# ASSESSING BENEFITS AND RISKS OF ONLINE SHOPPING IN SPAIN AND SCOTLAND

## Silvina Santana

Department of Economics, Management and Industrial Engineering and Institute of Electronics Engineering and Telematic of Aveiro – University of Aveiro

## Sandra Loureiro

Department of Economics, Management and Industrial Engineering - University of Aveiro

#### **Abstract**

The use of the Internet for shopping is increasing worldwide. Therefore, it has become very important to understand how consumers perceive its benefits and risks. In this paper, we address perceived benefits and risks of online shopping in Spain and Scotland. Building upon previous work done by others, a three-factor scale of perceived benefits and a four-factor scale of perceived risks were estimated. Women tend to perceive the enjoyment and adventure of online shopping more and are also more concerned with risks than men. Frequency of online searching correlates with perceived benefits and risks but its impact is different in the two countries. It is urgent to research the roles of emotion, interpersonal relationships and social involvement in conducting purchases online- an effort that will certainly require new models of consumer behavior and methodologies beyond the traditional quantitative techniques.

Keywords: online shopping, perceived benefits, perceived risks, consumer behaviour

## 1.INTRODUCTION

In recent years, the number of Internet users has increased considerably and so has the image of the medium as a cost effective and global commercial channel (Koyuncu & Bhattacharya, 2004; Kuhlmeier & Knight, 2005). However, recent research (OECD, 2007) shows that the increase in the share of e-commerce sales

Correspondence Address: Silvina Santana – Department of Economics, Management and Industrial Engineering and Institute of Electronics Engineering and Telematic of Aveiro – University of Aveiro, Campus de Santiago – 3810-193 Aveiro – Portugal. E-mail: silvina.santana@ua.pt

between 2003 and 2006 has been modest in Europe, except for a few countries such as Denmark (10%), Norway (8%), Portugal (7%) and Spain (5%). In Australia, the value of Internet income increased from 0.8% of total income to 2.2% between 2001-02 and 2004-05 and in Canada, Internet sales as a proportion of total business operating revenue increased from 0.3% to 1.3% in the period 2001-05. In the USA there was a steady growth in retail e-commerce sales, with a twofold increase registered between the last quarter of 2002 and the last quarter of 2006. Overall, total B2C plus B2B Internet commerce still only represents 2.2% of turnover in Australia, 1.3% in Canada and ranges from 0.01% to 17% for European countries.

An OECD report (OECD, 2007) shows that the most commonly cited barriers to Internet commerce are many products not being suitable for Internet sales and security and legal concerns. Attitudes and perceptions play a key role in whether American online users choose to purchase products online (Horrigan, 2008). While 78% of American Internet users agree or agree strongly that shopping online is convenient for them and 68% agree or agree strongly with the notion that online shopping saves them time, 75% of them state that they do not like giving out their credit card number or personal information online and more than half of Internet users encounter frustration and other frictions in the course of online shopping.

Risks and benefits depend to a great extent on consumer perception. Perception may be defined as the process of selecting, organizing and interpreting information in order to create a significant image of the world (Kotler & Keller, 2006). Perception depends not only on the physical stimulus but also on the relation between the stimulus and the environment and on the internal conditions of the consumer. Therefore, perceptions may change considerably among individuals exposed to the same reality. Perceived value may be defined as the consumer's perception of the net benefits gained in exchange for the cost incurred in getting the desired benefits (Chen & Dubinsky, 2003). Consumers seek to maximize value, and thus evaluate products, situation and other aspects related to consumption in terms of underlying benefits and costs and then select the one that provides them with the greatest overall value (Holbrook, 1994) and online consumers are no exception. Now, while bringing several benefits to consumers, electronic commerce seems to magnify the uncertainties involved with any purchase process, leading to higher perceived risks (Bhatnagar & Ghose, 2004; Delgado-Ballester & Hernández-Espallardo, 2008). Therefore, it is mandatory to understand how consumers perceive the benefits and risks of online shopping, with an aim to inform strategy, marketing, operations and technology decisions.

