# THE USAGE OF E-COMMERCE IN THE AREA OF EVROS, GREECE

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*Abstract: The use of technological applications is directly influenced by the perceived usefulness and perceived ease of use of technology according to the Technology Acceptance Model. In e-commerce applications, the ease or not someone understands how the electronic purchase process works can act positively or as a deterrent, to buy or not. Also, someone is positively influenced by the perceived relative advantage when s/he considers the electronic purchase, and negatively by the complexity perceived on the online purchase process. Certainly, the price and quality are still key factors in making purchases, as in traditional commerce. Evros is an area located in an important geographical area in northeast Greece, in the borders with Bulgaria and Turkey. It is a path for the trade among the three countries. In such a new trade area, there are a lot of issues to be addressed with regard to the consumer's purchasing behaviour. For residents of border areas, a lot of factors appear to be involved that may affect the user to carry out or not, an e-commerce purchase. The study aims to empirically investigate how factors such as gender, age, educational level, culture, nationality, Internet access, familiarity with technology, price, ease of purchase, risk, trust and security of the website, design of the site, services it offers, past experience and the name and reputation of the e-shop, affect the consumers, residents of this outermost geographical area. The survey was conducted by interviewing 200 people, residents of Evros. The findings are interesting and show that the factors affecting the purchase are gender, level of education and income. Although, the study suffers from a limitation in that it uses a convenience sampling technique without a fully matched profile of the respondents, it could be a basis of a reliable comparison for future research. The major contribution of this study is that it is the first attempt to investigate the impact of the aforementioned factors to the e-commerce in this part of Europe.*

**Key words***: TAM, e-commerce, factors, Evros.*

**JEL Classification Codes: L81, M1.**

## 1. INTRODUCTION

The Internet is a relatively new technology, that has been ever changing society since its creation. The way people live their lives has changed and made a big adjustment to the Internet's features and capabilities. People use the Internet for finding information, conducting research, communication, and most importantly for the study of consumption.

During the last few decades the world has observed an outstanding growth of Internet usage. According to Internet World Stats, on 30th November 2015 there were more than 3,3 billion Internet users (Internet World Stats, 2015) and, since the world market is not fully exploited, this number is expected to increase in the next years. So, a huge number of firms have developed the idea to diversify their sales not only in the "physical" store form, but even more

frequently a consumer finds on-line platforms where s/he can purchase goods and services, without moving to the store, during a process that usually lasts only a few minutes.

The explosive increase of Internet users has also led to dramatic shifts in the way of conducting business. From our daily lives to commercial transactions between businesses, the Internet has profoundly impacted and changed the way we do business. E-Commerce presents enormous opportunities for both consumers and businesses in the world. While e-Commerce has proliferated with the growth of the Internet, there have been insufficient empirical research efforts concerning its status and consumer behavior over the Internet. There may be some valid factors to explain the consumer' s adoption of e-Commerce.

Online consumer behaviour is a phenomenon that may vary from time to time with different demographic groups of people. The availability of access to the Internet along with its conveniences in purchasing products and services is growing more and more every day (Hoffman et al., 2000). However, only certain groups of people have been noticed for taking full advantage of the Internet's capabilities for e-commerce. With all the new advancements and technology we have in the Internet, it is hard to think that everyone and all groups would not be eager to join in the convenience of purchasing items from home. So, the question of why things are the way they are comes into play. Although Internet access has grown significantly and there are the digital foundations, e-commerce is yet to reach measurable levels in Greece (Xanthidis and Nicholas, 2004).

Since the current situation and needs of consumer have changed and the modern Internet user is experienced, fastidious to offered services and goods, considerate, and capable to be self-addressed, it is necessary to know well the Internet user, to maintain feedback with the user, which ensures that in the future, company which uses e-commerce will attract customer loyalty and increase its purchases on the Internet (Paliulis et al., 2007). E-businesses need to be interested in every moment of user's behaviour: the manner of browsing website, the way of choosing the goods, the time and reasons for closing the page in the process of purchasing, the way to load the website of the eshop etc. Online consumers must have the opportunity to submit their suggestions and complaints. There should be developed an interaction between the seller and buyer, which has to become operational as soon as the e-shop consumer-browser makes any of conscious action (comments, complains, asks a query, etc.).

Companies are paying more and more attention to the satisfaction and retention of their clients as a result of the intensive competition, but also to maximize their profit and all this on the basis of new information technologies and communications. Okholm et al. (2013) have identified three sources of user dissatisfaction: (1) Information gaps such as lack of access to adequate information (2) Service gaps such as lack of choice and too high prices (3) Performance gaps such as inferior quality of delivery performance.

Consumers' perceived value is the core construct and foundation in all relational exchange activities (Wu et al., 2014), and is a critical factor influencing repeat buying action in online shopping contexts (Chiu et al., 2014). Therefore, it is crucial to identify the factors affecting consumers' perception of value. Wu et al. (2014) have shown that benefits and sacrifice coalesce perceived value.

