling sites near my residence place		0.738						
13. Mobile SMS								
14. Emails.								0.826
15. Company websites.							0.692	
16. Social websites and forums.							0.863	
17. Company's product online ads.							0.626	
18. Fast communication with the client.	0.812							
19. Knowing client's initial feedbacks.	0.823							
20. Fast viewing of previous customers' comments.	0.721							
21. Fast response to client's inquiries.	0.772							
22. Fast response to false information about the product.	0.743							
23. Presence of previous customers' positive comments about the product			0.523					
24. Previous customers reacted with "like" toward the product.			0.820					
25. Large numbers of visits to the company website.			0.775					
26. Large numbers of views of the company's product ads.			0.757					
27. Different home appliances (washing machines, cookers, TVs, ..., etc.)						0.728		
28. Computers/laptop						0.905		
29. Telephones						0.883		
30. Clothes					0.867			
31. Leathers (Shoes- bags-. Etc.)					0.837			

Factors Statement	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
32. Accessories (watches, silvers, ...etc.)					0.785			

**NB**

- Items No. 7 and 13 were deleted because the loading coefficient < 0.50; and
- Item No. 14 was deleted because Factor No. 8 includes only this item.

**Table 2:** Denomination of the deduced factors and their respective importance

Factor No.	Titles	Eigen Values	Explained Variance%	Cumulative Variance%
1.	Speed of Communication	4.00	12.499	12.499
2.	Services	3.777	11.805	24.303
3.	Social Media	2.956	9.237	33.540
4.	Sites	2.841	8.878	42.418
5.	Special Goods	2.525	7.892	50.310
6.	Similar Goods	2.516	7.861	58.171
7.	Specific Product information	2.286	7.143	65.314

The results of the factor analysis [Tables (1) and (2)] indicate that there are seven factors explaining the phenomenon of online shopping through the social media. These factors are denominated below, in descending order of importance, **as follows:**

1. Speed of communication;
2. Services;
3. Social media (tools);
4. Sites;
5. Special goods;
6. Similar goods; and
7. Specific product information.

The two items (7, and 13) in Table (1) were excluded due to their low degree of saturation (less than 0.50) in conformity with the recognized standards in social sciences. Item 14 was also deleted as it was the only item included in Factor 8, which is statistically unacceptable. Similarly Item 23 was deleted because it did not obtain any responses from those who completed the questionnaire. Briefly, the above-mentioned seven most important factors explain approximately 65.3% of the phenomenon under study.

The above-mentioned results are in line with the conclusion of S. Dhiyya, 2016, which determines the main success factors of the digital marketing process as follows:

Providing specific product/service data and information; through using the social media and improving multi-channeled communication; while taking into consideration marketers' cleverness in using the company's website and other sites and social media platforms; besides improving the displayed data and information about the variety and specifications of the advertized products or services in view of obtaining the best response from local and international clients.

## 2. Principal Opinions influencing the digital purchase decision

The following table shows the principal opinions influencing the digital purchase decision and their respective importance. In order to obtain this statistical description, the researcher used the weighted average and the coefficient of variation of the variables.

**Table 3:** Statistical description of the research sample responses concerning the opinions of the primary groups influencing the digital purchase decision

Statement	Mean	Standard deviation	Variation Coefficient(%)	Order of Importance
1. My family members	3.86	1.123	29.08	3
2. My friends	3.95	9.973	24.63	2
3. My colleagues	3.84	0.987	25.70	4
4. My personal experience	4.22	0.818	19.37	1

From Table (3) it can be seen that the client's personal experience is the most important factor influencing his/her digital purchase decision, followed by the opinion of friends, family members and colleagues, in descending order of importance.

## 3. Main impediments of online shopping

The researcher used the weighted average and the coefficient of variation to statistically describe the main obstacles to online shopping. The results are shown below in Table (4).



**Table 4:** Main impediments of online shopping and their relative importance

Reasons for online shopping difficulties	Descriptive stat.			Arrange
	Mean	S.d	C.V %	
1. Error within the payment method.	3.96	0.925	23.351	2
2. My desire to watch the product interactively (using one of my five senses)	4.52	0.668	14.79	1
3. My lack of trust towards modern technology.	3.60	1.272	35.34	3
4. Negative experience of one of my family members – relatives – friends.	3.55	1.174	33.03	4
5. Lack of knowledge of modern technological methods.	2.75	1.518	55.09	5

Table (4) indicates that the most important obstacle to online shopping is the client's desire to concretely access the product; the second obstacle is finding an error within the payment method; then comes the lack of trust in modern technology; followed by a negative experience undergone by a family member, a relative or a friend; and of least importance is the lack of knowledge concerning modern technological methods.