In this paper, we address perceived benefits and risks of online shopping in Spain and Scotland. These countries represent important European markets that are greatly different from each other regarding the time of popularization of

the Internet and the tradition of distant buying, such as telephone ordering and catalogue shopping. Therefore, the two countries might prove to be an interesting setting to test if different experiences lead to different perceptions of the risks and benefits of online shopping.

This work is part of a larger effort aiming at modelling risks and benefits of online shopping as perceived by European citizens. We depart from an already validated scale (Forsythe, Liu, Shannon, & Gardner, 2006) to which we have added three perceived benefits related to the ease of the buying process and time saved and four perceived risks related to information security. These have resulted from further elaboration which has been done on the basis of more recent literature. First, we discuss previous research on the benefits and risks of online commerce. Secondly, we present the methods used in this investigation. Thirdly, we present the results of the empirical investigation conducted in Spain and Scotland. Finally, we discuss the findings and implications of our study for managers, marketers and those designing and implementing virtual stores, and present directions for future work.

## 2. THEORETICAL BACKGROUND

## 2.1 Perceived benefits of online shopping

Personal determinants of shopping in traditional formats are influenced by functional and non-functional motives (Hirschman & Holbrook, 1982; Seth, 1983). Functional motives are related to tangible, utilitarian attributes such as convenience, variety and quality of merchandise, it's price and physical facility. Non-functional or hedonic motives are related to non-tangible retailer attributes and social and emotional needs. Utilitarian motivation is seen as rational, goal or task oriented, mission critical and maximizing utilitarian benefits, while hedonic motivation seeks emotional and experiential benefits during the buying process, in a word – enjoyment!

Researched utilitarian benefits of online shopping include convenience, selection, availability of information and lack of sociality (Wolfinbarger & Gilly, 2001), perceived price (Chiang & Dholakia, 2003), product customization (Burke, 1997), cost-saving (Keeney, 1999), quickness and price (Koyuncu & Bhattacharya, 2004), information about the choice available, ease of placing orders, ease of cancelling orders, better prices and ease of contacting Internet vendors (Bhatnagar & Ghose, 2004). Some of them are multi-item dimensions.

Regarding hedonic benefits, recent research (To, Liao & Lin, 2007) addressed adventure/explore, social, idea, value, authority and status. Adventure translates to the interest, novelty and joy of exploration during the process of

shopping. Social relates to social interaction and activities. Idea refers to the pleasure of learning about new trends while shopping. Value relates to the pleasure that a bargaining process may bring to the shopper. Authority and status refers to the possibility of enjoying a personalized service and control over the process and the technology. Some authors (Bhatnagar & Ghose, 2004) assume that consumers who are high on non-functional needs tend to be conspicuous consumers and prefer outlets where they can be seen by their friends and colleagues. Therefore, these authors disregard hedonic benefits in their study of the benefits and risks of Internet shopping.

While in studies of physical shopping both viewpoints have been used to explore consumer behaviour (Babin, Darden & Griffin, 1994; Hirschman & Holbrook, 1982), few studies on online shopping have researched both utilitarian and hedonic motivations. A few studies explored shopping convenience, product selection, easy of shopping and hedonic/enjoyment (Forsythe et al., 2006) and cost saving, convenience, selection, information availability, lack of sociality and customized products or services, besides the hedonic motives described above (To et al., 2007).

## 2.2 Perceived risks of online shopping

Perceived risk (Bauer, 1960) is a well-established concept in consumer behaviour. Consumer perceptions of risk have been shown to shape purchase decisions to varying degrees, and therefore influence consumer behaviour (Bauer, 1960; Bettman, 1973; Cunningham, 1967; Mitchell, 1999). Based on previous literature, Ko, Jung, Kim, & Shim (2004) described and empirically researched several types of risk involved in purchase decisions: social, financial, physical, performance, time, and psychological risks. Social risk refers to the perception that a product purchased may result in disapproval by family or friends. Financial risk is the perception that a certain amount of money may be lost or required to make a product work properly. Physical risk refers to the perception that a product may be dangerous to health or safety when it does not work properly. Performance risk is the perception that a product purchased may fail to function as originally expected. Time risk is the perception that time, convenience, or effort may be wasted when a product purchased is repaired or replaced. Psychological risk is the perception that a negative effect on the consumer's peace of mind may be caused by a defective product. Privacy risk, defined as the potential loss of control over personal information, is mentioned but not further researched (Ko et al., 2004).