Some important factors influencing e-consumer behaviour are the following:

*Culture:* the culture in which an individual exists has an effect on all aspects of life. There is a diversion in different culturally built regions on how they process the overall trust, including how an individual views/uses information technology (Gefen, 2003; Van Slyke, 2010; Kimery and Amirkhalkhali, 2008).

*Trust and e-commerce (vendor and transactions):* Trust becomes a potentially important factor for e-commerce, because trust between parties is most often critical for a successful outcome and to establish a long term business relationship (Van Slyke et al., 2010; Corbitt et al., 2003; Gefen, 2003).

*Trust in vendors:* The trustworthiness of online vendors is an actual factor, because consumers consider online shopping as more risky than shopping through traditional face-to-face channels (Van Slyke, 2010; Corbitt et al., 2003; Constantinides, 2004).

*Trust on transactions:* According to EUROSTAT (2016A) about one third of the population in the EU that does not use e-commerce has concerns about payment security. Payment method used mostly and payment method that consumers would prefer: an important question is raised; if the most used payment method for online purchases (credit cart) is the most preferred (Nielsen Company, 2008).

*Usefulness and ease of use:* Studies show usefulness and ease of use were positively related to the attitude towards using the e-commerce websites and ultimately the behavioural intention to buy (Smith, 2008; Ramayah and Ignatius, 2005; Singh et al., 2006).

*Reasons to buy on the Internet:* Studies indicate that convenience is the main reason for the motivation to engage in Internet purchasing and could lead to an enjoyable shopping experience (Nielsen Company, 2008).

*Language:* Language proficiency affects the access to the information and the activity on the Internet (Kralish, 2004).

In general, the factors that affect the use of e-commerce are demographic characteristics such as gender, age, educational level, income, culture and nationality. Other important factors that affect the use of e-commerce are Internet access, familiarity with technology, price, ease of purchase, risk, trust and security of the website, experience, name and reputation of the e-shop, design of the website, services it offers, may affect the consumers. Specifically, the impact of factors such as perceived ease of use, perceived usefulness, perceived risk with products/services, and perceived risk in the context of online transaction affect consumer's purchasing behavior. All these factors will be discussed in detail in the section of literature review.

Cross border e-commerce sales are not fully exploited by enterprises selling electronically EUROSTAT (2016B). In 2014 in the EU-28, while almost all enterprises making electronic sales (19%) reported that they sold to the markets in their own countries (18%), only 8% of enterprises made e-sales to other EU countries. While 32% of enterprises in Ireland made e-sales — ranking it first among the EU countries — as many as 17% of enterprises reported selling to customers in other EU countries. For many other countries, however, the potential was much higher. For example, enterprises in Sweden and Denmark rank high in e-sales (28% and 27% respectively) but only 10% (each) sold to other EU countries. Outside the EU, Norway has the highest potential for enterprises to expand into foreign markets, with 29% of enterprises making e-sales but only 5% to customers in EU countries.

This paper investigates the users' behaviour toward e-commerce in the region of Evros. Evros is an area located in an important geographical area in northeast Greece, in the borders with Bulgaria and Turkey. It is a path for the trade among the three countries. Often construed as 'international trade' at the local level, such transactions reflect a complex interaction between the 'international', the 'national' and the 'local'. In such a new trade area, there are a lot of issues to be addressed with regard to the consumer's purchasing behaviour. For residents of border areas, a lot of factors appear to be involved that may affect the user to carry out or not, an e-commerce purchase. The paper also examines and explores whether and how Internet users-residents of this outermost geographical area use and trust electronic commerce. We demonstrate not only what

contextual constructs make a consumer adopt or reject e-Commerce as a purchasing vehicle of products/services, but also how these contextual differences influence the consumer's adoption behaviour. Therefore, in this study we try to facilitate a more thorough understanding of the roles of the aforementioned factors.

The remainder of this paper is organized into the following six sections. The second section provides a brief review of the literature on the factors that affect users' behaviour toward e-commerce. The third section provides a brief review of the background theory on technology acceptance model and theories of the perceived risk. Next, we present the methodology of the survey. Then, we present results by discussing the analysis and the implications of our study. Finally, we make conclusions of our study, followed by presenting limitations and future research directions.

## 2. LITERATURE REVIEW

In this section we present some studies related to the factors that affect the e-commerce use. Kolsaker & Payne (2002) studied any differences in the two genders in terms of trust in e-commerce. The results showed borderline significant differences on gender and e-commerce. According to Rodgers and Harris (2003), significant differences are identified between the genders as to their attitude to electronic commerce. The investigation showed that emotions, confidence and convenience are three important determinants for purchasing attitudes and behavior of women and men. Helga (2004) studied the motives for the choice of conventional and electronic markets and differences between the genders were identified. It was disclosed that women face conventional markets as a psychological activity and experience. Conversely, men see conventional markets as a typical task they have to do to get the goods they need to buy. Black (2005) studied how consumers buy the eBay website. The results of the Black study showed that women buy more than men on eBay, while men are willing to buy at a higher price. Zeng et al. (2006) studied the gender diversity in taking purchasing decision in e-commerce. The results showed that men are affected more than the price and the name of the product, while women when conducting online purchases are oriented to the quality of the product and whether the product is in fashion or not.