Along the same line, the study of Walts and Dodds, 2007, saw that the digital purchase decision was influenced by a small group of persons, but mainly by the purchaser's personal experience.

**Savary, 2011**, also confirmed that the purchaser's own stand, experience and the information he/she gathered about the product and the selling organization are the basic

factors influencing his/her decision to achieve the purchasing transaction via the social media.

## Second: Results of Testing the Study Hypotheses

1. The first hypothesis of this study is the existence of a relationship between the demographic characteristics of the research sample (age groups, gender, level of education and income level) and online shopping through the internet and the social media.

### 1.1 Testing results concerning age groups

Table (5) describes the relationship between the age groups of the research sample and their online shopping activity.

**Table 5:** Online shopping according to the age groups of the research sample

Age Groups	YES	NO
< 25	57	44
%	26.5	28.4
25-	62	18
%	28.8	11.6
30-	63	42
%	29.3	27.1
40-	27	18
%	12.6	11.6
50+	6	33
%	2.8	21.3
Chi-sq = 41.939, d.f= 4 Sig= 0.000 (sig at 0.01)		

The results shown in Table (5) confirm the existence of a relationship between online shopping and the age groups of the research sample. Chi-square was found equal to 41.939, at a significance level 0.01, and degrees of freedom= 4.

The number of young individuals (less than thirty years old) using online shopping represented 55.5% of the sample size; while 40% of the sample size in the same age groups did not use online shopping; on the other hand, the number of older individuals (40 years and above) using online shopping represented only 15.4% of the sample size, versus 33% for those who did not use online shopping in the higher age groups (40 years and above).

The above-mentioned results are in agreement with the sixth annual report issued by the Technological Innovation Center, affiliated to the Public Authority for IT Development, which states that Egypt ranks first among

Arab countries in using the social media [2], with 52 % of the users being less than 25 years old. This ratio declines to reach only 18% in the highest age group.



### 1.2 Online shopping and gender classification

**Table 6:** The relationship between online shopping and gender groups of the research sample

Gender Groups	Online shopping	
	YES	NO
Male	112	82
%	52.1	52.9
Female	103	73
%	47.9	47.1
Chi-sq = 0.024, d.f= 1 Sig= 0.878 (N.S)		

Chi-square = 0.024, degree of freedom=1; Significance = 0.878 (Not significant) The above-mentioned results

indicate that there is no statistically significant relationship between gender classification and online shopping.

### 1.3 Online shopping and the level of education

**Table 7:** The relationship between online shopping and the education level of the sample individuals

Online shopping/ Level of education	YES	NO
University	141= 65.6%	107 = 69.0%
Technical diploma	28 = 13%	25=16.1%
Master degree	35=16.3%	14= 9.0%
Ph.D. degree	11= 5.1%	9 =5.8%
Total	215= 100%	155 =100%

Chi-square = 4.418, degrees of freedom = 3, significance= 0.22 (Not significant)

The results shown in Table (7) indicate that there is no significant relationship between the level of education and online shopping. The value of Chi-square does not justify

the existence of that relationship at a significance level of at least 0.05.

### 1.4 Online shopping and income levels

**Table 8:** The relationship between online shopping and income levels

Online shopping Income	YES	NO
<2000	139	87
%	64.7	56.1
3000-	26	38
%	12.1	24.5
4000-	27	11
%	12.6	7.1
6000-	4	14
%	1.9	9.0
8000-	11	1
%	5.1	0.6
10000+	8	4
%	3.7	2.6
K.S. = 0.809, Sig= 0.530 (N.S)		

The results displayed in Table (8) show that there is no significant relationship between the level of income and online shopping. The **Kolmogorov Smirnov test** (K.S.) does not reach the value that reveals the existence of that relationship at a significance level at least equal to 0.05.

To sum up, according to the above-mentioned analysis of the sample responses, only the age group seems to have an influence on the online shopping activity; while the three other variables (gender, level of education, income level) cannot be seen as significant determinants of the decision to resort to online shopping.

