Abstract. *The literature review reveals numerous product classification models, the Search Experience Credence being one of them. Product categorization plays a major role in a company's marketing strategy and product characteristics can determine whether a product will be as successful online as it is in the traditional physical store. This paper presents the results of a survey conducted on consumers' perceptions of electronic commerce, the products being sold online and their categorization as either Search Experience Credence type. Using the data collected from 273 consumers, the intent is to examine if there are any correlations between demographic parameters and the way consumers perceive the products. In this regard the study's results show some significant differences between factors influencing the perception of a certain product type. Moreover, the study aims at examining whether online experience or frequency of shopping influences the way the customer perceive products on the online platform and a shift from credence to experience over to search can be induced by increasing the number of online purchases. Implications of the results are discussed.*

Keywords: Search Experience Credence Model, Nelson Product Classification, Product Category, Product Typology, Electronic Commerce, Electronic Markets.

THE SEARCH EXPERIENCE CREDENCE PRODUCT CLASSIFICATION PARADIGM IN THE EYES OF THE ELECTRONIC CONSUMER

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1. Introduction

In one form or another, the Internet has been a constant presence in today's technology-dominated world. What constitutes a relative new phenomenon is the adoption of the internet as an e-commerce platform by several companies from different industries, in the sense of a media for market transactions. In the traditional marketing, retailing companies have been confronted with distance and space limitations. However, the revolutionary impact the Internet had – and with it the e-retailing concept – allowed companies to go beyond the space and time dimension (Moe et al., 2000). Nowadays customers can purchase both products which belong to a niche market and those which were not available in their own country due to the lack of local branches.

The fact that the Internet's potential is not to be underestimated has been clear for more than two decades. However, only the recent years have truly shown the diversity of activities that the Internet can perform and the vast areas that it can be applied to. Both businesses and consumers have started to heavily rely on the Internet as a way of conducting day to day business and completing transactions. Electronic commerce has been a major milestone in the ongoing process of expanding beyond the traditional physical store, products being provided regardless of the time and space dimensions. The online transactions have increased exponentially, but this is just the tip of the iceberg. It merely gives a glimpse at what is lying underneath – the power of the Internet as an electronic commerce platform and its implications. While one cannot state that a clear shift from the traditional offline stores towards the online shops has taken place, more and more consumers have become interested in the value add that electronic commerce is able to offer and have started to regard electronic commerce as a day to day shopping platform.

However, even if the online retailing has partly lost the novelty aspect and consumers are familiar with the process, questions as the following remain to be answered by both online shoppers and retailers: Why are certain products being predominantly sold online than others? Does it mean there are certain characteristics which make these products more suitable for online selling? How can a company explore in advance just how successful a certain product will on the internet platform? Does the new platform or form of distribution channel impact significantly the firm's marketing strategy and if yes, how? Several studies have investigated what factors strongly impact the product suitability to be sold online (Kiang et al., 2000; Phau and Poon, 2000; Peterson et al., 1997; Bhatnagar et al., 2000; Granados et al., 2007; Girard et al., 2002). In order to be able to predict the success of e-commerce in general and the success of (specific) products in particular, the retailers need to know what those factors are and ways to influence them by adapting either the marketing strategy or elements from the marketing mix. While many companies have hurried down the path of e-commerce, there are very few that are likely to profit on the Web (de Figueiredo, 2000). Does this happen because they market every product, regardless of its characteristics, or is it because they are selling the wrong ones online? There is an

acute need for a set of guidelines to help determine which kinds of products are e-commerce suitable to avoid encountering difficulties and which are best to be kept on the shelves of the traditional stores. The retailer needs to adjust its marketing strategy in order to avoid a negative impact of a potential channel conflict. Ideally the online platform should be an additional channel and means for a firm to increase its revenue and gain market share, not cannibalize the existing traditional stores' sales.