There is evidence that consumers perceive a higher level of risk when purchasing on the Internet compared with traditional retail formats (Lee & Tan, 2003). It has also been reported that those who have not experienced online shopping have

a higher level of perceived risk and that cultural differences linked to nationality matter (Ko *et al.*, 2004). As for types of risk associated with Internet shopping, it has been found that product performance risk, financial risk, and time/convenience risk are related to the frequency of online search with intent to purchase (Forsythe & Shi, 2003) and that online purchasers evaluate these same perceived risks to be less risky than those who are only website visitors (Forsythe *et al.*, 2006).

## 3. METHODS

Data were collected from under-graduate students in public Universities in Scotland and Spain, using a questionnaire previously piloted on 10 individuals in each country. The surveys were conducted through face-to-face interviews, during June and July 2008; 250 students have been contacted at random in each country. Perceived benefits and risks of online shopping were accessed with an instrument based on two separate scales proposed in the literature (Forsythe et al., 2006) to which we have added three perceived benefits related to the ease of the buying process and time saved and four perceived risks related to information security, in line with recent studies. These new items are signalized in Table 1 and Table 2. The questionnaire also includes items related to demographic and socioeconomic status, and frequency of online searching for products or sellers. The instrument was designed in English and translated to Spanish using a dual focus method (Erkut, Alarcón, Coll, Tropp & Garcia, March 1999). Assessment of benefits and risks was made in terms of a five-point 'strongly disagree/strongly agree' response scale. Data was analyzed with SPSS version 16.0.

## 4. RESULTS

Results are based on 198 completely answered questionnaires received from students who have already used the Internet for shopping in Spain (n=97, response rate=39%) and Scotland (n=101, response rate=40%). All those agreeing to participate in the survey were interviewed by a trained person and completed the entire questionnaire. The cases are evenly distributed among genders in the two countries. Regarding age, 18.2% of the respondents were less than 20 years old, 56.7% belong to the age group 21-25, 17.6% are from the age group 26-30, 3.5% belong to the age group 31-35, 2.5% to the age group 36-40 and 1.5% to the age group 41-45.

Factor analysis procedures using principal component extraction and varimax rotation were conducted on the perceived benefits and risks scales separately. Table 1 and Table 2 show the two solutions obtained, including Mean (M),

Standard Deviation (SD), Factor Loading (FL) and Corrected Item-Total Correlation (CI-TC) for each of the items of the two scales and Cronbach's Alpha (CA) and Average Variance Extracted (AVE) for all of the factors extracted.

Regarding the perceived benefits scale (Table 1), a KMO (Kaiser-Meyer-Olkin test) of 0.91 attests to a good correlation between the items. Three factors account for 54.8 % of the total variance explained. All items have factor loadings and communalities above .4 (Fabrigar, Wegener, MacCallum & Strahan, 1999; Netemeyer, Bearden & Sharma, 2003; Nunnally, 1978). Only the dimension "Enjoyment and adventure of shopping" shows low reliability, which does not improve with the elimination of any item. The AVE provides the amount of variance that a construct or dimension obtains from its items with relation to the amount of variance due to measure error (Fornell & Larcker, 1981). AVE should be above .5, meaning that more than 50% of the variance of the construct is due to its items (Fornell & Larcker, 1981; Ping Jr, 2004). Therefore, items B8, B16 and B17, which are less correlated with their dimension, should be eliminated. Elimination of B8 does not change the value of Cronbach's alpha but the value of AVE increases to .51 and elimination of B16 and B17 increases the value of AVE to .72. Without the three items mentioned, the three factors extracted have discriminant validity, meaning that the average variance extracted from each particular factor is greater than the squares of the correlations between that particular factor and the rest of the factors (Fornell & Larcker, 1981).

Regarding the perceived risks scale (Table 2), a KMO of 0.915 confirms a good correlation between the items. Factor analysis extracted four factors that account for 66.8% of the total variance explained. All the items have factor loadings and communalities above 0.4. All dimensions have good reliability. The dimensions demonstrate convergent validity, as AVE is at least 0.5 and also discriminant validity.