Kelaart-Courtney (2010) found that younger adults (20s and 30s) exhibited significantly more ad blindness than older adults in using e-commerce. He also found that men exhibited significantly more ad blindness than women. Another study (Zhou et al., 2007) attempts to explore how two primary consumer characteristics (gender and age), interact with an important situational variable, i.e. shopping motive, to affect the linear relations between benefits/sacrifice and perceived value from the consumer's perspective.

Preferences for characteristics in e-commerce sites are differentiated by age, education and income. The sensory impact of sites became less important as respondents increased in age, income or education. As the income of respondents increased, the importance of the reputation of the vendor rose (Lightner, 2003). A survey by Corbitt et al. (2003) in New Zealand showed that factors such as income and education affect the decision on the electronic market. For example, high-income people seem to be more likely to make online purchases. The same applies to people with a high educational level. Jansen (2010) presented that Americans with higher-income households are more likely to use the Internet on any given day, own multiple Internet-ready devices, do things involving money online, and get news online. Sharma and Gupta (2003) propose a framework for investigating the socio-economic influences of e-commerce adoption in India.

Internet consumers and their differences, with regards to gender, race, education and income are analyzed in (Gosling et al., 2004). It is proved that these important factors have something to do with who purchases products and services from the Internet. The implications and results of these findings provide a better understanding of online consumer behavior and assist designers and developers in their quest to create more advanced systems and services to better accommodate the different types of people who are potential Internet consumers.

Hoffman and Novak (1998) explored the differences of Internet usage and access between African Americans and Whites. They concluded that access translates into usage, and that whites are more likely than African Americans to use the Web because they are more likely to have access. However, they found no differences in usage when both parties owned a computer at home. However, according to Alden et al. (1999), the majority of consumers shopping online worldwide have some common characteristics, such as age, gender, employment, purchasing power which is approximately similar internationally from any country if they come. Despite the internationalization of e-commerce, national cultures still play an important role in affecting online customers' behaviours. Nevertheless, few researchers have studied the impact of national cultures on e-commerce. To fill this gap, a paper explores the role that culture plays with respect to consumers' acceptance of e-commerce in Italy (Capece et al., 2013).

A paper by Mazaheri et al. (2014) examines how emotions and website atmospheric cues influence service tangibility and consumer attitudes. The proposed model is compared across three cultures: North America (Canada and U.S.), China, and the Middle East. The findings support the overall model and demonstrate several non-invariant paths across the groups. Particularly, the results suggest how the influences of two emotional dimensions (pleasure and dominance) on consumer perceptions of site atmospherics vary across cultures. During these experiences, if customers feel pleasure and dominance, they will have positive perceptions about the product and the firm. According to Donthu and Garcia (1999) found significant differences in the desire to buy branded products and price sensitivity among consumers of different countries who buy online. Also, a study of Bellman et al. (1999), showed that there were large differences between European, Australian and Canadian consumers as to the convenience level where sharing personal information online.

Lynch and Beck (2001) conducted a survey which involved 515 people from 20 different countries. In this study differences between people in terms of their beliefs, their attitudes, their beliefs and their buying habits on the Internet, were found. Efendioglou and Yip (2004) studied the influence of Chinese culture in electronic commerce. All have had some familiarity with the Internet, 37% speak English and often visited websites using the English language. Joo et al. (2007) studied the adoption of the culture of electronic commerce between Korean and American consumers. The survey actually studied how cultural differences among consumers play an important role in the decision of purchasing decisions. Sung (2006) studied the factors influencing the use of electronic commerce in Korea, Japan and America. The results showed that consumers in all three countries consider most important factors in the ease of the electronic market and the variety of products/services of the shop.

Appiah (2004) showed that the "black" Internet users spend more time on sites that targeted addressed to "black". Moreover, the Ono and Zavodny (2005) studied any racial and ethnic differences in Internet users in America. Wasserman and Richmond-Abbott (2005), revealed that Americans - Asians (Asian-Americans) use the Internet more often than any ethnic group in America. Alhammad et al., 2013 considers the theory of cognitive dissonance and its extended model, as a means to study the current distribution of consumer's pre-purchase cognitive dissonance and allows to investigate the effects of culture characteristics.

According to Marquie et al (2002), people who are older, do not use the Internet because they find it quite difficult to use and do not feel at all familiar with computers. Another investigation of Dillon and Reif (2004), showed that most of the experienced users seemed to have a more positive attitude towards the product through the Internet.

Alba et al (1997) studied the effect of the Internet price. The results showed that the differentiation between electronic and "natural" trade, lies in the ability of buyers via the Internet to easily get information about the product and its price reduced on cost and research time.