The U.S. Census Bureau of the Department of Commerce released in August 2011 the figures for the Quarterly Retail E-Commerce Sales for the second Quarter of 2011. According to the report, the estimate of U.S. retail e-commerce sales for the second quarter of 2011, adjusted for seasonal variation, but not for price changes, was $47.5 billion, an increase of 3.0 percent (±1.2%) from the first quarter of 2011. Total retail sales for the second quarter of 2011 were estimated at $1,041.7 billion, an increase of 1.2 percent (±0.5%) from the first quarter of 2011. The second quarter 2011 e-commerce estimate increased 17.6 percent (±2.5%) from the second quarter of 2010 while total retail sales increased 8.1 percent (±0.2%) in the same period. E-commerce sales in the second quarter of 2011 accounted for 4.6 percent of total sales. Year over year e-commerce sales grew 17.6 percent compared to the first quarter in 2010. The 2011 figures show that the e-commerce sales in the U.S. make up for approximately 4.6 percent of the total retail sales. (U.S. Census Bureau of the Department of Commerce, August 2011)

Several research companies such as AC Nielsen have been investigating yearly what the most sold online products are. (Nielsen Global Consumer Report) The purpose of this study is to empirically partly explain this popularity, namely that it can be influenced by a range of factors, age and gender being two of them.

2. Literature review

Over the years the researchers have become more and more preoccupied with the topic of product classification. So much so, that even two schools of thought have emerged, namely information oriented and transaction oriented (Kiang et al., 2011). This paper is based on a model which is pertaining to the former approach; therefore the literature review will also focus on it.

There is in general a scarcity of models or frameworks for evaluating e-commerce success (Molla and Licker 2001) and no published empirical studies examined consumer behavior in a solely virtual shopping environment (Tan, 1999). Moreover, the literature that focuses on end-users is vaster than the one on products or product types suitable for e-retailing. In fact, most studies take the end-user approach with the consequence that there has been research done in the domains of online consumer behavior, consumer decision-making or consumer intentions (Keen et al., 2004). While it is understood that firms marketing their products online or offline have to take the factors that influence consumers' buying decisions into account, these intentions merely reflect the consumer behavior. They do not reflect the attitude that the user has towards a certain product sold online, but just the attitude towards the

product or the brand, independently of the marketers' initial choice of distribution channel.

A comprehensive literature review (Varvara Mityko, 2011) revealed that there are 22 different models of categorization from 52 researchers. The rationale behind the multitude of models is that they have different units of analysis, the research hypotheses differ and the classification dimension perspectives are varied. Depending on the object of analysis, a different model is being used or an existing one is being extended to incorporate the research object therefore producing a new categorization model. While some models in the current literature focus on the classification from the consumers' perspective, which will lend products specific attributes, others group products based on the products' attributes, which in return raise a certain reaction from the consumers.

The angle had now shifted from the seller on to the consumer. While it is true that the drivers behind the success of e-commerce are the individual buyer and the ability of internet retailing to fulfill his/her needs, attention must be paid in the exact same amount as before to the seller's side, and to the innovations which can bring customer satisfaction to higher levels or increase the positive shopping experience. The buyer and seller perspective are therefore closely interlinked: one cannot be researched in depth without taking into consideration the other.

One of the first classification models was introduced by Copeland in 1923, with the convenience, shopping and specialty goods, model also being used by Thirumalai and Sinha in 2005 in their study. This model continues to be endorsed by both the American Marketing Association and the UK Chartered Institute of Marketing.

Holton extended in 1958 this model along two dimensions, namely the ratio of cost of search to gain from search and the volume of demand for the supply of a certain good. In 1971 Mayer et al. have stated that the goods can be convenience store-convenience, convenience store-shopping, convenience store-specialty, shopping store-shopping or specialty store-specialty goods.

Levitt (1981) has developed a product differentiation model that opens a new perspective as to what a product is. This model defines a product on four different levels: the generic product, the expected product, the augmented product and the potential product. The generic product is according to Levitt the product itself. The expected product includes the aspects that relate to delivery, terms, and support. While they do not constitute the product itself, the product couldn't be sold without them. The augmented product refers to Levitt's notion of adding something to improve or modify the product for a particular customer. It could be the synonym of customization. Finally, the potential product is "everything that might be done" (Levitt, 1981) to attract, hold and bind the customer to the product, thus creating the brand loyalty feeling. Moreover it creates the need in the customer's mind to request a new product, and this way the retailer has its own research and development department in its consumers, without actually having to invest in one.