Investigating the difference between male and female perception with regard to the way they assess the extracted seven factors (Table 3), we found that it is not statistically significant for the dimensions of "Ease and comfort of shopping" and "Convenience of shopping". For the other dimensions, the difference is statistically significant (p<0.05), meaning that women tend to perceive more the enjoyment and adventure of online shopping than men, but that they are also more concerned with all the types of risks than men.

The correlations between frequency of online searching and the three dimensions of the perceived benefits scale are positive and statistically significant (p<.01) in the Scottish sub-sample. In the Spanish sub-sample, the results are positive and statistically significant (p<.05) only for the dimensions of "Ease and comfort of shopping" and "Convenience of shopping". The correlations between frequency of online searching and the four dimensions of the perceived risks scale are negative, but only significant (p<.05) for the "Process risk" in the Scottish sample and for the "Time risk" in the Spanish sample.

TABLE 1 Statistical results for perceived benefits

| Statistical results for perceived periodical |   |      |      |     |       |                         |                     |     |  |
|--|---|------|------|-----|-------|-------------------------|---------------------|-----|--|
| Dimension                                    | lfem  | N    | SD-  | FL  | CI-10 | % variance<br>explained | Cronbach's<br>alpha | AVE |  |
| Easiness<br>and comfort<br>of shopping       | (B1) Access to many brands and retailers      | 3.90 | 1.10 | .60 | .65   | 38.70                   | .89                 | .42 |  |
|  | (B2) Don't have to wait to be served          | 3.88 | 1.16 | .74 | .72   |                         |                     |     |  |
|  | (B3) Not embarrassed if you<br>don't buy      | 3.68 | 1.31 | .72 | .64   |                         |                     |     |  |
|  | (B4) Don't have to leave home                 | 4.04 | 1.10 | .70 | .69   |                         |                     |     |  |
|  | (B5) May easily compare products and sellers* | 3.86 | 1.07 | .65 | .70   |                         |                     |     |  |
|  | (B6) No hassles                               | 3.60 | 1.20 | .72 | .66   |                         |                     |     |  |
|  | (B7) Broader selection of products            | 3.82 | 1.13 | .63 | .63   |                         |                     |     |  |
|  | (B8) Save time in purchases*                  | 3.60 | 1.16 | .46 | .49   |                         |                     |     |  |
|  | (B9) Can shop in privacy of home              | 3.88 | 1.11 | .75 | .66   |                         |                     |     |  |
|  | (B10) The buying process is easy*             | 4.02 | 1.05 | .72 | .58   | 9.73                    | .83                 | .51 |  |
|  | (B11) No busy signal                          | 3.72 | 1.09 | .62 | .49   |                         |                     |     |  |
| Convenience<br>of shopping                   | (B12) Can shop whenever I want                | 4.25 | 1.08 | .75 | .74   |                         |                     |     |  |
|  | (B13) Can save the effort of visiting stores  | 3.99 | 1.17 | .51 | .58   |                         |                     |     |  |
|  | (B14) Items from everywhere are available     | 4.05 | 1.07 | .55 | .61   |                         |                     |     |  |
|  | (B15) Can get good product information online | 3.49 | 1.03 | .64 | .58   |                         |                     |     |  |
| Enjoyment<br>and<br>adventure<br>of shopping | (B16) Can custom design products              | 3.02 | 1.12 | .53 | .34   | 6.36                    | .62                 | .36 |  |
|  | (B17) To try new experiences                  | 3.11 | 1.17 | .61 | .39   |                         |                     |     |  |
|  | (B18) Exciting to receive a package           | 2.78 | 1.41 | .69 | .39   |                         |                     |     |  |
|  | (B19) Can buy on impulse in response to adds  | 2.75 | 1.31 | .78 | .49   |                         |                     |     |  |