Jayawardhena et al. (2007), studied the "electronic" consumers and segmenting consumers into the following groups: (i.) consumers who are sensitive to the price of the product - price sensitive. (ii.) consumers who like easy market - convenience shoppers, (iii.) The loyal customers - loyal shoppers. (iv.) to discerning consumers (consumers with a balanced orientation) - discerning shoppers and finally (v.) The active - motor consumers - active shoppers -, (consumers looking for the best possible market and constantly moved).

Clemons et al. (2002) studied the sensitivity shown by consumers when purchasing electronic airline tickets via the Internet. The results showed that consumers buying air tickets via Internet, are highly sensitive to the price of tickets.

The research of Chiang and Dholakia (2003) investigates the consumer's intention to make online purchases during acquisition of relevant information for the electronics market. This study examines the effect of three key variables: (a) the ease of finding the product on the market channel, (b) the type of product, (c) the price of the product. Evanschitzky et al. (2004) studied the satisfaction of online shopping customer in Germany. Not important factor seemed to be the convenience to carry out the electronic market, followed by the factor of how the site design.

Miles et al (2000) believe that the combination of security, reliability and price are key to making a purchase on the Internet. Forsythe and Shi (2003) found four types of risk that may prevent Internet users to online shopping: the financial risk, time/convenience, the risk in terms of product performance and concerns about the privacy of their personal data on the Internet. Other reasons that make it difficult for users to make an online purchase is according to Kau (2003), the risk of fraud on credit cards, the inability to touch and try the product before buying and the problem of returning the goods which did not meet consumer needs.

Gefen (2000) investigated the role of familiarity and buyers more confidence in electronic commerce. The author separated the concepts of "familiarity" and "trust" and as an "acquaintance" means the understanding of a situation, person or procedure which may be due to experience in education or training or even interactions. And the "trust" deals with beliefs about future behaviors or situations. Familiarity and trust are considered uncertainty reduction methods since leaving people to have relatively reliable expectations about the future actions of other people.

Walsczuch et al (2001) studied the trust of consumers in electronic stores and psychological factors that push or not consumers have trust in an online store. The results showed that factors such as the reputation of the electronic retailer, the perceived behavioral control that the user has the online store and the perceived familiarity with e-commerce are very important factors for the consumer to have confidence in e-retailer.

In another survey by Belanger et al (2002) about the role of security in e-commerce, the results showed that the presence of security features on the website is the most important factor to make the consumer purchases online. Corbitt et al. (2003) in a aforementioned study, showed that trust is a critical factor for e-commerce and is influenced by three factors: the reputation that exists for e-commerce, consumers and website visits for e-commerce. The reliability of

electronic commerce influence the consumer's decision to adopt or not the Internet for purchasing products.

Dillon and Reif (2004), in another aforementioned study, proved that experience in online markets directly affects consumer attitudes on electronic commerce.

Rungie et al. (2005) discovered that the reputation of the electronic retailer plays a big role in the consumer's decision to make an online purchase. Moreover, according to Van der Poel and Leunis (1999), the familiar brand disperses the risk involved in an online marketplace. Finally, according to Lee and Tan (2003), consumers are more likely to buy goods that are brands from online retailers with good reputation even if they sell products less known.

The risk and trust of buyers and sellers by developing two attitudinal models — attitude towards purchasing (for buyers) and attitude towards selling (for sellers) (Leonard, 2012). In the same study, Leonard presents that the model changes for seller's attitude towards selling, trust and attitude are combined into one variable and risk is not found to be an influence.

A study by Crespo et al. (2013) investigates the adoption of electronic commerce by consumers, examining the influence of two variables that have rarely been studied in the field of online purchasing: users' perceived compatibility with e-commerce and their prior experience of online purchasing. The research sample is divided between those Internet users that have never purchased on the Internet and those that have already purchased online in the past. The results obtained support that perceived compatibility has a positive influence on attitudes towards e-commerce and on perceived usefulness and on ease of use of online purchasing for Internet users with and without prior experience with online transactions.

Compared to the results of recent studies (that examined direct antecedents of trust, such as fear of seller opportunism and third party recognition, in consumer-to-consumer markets, the results of a study by Jones and Leonard (2015) suggest that trust propensity is of minor importance in shaping trust perceptions. An explanation for the rather weak effect of perceived risk might be the reputation mechanisms that are utilized by the different online auction marketplaces. The result for one of the omitted variables, namely reputation, lends support to this attitude.

## 3. BACKGROUND THEORY

The theoretical basis for this investigation steams from the study by (Venkatesh, et. al. 2003), which enables the studying of acceptance and use vis-à-vis none acceptance and none use of technology. UTAUT model originates from eight acceptance and use of technology models (Venkatesh et al. 2003). The model theorizes that intention to use a technology is influenced by people's perceptions of performance expectance, effort expectance, social factors and facilitating conditions. The model constructs are moderated by gender, age, experience and voluntariness (Column 1, 2 & 4 of Table 1). To provide alternative measures of intention to use in other contexts, the model allows expansion or deductions.