Aspinwall (1962) developed a model which classified products as green, yellow and red based on the following dimensions: replacement rate, gross margin,

(buyer goal) adjustment, time of consumption (duration of product satisfaction) and searching time. This model has been extended in 1965 by Miracle (1965) using nine different characteristics such as unit value, significance of each individual purchase to the consumer, time and effort spent purchasing by consumers, rate of technological change (including fashion changes), technical complexity, consumer need for service (before, during and after the sale), frequency of purchase, rapidity of consumption and extent of usage (number and variety of consumers and variety of ways in which the product provides utility.

Nelson (1970, 1974) has been the first to classify products as search and experience, concept taken over by Darby and Karni in 1973 and Klein in 1998 resulting in the model we know today as the SEC (Search, Experience, Credence) paradigm. According to this classification scheme products are being categorized by the degree of evaluation of a product's quality prior or after purchase. Search products are those whose quality can be objectively evaluated by the consumer prior to purchase and therefore there are certain factors which play a role in the purchase decision. According to Nelson (1970, 1974), a good qualifies as an experience good under one of the following conditions: (1) direct experience is required for obtaining full information on the dominant product attributes; (2) the search for information for these dominant attributes is more costly or proves to be more difficult than the direct product experience. Experience goods - both type 1 and 2 as illustrated by Klein (1998) – have to be tested before purchase either in the traditional store or in the electronic environment. Only after testing can a consumer form an opinion about the product's quality and benefits. While the limitations to each product type have been clearly defined by Nelson, Klein has illustrated that products can shift from one product type to another, an experience good could become a search good if certain conditions are met. And finally, credence products are those whose qualities and benefits the consumers might not perceive even after purchasing them and have to rely on word of mouth, recommendations or brand reputation as a sign of quality.

Norton and Norton (1988) extended Nelson's model along the dimension of frequency of purchase, distinguishing further between non durable and durable experience goods. A further model has been developed by Wright and Lynch (1995) which incorporates the sampling possibility for products.

In 1997 Peterson et al. provide a completely different perspective at classifying products. The same dimensions have been used by Phau and Poon in 2000 and Kiang and Chi in 2001 in their studies. The cost (low/high) and the frequency of purchase (frequent/infrequent), the value proposition (tangible and physical versus intangible and service related) and the degree of differentiation can be used to not only classify the products, but also determine their electronic commerce suitability. Using the dimension of purchase frequency Burke classifies in 2002 the product types by analyzing the difference in the shopping attributes. The products can be infrequently purchased durable goods, frequently purchased non-durable goods or entertainment/apparel products.

Starting from his statement "On the Web goods are not equal", de Figueiredo (de Figueiredo, 2000) developed a product classification scheme arguing that products possess different attributes and different levels of the same attributes. His "Dot-Com Retail Continuum" lists on one end of the spectrum the commodity products, for products where quality can easily be assessed, articulated, presented and perceived. On the other end there are the "Look and Feel" goods with variable quality, for which the decisive element is the individual consumer's perception, not the product's characteristics or the available information. In between the author also defines quasi-commodity and "Look and Feel" goods.

For the commodity products – or undifferentiated commodities – the title and its specifications are enough to provide the customer with an exact definition of quality and what to expect. The consumers in the commodity products market care very little about the seller of this product, regarding the item as being standardized and having several alternatives to choose from (e.g. cooking oil, paper clips, wooden screws, nails or stocks and shares). The sellers of these products mainly compete on price and delivery conditions. The quasi commodity products market has experienced the biggest increase in e-commerce. Books, videos, CDs, toys all fall under the same product category according to de Figueiredo.

When it comes to cosmetics, suits or furniture it is hard for sellers without a strong reputation and brand names to conquer the e-commerce world since these products fall into the category of "Look and Feel" goods. Although the products in this class are diverse, they all share a common characteristic, namely their quality is difficult to assess from a distance, requiring physical contact with the goods.

The last product class on de Figueiredo's continuum spectrum is the "Look and Feel" goods with variable quality. For these products, even after the consumer has completed his search and knows the brand and its reputation, the need to feel and see them are still there. Original art, used cars, collectables, fresh produce and grocery goods belong to this category. The goods are so different from one another because each consumer has his own preference and expectations on how ripe an apple must be or what kind of colour the watermelon has to possess. While this classification approach clearly differentiates between product attributes, it poses some difficulties in the process of ordering a product to a specific category. If a product present attributes from two categories, the choice that the marketer faces will not be supported by additional ordering mechanisms.