## 2. Testing the validity of the second hypothesis

The second hypothesis of this study was that the frequency of visits to the company's website does not influence the volume of the company's sales.

**To test the validity of this hypothesis, the researcher used the simple regression analysis.**

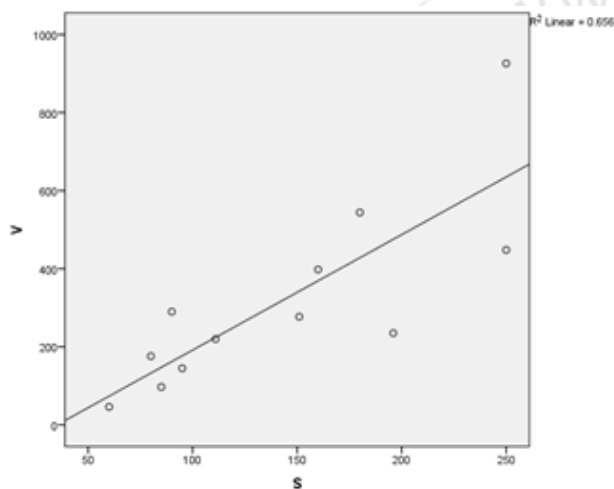
The analysis aimed at investigating whether or not a direct relationship exists between the consumer's collection of data and information about the products marketed by the companies of long experience within the Egyptian market and the sales of those companies. The researcher found

only two companies having a pioneer role in the Egyptian market but could not obtain satisfactory responses from their officials. However, the researcher was able to gather some scattered data and information for the years 2016 to 2018, from a single pioneer company in the field of electric devices and home appliances [3]. These data and information were completed in such a way as to enable the researcher to study the relationship between the data and information collected by the consumer as reflected in the number of his/her visits to the company's site (the independent variable) and the change in the company's sales (the dependent variable).

**The results of the Simple Regression Analysis are presented below.**

## 2.1 Scatter diagram

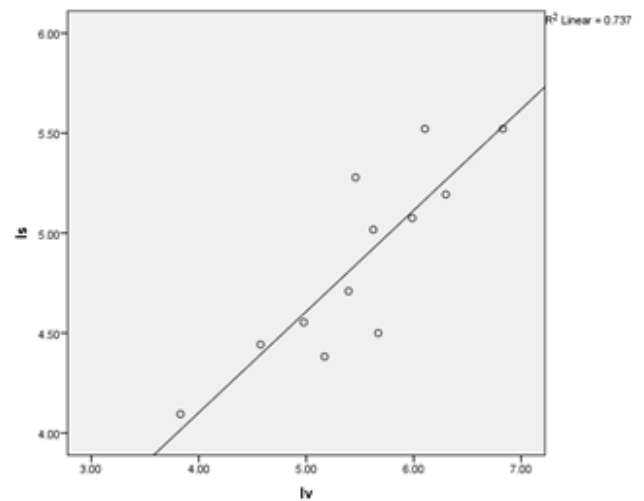
The number of visits is represented on the horizontal line (X-axis) and the change in the company's sales is taken on the vertical line (Y-axis).



**Figure 2:** The scatter diagram depicting the relationship between the number of visits of the consumer to the company's site and the change in the company's sales

From this diagram, it can be seen that the linear form can provide the best description of the relationship under study. Moreover, the coefficient of determination ( $R^2 = 65.64\%$ ) indicates that about 66% of the change in the company's sales can be explained by the number of the consumers' visits to the company's site.

However, it can be noticed that some values remain away from the fitted line. Therefore the researcher took the logarithms of the two variables and obtained the following scatter diagram:



**Figure 3:** The scatter diagram of the relationship between the natural logarithms of the two variables (Number of visits – Change in the company's sales)

In Figure (3), we notice that all the points are closer to the linear function as compared to Figure (2). In addition, the coefficient of determination rose to 74% thus confirming that the relationship between the natural logarithms of the two variables is stronger than in the first case.

### a) Statistics of the linear model

**Table 9:** Results of the Simple Regression Analysis when applied to the natural logarithms of the variables (Number of visits – Change in the company's sales)

Results	
Estimated parameters	$\ln(S) = 2.079 + 0.506 \ln(V)$
T-test	(3.918) ** (5.288) **
Model testing	F-ratio = 27.963, d.f = (1, 10) Sig. = 0.000, $R^2 = 73.740\%$ , SE = 0.255

The results shown in Table (9) confirm the validity of the estimated model.