Over the last years Information and Communication Technology (ICT) has been used in numerous of developments in the e-commerce era. Consequently the use of e-commerce resources and technologies has been rapidly increased. To this end, many research efforts have been made on the investigation of e-commerce technology acceptance in order to improve the educational outcome. Many related theories and models were proposed the last few years. Some of the most popular are:
- Theory of Reasoned Action (TRA)
- Theory of Planned Behavior (TPB)

- Technology Acceptance Model (TAM)
- Technology Acceptance Model 2 (TAM2)
- The Unified Theory of Acceptance and Use of Technology (UTAUT)

The theory of reasoned Action (TRA) is a model that finds its origins in the field of social psychology. It was formulated by Fishbein and Ajzen (1975). According to this model external stimuli influence attitudes by modifying the structure of the person's beliefs. The behavioral intention is also determined by the subjective norms that are themselves determined by the normative beliefs of an individual and by his/her motivation to comply to the norms.
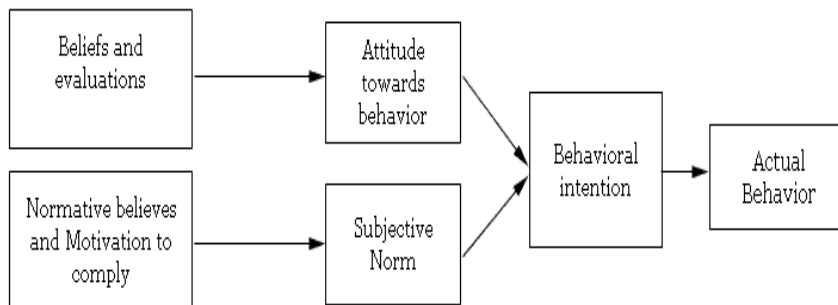


**Figure 1: TRA Diagram** (Davis, Bagozzi & Warshaw, 1989)

However TRA components may not be sufficient to explain behavior in which volitional control is reduced. This resulted in the addition of perceived behavioral control and the theory was renamed to Theory of Planed Behavior (TPB) (Ajzen, 1985; Ajzen,1991) as illustrated in Fig.2.
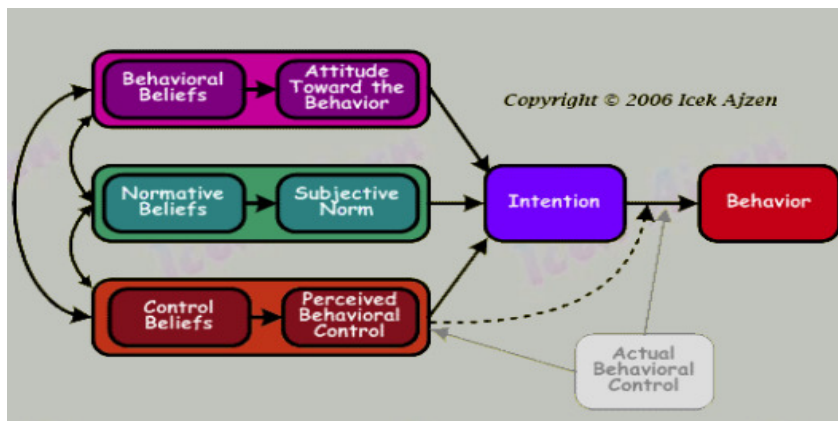


**Figure 2: TPB Diagram by Icek Ajzen** (http://people.umass.edu/aizen/tpb.diag.html#null-link)

The theory of planned behavior helps to understand how we can change the behavior of people and predicts deliberate behavior; because behavior can be deliberative and planned. According to TPB Human actions are guided by three kinds of considerations (a) Behavioral Beliefs about the likely consequences of the behavior, (b) Normative Beliefs about the normative expectations of others and (c) Control Beliefs about the presence of factors that may facilitate or impede performance of the behavior.

Davis (1989) employed TRA to explore the relationship among perception, factors of affections and technology usage, and he used the derived findings to construct TAM, which proposes that users' acceptance of a new system is affected by their attitude toward using the system. One of the main models proposed by Davis (1989) is the Technology Acceptance Model (TAM). TAM was adapted from the (TRA) and offers a powerful explanation for user acceptance and usage behavior of information technology. TAM investigates the Perceived Ease of Use (PEU) and the Perceived Usefulness (PU) of a technology system. PEU directly influences PU. Perceived usefulness is defined as "the degree to which an individual believes that using a particular system would enhance his or her productivity" while perceived ease of use is defined as " the degree an individual believes that using a particular system would be free of effort" (Davis, 1989).