In 2000 Goldkuhl & Röstlinger made a first distinction between tangible and intangible products. Products comprise both services and goods. In this model the product classes result from the specific situations of use. These are: material, informative, experiential and financial. Therefore, the products can be provided products (temporary or goods for permanent transfer), treatment products (treatment of client's property or treatment of client), transportation products (transportation of client's property or transportation of client) or presentation products (exhibition of goods or presentation of producer). It is this distinction that is more and more applied

to product classification models after the rise of the Internet which allowed selling products to the customer in a purely digital manner, with no physical distribution.

Considering all the researchers who have proposed new or extended product classification models, one can easily see that most of the models have been developed starting 1980, with a predominant number being added to the list starting 2000. This could have been in part triggered by the need of both consumers and producers to have a better understanding of where the products they are buying or selling, respectively, fit into the picture. What is interesting to observe is the fact that even the "older" models, which were clearly meant for the products being sold in the traditional store, can be applied and reused for classifying goods and services meant for the e-commerce platform.

A company can use product classification for a better definition of the product differentiation, which is required for a sound marketing strategy. If a company is to understand how to better align its product categorization methodology or culture to its marketing strategy, it has first to understand the concept of category management. Category management is not by any means a new concept, nor is it particular solely to the electronic commerce environment. Instead, it is a concept which is applied to both retailers and supplier and in which the range of products purchased by a business organisation (from a supplier) or sold by a retailer is subdivided into groups of similar or related products; these groups are known as product categories.

Although initially designed by Nelson solely for the traditional distribution channel, the SEC model can be applied to the online commerce as well, by keeping in mind the digital dimension of the products. Some researchers argue that this model does not pass the suitability for e-commerce test as it is not specific enough as to what product attributes are successful online. However, the SEC paradigm can be useful as a starting point in the ideal product classification model quest, a model which would be able to explain, predict and understand not only the product types, but their success on the web as well.

3. Conceptual framework and hypothesis development

As mentioned earlier, the goods which were under investigation in this survey were classified according to Nelson's (1970) classification model, which was extended by Darby and Karni (1973) and Klein (1998). Following, the products was search, experience or credence, depending on whether the consumer can evaluate the products' quality and their benefits before or after purchase. And it is this consumer evaluation that plays an important role to which category a product belongs to, as this perception can be influenced by several factors such as: gender, age, frequency of shopping on the internet, previous experience with the online platform, etc. Consumers from the older generation might be more inclined to shop less online, since they cannot assess the quality of the product. Moreover they could prefer to buy in a traditional store a CD, rather than download online the mp3 version, considering it could take an additional effort to play the music on other devices than on the

computer. Figure 1 illustrates the research framework and conceptualization of the relationship between potential product suitability for online commerce and affective factors.

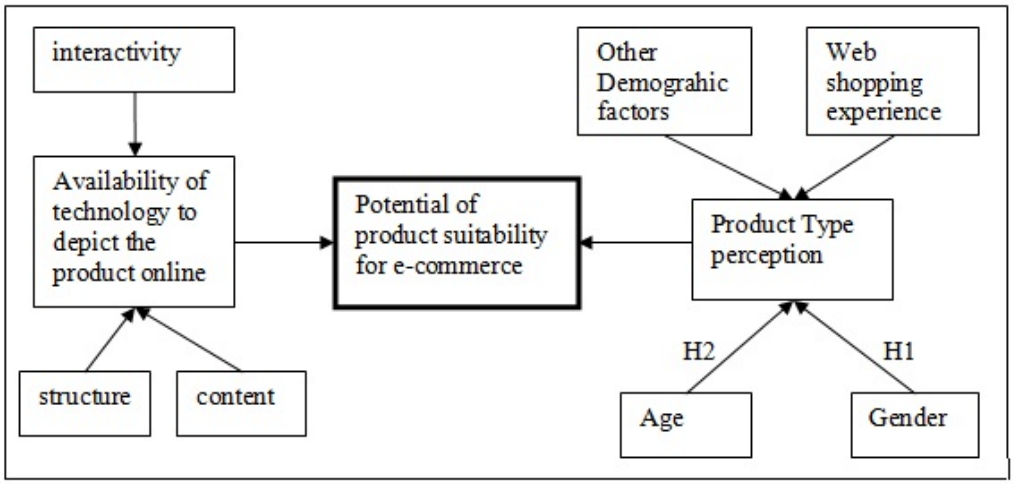


Figure 1. **Research framework**

The developed hypotheses are the following:

$H1_0$: There is no significant correlation between gender and product perception as search, experience or credence.

$H1_1$: There is a significant correlation between gender and product perception as search, experience or credence.

$H2_0$: There is no significant correlation between age and product perception as search, experience or credence.

$H2_1$: There is a significant correlation between age and product perception as search, experience or credence.

All hypotheses have been tested for each of the 10 products, namely: airline tickets, groceries, clothes, books, mp3 and music download, body lotion and face care products, flowers, perfume, laptops and vitamins. These products have been chosen after a careful analysis of the Nielsen Global Consumer Report (2010) and the EIAA Online Shoppers Executive Summary (2008) which highlighted some of the most sold online products. The author of the study made the assumption that the respondents will be most familiar with these products, since they have been classified by other studies as "online popular". The products have been taken one to one, i.e. in the "mp3 and music download" category only these two types had been mentioned by the above listed Consumer Reports as being popular (video or software downloads were not mentioned in the reports). The list has been limited to 10 products, so as to not take too much time from the respondent to fill in the questionnaire.

3.1. Research study methodology

3.1.1. Procedure

Data has been gathered through a structured semi open questionnaire. The survey was personally administered by the researcher to reduce incorrect answers which might lead to wrong findings or invalid answers. The unit of analysis in this particular survey is the individual online shopper. The total population is comprised of literate people, so of individuals who know how to write and read and therefore use the internet. All individuals in the population have access to the internet. In total this study received 271 valid completed responses. Data were collected during the autumn of 2011.

Each of the responses received was screened properly for error, incomplete or missing responses. After the screening process, two were considered as unusable and were deducted from the analysis. The various statistical techniques that are used in the data analysis are described in this section. Frequency Distribution Analysis is used to determine a demographic profile of the survey respondents. Cross-tab and Pearson Chi-square Test are used to determine the relationship between age, gender and product types according to the SEC classification. For the test of independence - test of homogeneity - the chi-squared probability of less than or equal to 0.05 has been chosen. The product classification is based on the SEC model developed by Nelson (1970, 1974), Darby and Karni (1973) and Klein (1998), except there is no distinction between experience-1 and experience-2 products.

3.1.2. Questionnaire design

The instrument used for data collection for this study is a self-administered questionnaire. The language of the questionnaire was English. The unit of analysis in this particular survey has been the individual online shopper. The total population is comprised of literate people, so of individuals who know how to write and read and therefore use the internet. All individuals in the population had access to the internet. The questionnaires were e-mailed with a cover letter thanking the potential respondent for their participation and with a link to the online survey website. The sampling design followed the non-random/non-probability principle of snowball. This is a process where a sample is being selected using network. To start with, a few individuals in a group or organisation – in this case Facebook and at the place of work – are selected and the required information is collected from them via an online survey platform. They are then asked to identify other people in the group or organisation and the people selected by them become a part of the sample.

The questionnaire is divided into three parts which address issues such as online shopping experience, frequency of shopping online, reasons for shopping online or not, website design, trust and trustworthiness, product, and demographic respectively. Two sections are relevant for the empirical results presented in this paper, as the third part was directed at finding out what risks the respondents

perceived when shopping online and what impact a product brand has in their online shopping environment. The questionnaire was comprised of 46 questions out of which 12 questions directly related to the SEC classification model. The structured questionnaire was used to collect the necessary data which served as primary data to investigate whether the hypotheses enounced in the previous chapter can be accepted or not. The definitions for the SEC product categories have been the following:

- A search product: the consumer can find full information online before purchase and does not necessarily require the use of the following sense: touch, smell, hear.
- An experience product: the consumer must try/use/see the product before purchase.
- A credence product: the consumer encounters difficulty evaluating / obtaining info on the product both before AND after purchase.