 $<sup>\</sup>star$  additional item proposed in this study

TABLE 2 Statistical results for perceived risks

| Dimension           | ltem   | M    | SD   | FL  | CI-TC | % variance explained | Cronbach's<br>alpha | AVE |
|---------------------|--|------|------|-----|-------|----------------------|---------------------|-----|
| Product risk        | (R1) Can't examine the actual product                          | 3.85 | 1.20 | .76 | .75   | 45.44                | .89                 | .64 |
|                     | (R2) Size may be a problem with clothes                        | 3.59 | 1.35 | .73 | .64   |                      |                     |     |
|                     | (R3) Can't try on clothing online                              | 3.89 | 1.25 | .84 | .77   |                      |                     |     |
|                     | (R4) Inability to touch and feel<br>the item                   | 3.80 | 1.27 | .79 | .77   |                      |                     |     |
|                     | (R5) Must pay for shipping and<br>handling                     | 3.57 | 1.24 | .65 | .66   |                      |                     |     |
|                     | (R6) Must wait for merchandise to be delivered                 | 3.57 | 1.18 | .59 | .61   |                      |                     |     |
| Information<br>risk | (R7) My credit card number may not be secure                   | 3.43 | 1.28 | .54 | .69   | 9.82                 | .89                 | .57 |
|                     | (R8) Might be overcharged                                      | 3.12 | 1.31 | .51 | .66   |                      |                     |     |
|                     | (R9) My personal information may<br>be sold to others*         | 3.50 | 1.27 | .74 | .75   |                      |                     |     |
|                     | (R10) My personal information may by used for spamming*        | 3.57 | 1.35 | .68 | .66   |                      |                     |     |
|                     | (R11) My personal information<br>may be intercepted by others* | 3.41 | 1.25 | .69 | .73   |                      |                     |     |
|                     | (R12) My personal information<br>becomes exposed*              | 3.15 | 1.26 | .73 | .74   |                      |                     |     |
| Process risk        | (R13) May not get the product                                  | 3.41 | 1.29 | .76 | .62   | 6.47                 | .86                 | .54 |
|                     | (R14) Can't trust the online company                           | 3.10 | 1.24 | .80 | .69   |                      |                     |     |
|                     | (R15) May purchase something<br>by accident                    | 2.62 | 1.38 | .47 | .57   |                      |                     |     |
|                     | (R16) My personal information<br>may not be kept               | 3.25 | 1.33 | .65 | .71   |                      |                     |     |
|                     | (R17) I may not get what I want                                | 3.20 | 1.26 | .72 | .77   |                      |                     |     |
| Time risk           | (R18) Difficult to find appropriate websites                   | 2.66 | 1.27 | .65 | .54   | 5.05                 | .76                 | .54 |
|                     | (R19) Pictures take too long to come up                        | 2.54 | 1.28 | .82 | .66   |                      |                     |     |
|                     | (R20) Too complicated to place orders                          | 2.37 | 1.16 | .79 | .57   |                      |                     |     |

<sup>\*</sup> additional item proposed in this study

TABLE 3

Differences among male and female regarding the way they value the several factors

| Scale    | Dimension                           | Mean                       | t-Test | Sig.  | Cl 95% |
|----------|-------------------------------------|----------------------------|--------|-------|--------|
| Benefits | Easiness and comfort of shopping    | Male: 3.80<br>Female: 3.81 | 09     | .93   | 2522   |
|          | Convenience of shopping             | Male: 3.90<br>Female: 3.94 | 31     | .76   | 2619   |
|          | Enjoyment and adventure of shopping | Male: 2.78<br>Female: 3.05 | -2.24  | .03   | 5103   |
| Risks    | Product risk                        | Male: 3.56<br>Female: 3.87 | -2.25  | .03   | 5904   |
|          | Information risk                    | Male: 3.18<br>Female: 3.54 | -2.50  | .01   | 6508   |
|          | Process risk                        | Male: 2.94<br>Female: 3.29 | -2.38  | 0,02  | 6306   |
|          | Time risk                           | Male: 2.30<br>Female: 2.75 | -3.25  | 0.001 | 7418   |