These two perceptions affect users' positive or negative attitudes towards using the technology system. PU also directly influences behavioral intention to use. Behavioral intention to use technology then determines the actual use of a technology or a system (Figure 3).
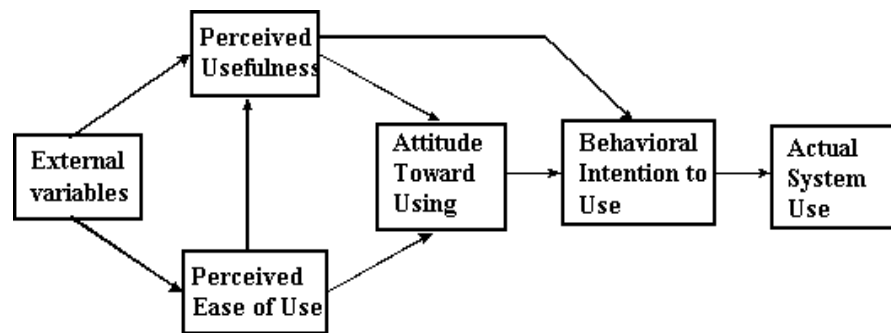


**Figure 3: Technology Acceptance Model diagram**

Therefore it is possible to investigate and predict the actual use of a system or technology using the perceived ease of use and usefulness by the users.

Venkatesh and Davis (2000) develop an extended version of TAM called TAM2 by adding social influences (subjective norm, voluntariness, and image) and cognitive instrumental processes (job relevance, output quality, result demonstrability, and perceived ease of use) to predict the adoption of information technology. According to this model perceived usefulness is determined by four cognitive instrumental determinants: (a) job relevance in which the user estimates the effects of a system on his/her job, (b) output quality which is the degree to which the user thinks that the examined system can perform required tasks, (c) result demonstrability defined by Moore and Benbasat (1991) as the "tangibility of the results of using the innovation," will directly influence perceived usefulness, and (d)perceived ease of use which is retained from TAM although this time as a direct determinant of perceived usefulness.

In terms of explanatory power, TAM explains only 40%–50% of technology acceptance (Aversano, 2005), whereas TAM2, as pointed out by Davis, reaches 60% (Venkatesh & Davis, 2000).
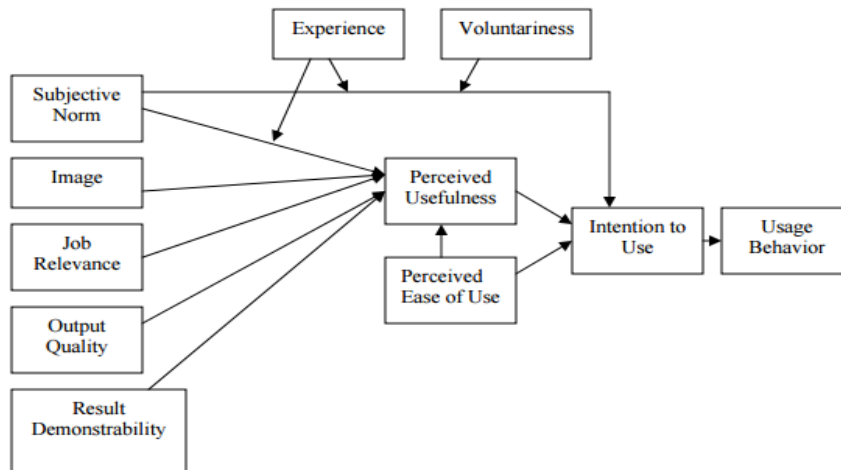
**Figure 4: The Extended Technology Acceptance Model (TAM2)** (Venkatesh and Davis, 2000)

The unified theory of acceptance and use of technology (UTAUT) is a technology acceptance model formulated by Venkatesh and others (2003) in "User acceptance of information technology: Toward a unified view". The UTAUT aims to explain user intentions to use an information system and subsequent usage behavior. The theory consists of four main concepts: (a)Performance Expectancy (PE) which is the degree to which an individual believes that using the system will help him or her to attain gains in job performance, (b)Effort Expectancy (EE) which is the degree of ease associated with the use of the system, (c)Social Influence (SI) which is the degree to which an individual perceives how important others believe he or she should use the new system, and (d)Facilitating Conditions (FC), the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system. The first three are direct determinants of usage intention and behavior, while the fourth is a direct determinant of use behavior. Gender, age, experience, and voluntariness of use are posited to moderate the impact of the four key constructs on usage intention and behavior.
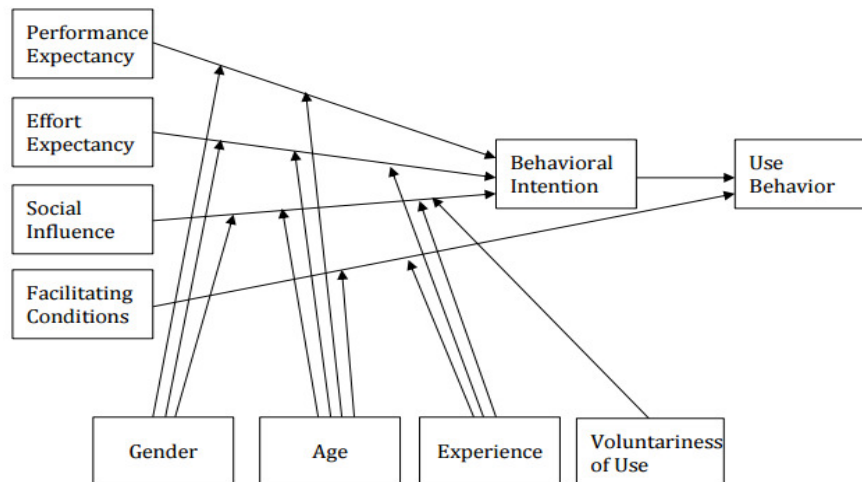