The answers possibilities were constructed in such a way that the respondent could only select one answer per question, i.e. the questions didn't allow multiple answers. The answers have been design to be of a qualitative nature, i.e. the respondents had to determine for each of the 10 products whether they perceive the products as being search, experience and credence, using the definitions illustrated above.

3.1.2. Respondents demographic profile

Of the respondents 34% were female and 66% were male. More than half of the respondents (57%) are between the ages of 20 to 25; 9.6% between the ages of 26 to 30; 5% ages 31 to 35; 13% between 36 and 40; 6.6% between 41 and 45 and 8.5% of the respondents older than 41. Around 55% of the respondents have listed as having already obtained a high school degree, 21% were holding an undergraduate degree and approximately 26 percent had a graduate or higher degree. The answers collected have been from respondents in five different countries, namely Switzerland, United Kingdom, France, Romania and Spain. The respondents were also asked whether they were familiar with the possibility of shopping online, question which has been answered positively by 99%. Out of the 273 respondents, 60% had effectuated an online purchase in the past three months and around 30% are shopping online more than once a month. The most important factor that determined the respondents to shop online was the time saving factor, with 73% of the participants listing it. The price was second most important (60%) and on the third place the respondents listed the convenience factor, with 43%.

Figure 2 shows the age distribution of the respondents and their web shopping experience, where the 3 possible answers have been weekly shopping, bimonthly online shopping and 3 times a month online shopping experience, where the distribution if by age. It is worth to mention that weekly shopping is being effectuated extensively by the age groups 35-40. The young generation, classified in the age group of 20-25 shop only every 3 weeks and the majority of the consumers ages 35 to 40 shops bimonthly.

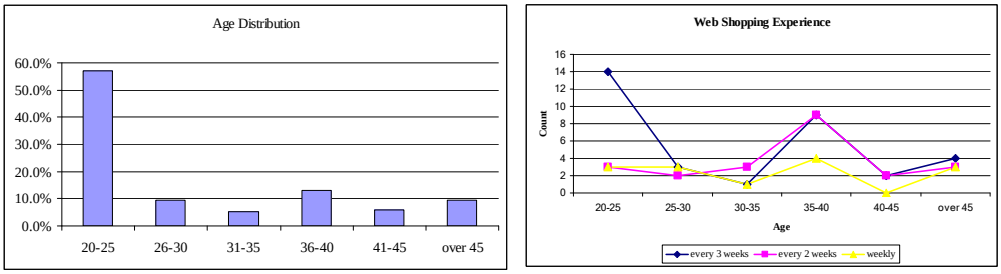
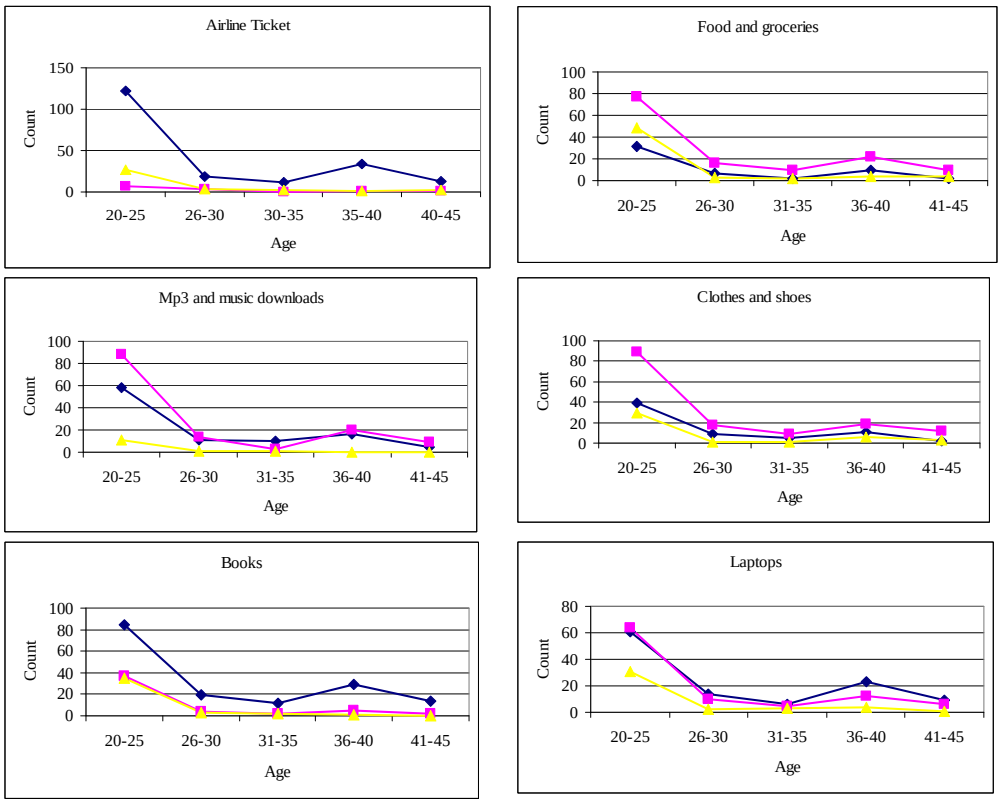