## 5. DISCUSSION AND CONCLUSION

Only one of the three constructs defining perceived benefits in our research, "Enjoyment and adventure of shopping", matches exactly one of the factors of the scale proposed by Forsythe et al. (2006). However, it shows low reliability and must be further investigated. A possibility is more exploration of the hedonic dimensions defined in recent literature (To et al., 2007). Regarding utilitarian benefits, "Convenience of shopping" refers to the generic idea of shopping and represents the benefits of having good product information and buying items available from everywhere whenever the consumer wishes to shop without leaving home, while "Ease and comfort of shopping" seems to refer to a more defined idea of the situation and represents the benefits of having immediate and informed access to a broad selection of products and sellers without emotional hassles, in the privacy of one's home. It somehow incorporates the benefits of product selection (Forsythe et al., 2006) but goes beyond it, as it also incorporates physical and psychological ease and comfort during the shopping process. This might indicate that product selection is only one part of the value that must be incorporated into online product offerings, in order to attract the customer.

Regarding the four constructs defining perceived risks in our research, "Product risk" (concerns the quality and suitability of the product due to physical and temporal distance) and "Time risk" (concerns the time required to find a suitable website, getting required information and processing the transaction) match exactly these two factors on the scale proposed by Forsythe et al. (2006). Our research further generated the factor of "Information risk", which expresses

concerns about the way personal and financial information might be used by the seller or other entities and the factor of "Process risk", which expresses concerns about the particular aspects experienced during the process of online shopping. This four-factor scale of perceived risks emerging from our research deserves attention. In fact, the risks associated with two of the three flows inherent to any commercial transaction are represented there, namely "Product risk" and "Information risk", but the variables associated with the financial flow join the variables associated with the information flow in a single factor. Particularly interesting is the "Process risk" factor, where all the parts involved in a transaction are represented in consumer concerns: the online company, the entity that brings the product to the consumer and the consumer himself.

Women seem to be more susceptible than men to the adventurous and exciting dimension of online shopping. This is probably no surprise as it is common sense when the same happens with traditional shopping. Nonetheless, this is an aspect deserving further investigation and action from companies' strategists, marketers and those designing and implementing technology for e-commerce. As suggested in the literature, the frequency of online searching for products or sellers has positive correlations with perceived benefits and negative correlations with perceived risks. A possible explanation is that consumers who have more experience of the Internet may be more confident because they feel more in control of the technology. Another possibility is that with use, consumers may learn how to avoid bad experiences and this may lead to increasing trust in the medium.

An important theoretical contribution of this research is that our improved scale includes an important dimension of risk, *information risk*, an aspect present in literature but absent in the research of Forsythe *et al.* (2006).

Globally, our work suggests that Internet shopping is not governed only by rational motivations. Therefore, it is imperative to research the roles of emotion, interpersonal relationships and social involvement in online buying. This effort will certainly require new models of consumer behaviour and methodologies beyond the traditional quantitative techniques.

Our results are based on a small sample and respondents have very specific characteristics that obviously do not mirror those of the populations in the two countries: our respondents are young, they have higher education credentials and easy access to the Internet – a technology they use intensively and feel at ease with. However, they are part of an important group of consumers that will enter the labour market soon and will be taking buying decisions in organizations, families and other influence groups. The results presented in this work should be considered in the light of these factors.

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## Resumo

A Internet é cada vez mais utilizada para efectuar compras. Por isso, é importante e necessário estudar a forma como os consumidores percebem os riscos e os benefícios associados a este canal. Este artigo aborda os benefícios e os riscos percebidos das compras online, em Espanha e na Escócia. Com base em trabalho anterior desenvolvido por outros autores, estimam-se uma escala a três factores para os benefícios percebidos e uma escala a quatro factores para os riscos percebidos. As mulheres tendem a perceber mais as componentes de prazer e aventura associadas à compra online do que os homens, ao mesmo tempo que se mostram mais preocupadas com os riscos associados ao meio. A frequência com que se procura informação sobre produtos na Internet está correlacionada com a forma como se percebem os riscos e os benefícios mas a relação não é a mesma nos dois países. É urgente estudar o papel das emoções, das relações interpessoais e do envolvimento social nas compras online, um esforço que certamente requererá novos modelos para o comportamento do consumidor e metodologias para além das tradicionais técnicas quantitativas.

Palavras-chave: online shopping, benefícios percebidos, riscos percebidos, comportamento do consumidor