Hence the estimated F-ratio was found equal to 27.963 at a level of significance of 0.01 and degrees of freedom (1, 10). On the other hand, the analysis results indicate that the increase in the sales volume is strongly influenced by the number of customers' visits to the company's website, at a ratio reaching approximately 74%.

[See the reference to: Court et al., 2009; Mayzlin, 2006; and Fang, 2015; in "Previous studies" herein].

The above-mentioned results are in agreement with the findings of the study of **Afrina Yasmin, 2015** in stressing the relevance of digital marketing for both marketers and shoppers. In that study, the researcher investigated about 150 companies and questioned fifty executive managers engaged in digital marketing; then concluded that the application of digital marketing and increasing the number of customers' visits is strongly and positively related to increasing the company's sales.

According to the above-mentioned analysis, the validity of the second hypothesis of the present study is absolutely rejected.

### 3. The Study Findings

- This study concluded that the age groups less than thirty years old were the most active users of the internet during their online shopping through the social media, as evidenced by the study sample. No significant relationship was found between the other factors of gender, level of education (Technical diploma- University degree- Master degree- Ph.D. degree) and income level, on one hand, and online shopping on the other hand.
- There are seven main factors (7' S) influencing the digital purchase decision, namely: Speed of communication- Service- Impressions gathered from Social media communications – The Sort of goods and services- Variety and recentness of the goods and services offers- the Information available on the company's website and on other sites).
- Factors from the surrounding environment affecting the digital purchase decision are most importantly, the client's own experience in dealing with the product; then what he/she might have heard about the product from a family member, or a friend or a colleague who might have had a good or bad experience with online shopping.
- The main disadvantages impeding online shopping are firstly, that the purchaser cannot actually see and touch the product with his/ her own hands; and secondly, that the customer might consider the electronic payment method risky and prone to errors.
- Digital marketing can be more successful if the customers' needs are set as an utmost priority. Marketing companies should create innovated experiments for the customers, and devise specific strategies for improving the performance of digital marketing.
- Clients' visits to examine the product may increase the company's sales by as much as 74% approximately.

### 4. Recommendations

1. The company must use the proper approaches and methods to overcome customers' fears or give direct guarantees to the client for recovering his/her rights in case an error occurs during the electronic purchase process;
2. The content of the advertising message sent to the client via the social media should be clear;
3. The company should keep up with the state-of-the-art tools of the social media and select the best sites enjoying clients' confidence to display their products and services;
4. Marketers must regularly re-evaluate their products and services through constantly following-up customers' visits, comments and suggestions and their expressed satisfaction concerning the product/service via the social media;

5. The data and information posted by the company must be correct and accurate; any incorrect or misleading information must be immediately corrected;
6. Companies must create innovative experiments for their customers and set up specific strategies for improving the performance of digital marketing through the various electronic communication channels, at the local and global levels; while taking into consideration different cultures and traditions and giving utmost priority to the customers' needs and requirements;
7. Companies must establish an integral methodology and allocate the necessary resources for preparing thorough studies concerning the age group under 35 years old, in order to depict the best times, sites and platforms for advertizing the company's products/services, according to the observed frequency of their visits and their expressed preferences and interests;
8. The advertizing message must not carry any misinformation; it must be sufficiently clear and understandable for the customer and it must be presented in the adequate language for the targeted customers' category;
9. The company must provide full credibility concerning the posted prices and the availability of the products at the adequate time and place for the client, and according to the announced features and specifications;
10. The company must use the state-of-the-art technologies – such as “3D Model” and “Augmented Reality”- for displaying their products via the social media. These new technologies give the shopper the feeling of actually seeing and touching the product so that online shopping becomes a more pleasant and less risky process;
11. The sender must provide recent information about the new offers and the new products added to the site; and he must announce their launching in good timing before their circulation; and
12. The company must prepare a complete working team to remove any technical problems or psychological obstacles which the customer may encounter while browsing the social media sites; the company must furthermore put up simple and clear visual definitional messages in order to encourage the age groups (55 years and above) and those who have an intermediate level education to deal in an easy way with the company's sites via the social media.

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