Figure 2. **Shopping experience and age group**

3.2. Results and statistical analysis

3.2.1. Data analysis

Figure 3 is a summary of the categorization that each of the respondents made for the 10 products, distributed by age groups, classifying the products as search, experience or credence.



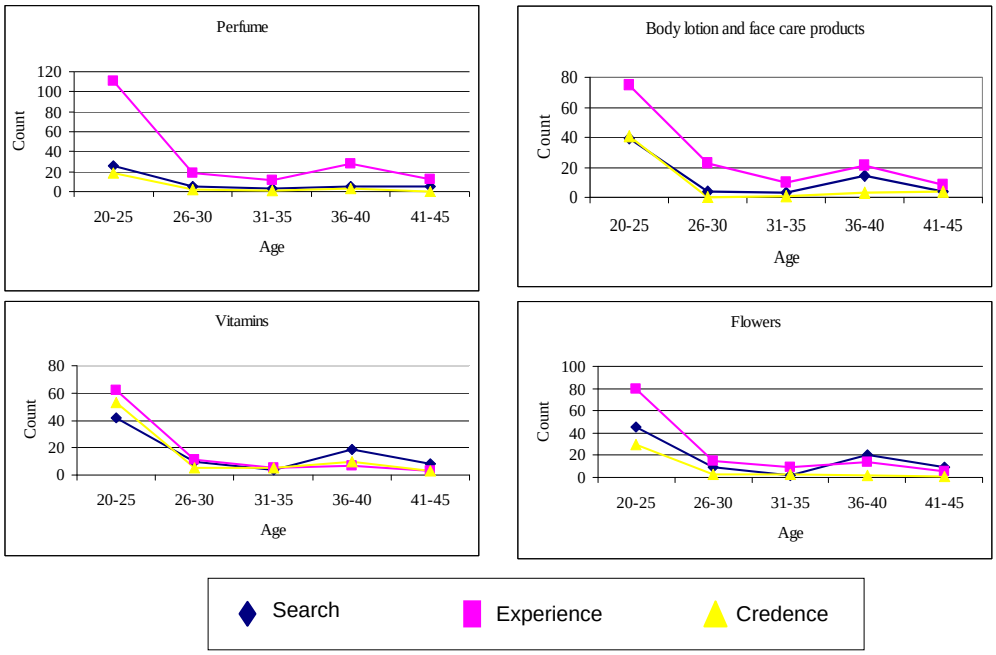


Figure 3. **Age group and search experience credence ratings**

What can be seen from the consolidated results is the following: airline tickets are considered by the majority of the 20-25 year old respondents as being search products, followed by credence and experience. The groceries are being perceived as experience products. The mp3 and music downloads have been ranked overall as belonging to the experience category, although, in the age group of 30-35 consumers rated t as being a search product. The next experience product classified by the respondents was clothing products, perception which is being shared by all age groups. Almost half of the respondents have rated laptops as being a search product, while the other half listed them as experience. Also as experience are flowers, perfume and body lotion and face care products and vitamins.