**Figure 5: Unified theory of acceptance and use of technology (UTAUT)** (Venkatesh et al., 2003)

Venkatesh et al. (2003) tested UTAUT and found that this model explains 70% of the variance in user behavioral intentions to use information technology and about 50% in actual use.

## 4. METHODOLOGY

In order to ascertain the views of users and their preferences on the Internet about e-commerce and their preferences on the Internet in the region of Evros, a self administrative questionnaire was chosen to collect the data for research with their attitudes and beliefs.

In the questionnaire we chose most of the questions to be closed for quick completing and data processing. Moreover, the questions were multiple choice, where it is possible to choose among several predefined answers. Most of them were questions of scale or preference, where the degree of preference of the respondent stated. They are the most important questions in a questionnaire, because they allow classification of the views or attitudes of respondents.

Furthermore, we attended the questionnaire marked by clearness and clarity. The questions were short and clear. The negative questions were avoided because they are often misunderstood, since the negative keyword is ignored and the respondent gives an answer that is contrary to his/her real opinion. Also we did not include questions with double meaning, because they require the respondent to answer two separate ideas with a single answer.

Thus, the final questionnaire was formulated and drafted. It contains a total of 24 closed questions and three open-ended questions. Regarding the content of the questions in the questionnaire, they can be grouped into the following four parts: The first part includes questions related to the demographic characteristics of consumers (questions 1-8). The second and third parts include questions regarding the frequency and reasons for using the Internet (questions 9-12) and electronic markets (questions 13-25). Finally, the fourth part includes questions on the opinion of users about Internet security (questions 26-27).

The chosen scales in this research are the Likert and the Gutman. In Likert scale, the attitudes have five response categories: "Totally agree"=5, "Agree"=4, "Neither agree nor disagree"=3, "Disagree"=2, "Totally disagree"=1. In the Gutman scale, the attitudes have two response categories "Yes" and "No". The Likert scale was mainly used for questions of the third section of the questionnaire; it is commonly used in the literature for behavioral prediction models.

The stages for the formation and the final composition of the questionnaire were: (1) the questionnaire was drawn up after a literature review, (2) the questionnaire was finalized and received in its final form after a trial application (reliability test) in a small sample.

The questionnaire completion process required approximately 10 minutes and the sample was 200 people. The questionnaire was given to two hundred fifteen (215) people and was completed by two hundred (200), so the response rate was 93%. The research data resulted from data collection by way of a questionnaire to be filled by a selected sample of people in the Evros region. The data collection was the period from December 2015 to January 2016, with the technique of anonymous questionnaire.

The data obtained from the questionnaire responses were appropriately processed using SPSS and Statgraphics software. The processing was done by methods of descriptive and inferential statistics. At the descriptive level, the organization presenting the statistics include depending on the type of variables, tables of absolute and relative frequencies and averages. The validity of the hypotheses was tested with the test of correlation between dependent and independent variables.

## 5. RESULTS AND DISCUSSION

47% of the sample visits 3-5 stores before making any electronic purchase. 28% of the sample visits more than 5 stores and 25% of the sample visits 1-2 stores before making any purchase. 34% of the sample surf to online stores pages that are only in native language, while 66% of the sample does not surf on online stores pages that are only in their native language. 40% of the sample prefer to pay for online purchases with cash on delivery, the 23% prefer the prepaid card, 17% of the credit card and 10% of the e-banking payment and deposit into account respectively. The preferable way of receiving the product is 85.5% for the delivery at home, while 14.5% prefer the receiving from the store.

The reasons that address someone for purchases on the Internet according to the sample, are mainly the low prices found in online shopping in 55% percent , the time saved in 46% percent, the variety of products in 45.5% percent, the convenience of the purchase in 45% percent and the better information in 34% percent. In the questions referring the security and the self-control of the transactions in an online store, 32% of the sample feels security and 42% of the sample feels self-control in online transactions. The crosstabs of the factors emerge interesting results that we present.