3.2.2. Hypotheses Testing

The main aim of this part of the study is to test the hypotheses that were developed earlier, namely if there is a correlation between age and gender and the perception of product classification as being search, experience or credence. Based on the results, there is empirical support for the two hypotheses. With regard to gender, the null hypothesis can be accepted for all the 10 products investigated, which means that gender does not correlate significantly with the product type perception.

With regard to age the null hypothesis can be accepted for 6 out of the 10 investigated products. The alternative hypothesis, meaning a significant correlation, is valid for airline tickets, books, body lotion and face care products, and flowers. If we look at how the respondents classified these 4 products, we notice that there is a

significant correlation between age and search and experience type of products. The relationship between age and these products is that the older a person is, the more he/she perceives the product as being rather experience or credence than search.

Airline ticket

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18,538	10	.047
Likelihood Ratio	22.046	10	.015
Linear-by-Linear Association	8.994	1	.003
N of Valid Cases	271		

Books

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	45,495	15	.000
Likelihood Ratio	38.361	15	.001
Linear-by-Linear Association	21.354	1	.000
N of Valid Cases	271		

Body lotion and face care products

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22,136	10	.014
Likelihood Ratio	24.087	10	.007
Linear-by-Linear Association	.026	1	.871
N of Valid Cases	271		

Flowers

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18,002	10	.055
Likelihood Ratio	18.518	10	.047
Linear-by-Linear Association	11.316	1	.001
N of Valid Cases	271		

Figure 4. **Pearson Chi Square values for the selected products**

Figure 4 shows the results for the testing of $H2_0$, for those products where the null hypothesis can be rejected, taking into account that the significance level chosen was 0.05. Since the significance level of a test is the probability that the test statistic will reject the null hypothesis. In the above presented case of the four products, the 2-sided significance level illustrates that the airline ticket perception can be considered as being influenced by the age factor (the independent variable) with a probability of 95%. The fact that the significance value for flowers is 0.055, so slightly above the defined 0.05, leads to the statement that the hypothesis is marginally significant.

3.2.3. Discussions and implications

There are several important implications from this research. First, the study finds that age plays a role in how consumers perceive the products, which could be indirectly related to the web experience they have; the less they feel uncertain about product attributes, benefits and quality. This indicates that the SEC paradigm, although used in many other studies as a starting point for classifying products, may prove to be rather subjective, depending on the customer perception, which in return

depends on factors such as age or gender. By trying to redefine their marketing strategies or marketing mix elements along those two factors, the companies could be able to influence the way that the online consumers perceive their products, which in return has an influence on the whole online purchase decision process.

Second, even if the gender factor is to be ignored or considered equal for all consumers, the age dimension plays an important role for certain products. Taking the age factor into consideration, retailers can adjust or adapt their messages, adverts or website presence to either fit the consumers with a lot of web shopping experience or those less online purchasing savvy.

Third, retailers can adapt their overall marketing strategy if they know for sure how certain age groups perceive certain products and product categories. And there have been numerous studies researching this specific issue. For instance, Girard et al. (2002) found that consumers would rather purchase search than experience products on the web. The present study confirms this finding, the majority of the respondent listing the search product type as the product they would be more inclined to shop online.

4. Conclusions

This study adds to those already reported in the literature in several ways. First, it uses an international, rather than regional or national sample of online consumers. Second the questionnaire was developed to use actual online shopping behaviour rather than hypothetical scenarios. This research explored the age and gender difference in the perception of selected products from the SEC classification model. The study found that in some cases and for some specific products age has an influence on consumers' perception of product qualities and therefore their category. The hypothesis that gender impacts the product type perception could not be verified. Future research should attempt to control the age variables, if the SEC paradigm is to be used objectively for classifying products both offline and online. Therefore, this research brings implications which can be used in the future towards the quest for a standardized and unified product classification model. A test for a different influencing factor such as frequency of shopping, or other demographic characteristics (education, income or country of origin/residence) could also be tested in a future research. This type of findings can be important to electronic retailers or those retailers choosing the internet as an additional distribution channel and support them in developing effective marketing strategies that target online consumers and are characterized by specific demographic profiles. Moreover the results are also beneficial to researchers in developing models linking the success of retailers who use the online commerce platform to demographic factors.

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