### 5.1 GENDER

The sample consisted of 52.5% females and 47.5% males. From the survey results were some differences between the genders. These differences are discussed below:

i. Men seem to feel more trust and self-control to electronic commerce than the women.

ii. Men seem to make electronic purchases more frequently, which may be due to the higher trust they feel for online stores.

iii. Women prefer cosmetics/fragrances/medicines, Clothing/Footwear, Furniture/ Household Appliances, Reservations, whereas men prefer purchases of electronic equipment, tickets and games.

iv. Men spend more money in their online shopping than women.

v. Men seem to prefer the use of cash on delivery and the prepaid card while women prefer the credit card and finally.

vi. Most men spend in most purchases per month the amount of 0-50 euros (44%), 51-100 euros (23%) and 101-200 euros (21%) and other markets (12%) in amount greater than 200 euros, while women spend in most purchases per month the amounts of 0-50 euros (51.5%) and 51-100 euros (31.5%) and in amount greater than 100 euros (17%). So, we observe that men spend more money than women in electronic purchases.

### 5.2 AGE

In our research 37.5% of the sample were aged 25-34 years, 36.5% were ages 18-24, 15.5% ages 35-44 years, 4.5% were aged 45 -54 years, even 3.5% were individuals under 18 years and finally 2.5% of the sample were aged over 55 years.

i. Ages between 25 and 34 feel more security, while younger than 18 or older than 35 do not trust much e-commerce.

ii. Ages between 18-34 years make online purchases frequently once to twice per quarter. While ages from 35 years old and over once or twice per semester or once or twice per year. Ages between 18 and 34 make online purchases more frequently, especially ages between 25 and 34, because it seems that a small percentage of this group make purchases once or twice a week. This may be due to higher confidence felt by this age group than the others.

iii. We observe according to our research that the respondents aged 18-44 spend on electronic purchases 0-50 euro, while spending more than 45-55 over 100 euros. Younger than 18 years old who do not constitute a large percentage of the sample, spend most of their money wastefully. And the older than 55 years old also are not many, both inexpensive and expensive purchases.

iv. Even the preferences of online shopping in the sample are: cosmetics, perfumes and medicines for ages older than 25, especially electronic equipment mainly for ages 18-44, domestic appliances and furniture for ages between 25-44, clothes and shoes from early ages up to 54 years old, games mainly under 18 years old , make reservations more ages 18-54, while the younger ones seem to prefer to book tickets more than older, probably because they travel more.

v. From 18 and over, they are aware of their rights as e-commerce customers.

## 5.3 EDUCATIONAL LEVEL

The majority of the sample has higher education. The results showed that highly educated people make online shopping more often. Moreover, Internet users with a higher level of education seem to prefer more than users with lower level of education, to buy cosmetics, clothes and shoes, furniture / home appliances, electronic equipment, tickets, reservations (Hotels, Restaurants, Theatres, Cinemas, etc.), and selecting "something else" that can be e.g. books etc. Users with high educational level seem to choose payment by credit card, compared with lower educational levels users, who prefer to pay with a prepaid card.

## 5.4 INCOME

From our sample, 12.5% of people have income less than 500 euros, 21.5% have income between 501 and 1000 euros, 34.5% of people have income between 1001 and 1500 euros, the 16% of people have income between 1501 and 2000 euros and 15.5% of people have income above 2000 euros. The income has a positive and direct correlation with the frequency of performing electronic purchase, so people with high income often shop online. About their preferences, Internet users with a higher income seems to prefer to buy tickets on the Internet, electronic equipment, furniture, clothing, reservations (hotels, restaurants, theaters, cinemas, etc.). Additionally, people with higher incomes seem to prefer the use of prepaid card, while users with lower incomes, prefer delivery on cash.

## 5.5 THE PRICE OF THE PRODUCT

The price of the product seems to have great importance for the Internet users. Low prices and quick price comparison through the Internet seem to be at great importance for the user. Specifically, 90.5% of the sample agrees and fully agrees that the existence of lower prices on the Internet is considered a very important factor. These results show the importance for the the Internet user of the product prices traded on the Internet.

## 5.6 THE EASE OF PURCHASE

The ease of shopping on the Internet, was evaluated by the participants in the survey, as a very important factor for making online purchases. Specifically, 85% of the sample agrees and fully agrees that the factor "ease of purchase" is considered very important. Moreover, the convenience of purchase seems to have a positive correlation with the frequency of materialization of the Internet purchase provides since those who believe that e-commerce is easier purchase, perform online shopping more and more frequently.

## 6. CONCLUSIONS

Electronic commerce is an activity that has become increasingly open in recent years due to the rapid development of the Internet. This has resulted in overcoming traditional barriers such as time, borders and capital in the growth and development of commercial enterprises. From our research it appears that there are differences in attitudes of Greek Internet users in the region of Evros, according to gender, educational level and income.

The Greek Internet users in the region of Evros seem to believe that they will increase the frequency of the electronic purchases in the future. The important thing is that who do not use the Internet for online shopping or they use it very little have the same opinion. These consumers consider good training in computers and the Internet one of the most important factors that will help them to use the Internet for online shopping in the future, something that indicates that these users do not make online purchases because of insufficient training in computers and Internet. Finally, e-commerce in the region of Evros appears to have won a major market share in recent years. In no case, however, e-commerce seems to substitute conventional shops in the region of Evros but it is supplementary to them.

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