PERCEIVED RISK, PRICE AND ONLINE TRAVEL AGENCIES: DOES PRICE ALWAYS MATTER?

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Abstract:
The present study analyzes the influence of price level in the case of online shopping for travel services. The methodology used is a quasi experiment developed in the online environment. The analysis is made within groups and follows three scenarios which depend on the level of brand awareness. Inside each scenario price takes two levels: similar to competition and smaller than competition. Results show that price does not have an influence on all types of perceived risk and that its influence depends also on the brand awareness component.

Keywords: perceived risk, price, online travel agencies, e-commerce, e-tourism.

Introduction

The Internet has changed the way consumers used to do their shopping (Card et al., 2003). Nowadays, people use Internet to shop for products, as well as for services. Travel services have become very popular among consumers using Internet. Being a service defined by a strong information component, tourism found itself at home on the Internet. Thus, it made sense for many travel agencies to go online. For some travel agencies, this was a good move, since now they appeal to a global market as in the case of Booking.com, Hotwire.com, Expedia, Travelocity, Orbitz, CheapTickets, Priceline and others.

Because of this consistent change of the tourism market, traditional travel agencies face now a fierce competition coming from the online environment. A short glimpse at the industry distribution across Europe is relevant for the development of e-tourism: the UK accounted for 30% of the European online travel market in 2008, with Germany in second place at 18%. The direct sellers accounted for 64% of online sales in the European market in 2008, while intermediaries 36%. Considering the structure of the market by type of service in 2008, air travel accounted for 54%, hotels (and other accommodations) for 19.5%, package tours for 15%, rail for 7.5%, while rental cars (and car ferries) accounted for 4%. As far as Central-European countries are concerned, air travel accounted for most of the online shopping, registering an important share of e-commerce revenues in 2008 (Marcussen, 2009).

Price in e-tourism

Ever since Internet started to become an option for consumers to search and buy online travel services, there has been a debate on pricing strategies and consequences upon competition in the market. Availability of information regarding price and product details in the online environment can induce a change in the consumer's behavior, who becomes more and more

informed and searches for the best offer possible, the Internet significantly reducing the search costs. Thus, price sensitivity is expected to increase in the online environment due to the ease of price comparisons on the Web (Cho & Agrousa, 2006). There is a lot of research that supports this new feature of the consumer behavior. For instance, Yesawich, Pepperdine and Brown (2000) found that 60% of leisure travelers are always looking for the lowest price offer. Customers perceive that they get a more favorable price online than offline (Shankar et al., 2002). Convenience, price comparison, and lower prices were identified as the three main reasons why Internet users buy travel products online (Starkov & Price, 2003 in Beldona et al., 2005). Price is, as expected, an important criterion to compare online travel agencies (Kim et al., 2007).

When studying e-commerce adoption in the case of travel services, many researchers revealed that convenience is an important motivator (Moharrer et al., 2006), while safety and privacy are serious concerns and inhibitors (Yang & Jun, 2002; Moharrer et al., 2006, Ku & Fan, 2009; Tsang et al., 2010). Moreover, price is believed to be as well a motivator (Park et al., 2007) for encouraging customers to shop online. Consumers will be attracted to shop online if they feel they get a better deal (Ku & Fan, 2009). Still, consumers expect the lowest price on Internet (O'Connor, 2003) and also expect a congruency between prices from different distributors – large differences between prices of same travel packages can generate a state of uncertainty and increase the level of risk perceived.

Perceived risk in e-tourism

Despite all advantages of Internet as a new distribution channel, there are still people who prefer traditional shopping as they feel a strong need for the travel agent's advice (Card et al., 2003). The reluctance towards Internet shopping is not only due to the lack of human contact, but also due to the cautiousness characterizing people in adopting new technologies in buying travel services. Nevertheless, these people use Internet to get information, to study offers and to evaluate alternatives, finalizing the buying process offline (Nysveen, 2003). One plausible reason could be the double nature of the risk perceived when buying online – not only the risk associated with the service purchased but also the risk coming from the new technology (the Internet).

Perceived risk has been defined in the literature as a subjective risk that emanates from the uncertainty of negative consequences (Bauer, 1960). There are different types of consequences which can be associated with the purchase and consumption of products or services. This is why perceived risk can take multiple facets such as: financial, social, psychological, physical, performance risks (Jacoby & Kaplan, 1972) or time risk (Roselius, 1971). The previously described facets of perceived risk can be both associated to traditional and online shopping. When considering the specific case of online shopping, a tri-dimensional view can be appropriate: risks associated with the product itself, risks associated with the Internet as the purchase mode, and risks associated with the site on which the transaction is made (Lin et al., 2009).

Investigating the online context, Jarvenpaa and Todd (1997) suggested that several perceived risks are specifically or stronger associated with online shopping: economic risk, social risk, performance risk, security risk, and privacy risk, the last two risk dimensions being further detailed.

Security risk is more or less connected to the financial one which basically refers to the probability of losing the money paid for a product

because of product faults or low performance. Security risk can actually be considered as a financial risk with a larger stake. When paying by credit card over the Internet the consumer risks losing all the money in his bank account as his personal information can be stolen by hackers. A secure transaction is what most consumers are concerned of, safety issues in purchasing online travel services are reported as major reasons for not performing any electronic commerce transactions (Tsang et al., 2010).

Regarding privacy risk (also called intimacy risk) comes from the fact that e-shops usually register all personal data of their customers, not only the data they are willing to give when completing the purchase forms, but also data regarding their activity on the website, creating a profile for each customer. This wouldn't be such a big issue if the e-shops used the data only for their own interest. Yet, customer databases are sold to third parties more frequently, exposing consumers to unwanted advertising messages. Even though noted as an important barrier to e-commerce usage, perceived risk does not seem to stop people from buying online travel services (Brown et al., 2007).

Research Methodology

The purpose of this paper is to analyze the role of price in reducing the perceived risk in the context of online buying of tourism services.

Perceived risk can be measured according to previous literature in two manners: one in which perceived risk is indeed a multidimensional construct, and the second, in which each type of risk is assessed independently, with its specific importance. The methodology for measuring perceived risk in this study is the one employed by Jacoby and Kaplan (1972), adapted for the case of travel services sold through e-commerce. The overall perceived risk in purchasing tourism services is the aggregate of several types of risk. When analyzed in e-tourism content, perceived risk has a different structure that should be carefully investigated.

The measurement of perceived risk in our study has three main changes: we eliminated psychological risk and physical risk because our aim was to analyze perceived risk in relation to e-commerce as a distribution channel not to travel services as a product and we adapted the sense of social risk to that of lack of human contact. Moreover, we added the dimension of privacy/security risk and technical risk, which is different from performance risk as we test the way consumers deal with the e-commerce system. Table no. 1 contains the operational definitions of the types of risk included as dependent variables of our research methodology.

The dependent variables in our research are the six components of perceived risk as defined in table no. 1, while the independent variable is represented by the price level. As the main purpose of the research is to test the influence of price level on perceived risk, the independent variable will register two levels. Thus, we have two situations in which respondents have to assess all components of perceived risk: one situation in which the online agency sells online a travel package at a similar price as its competitors and the second in which the price is smaller. Since it is known that brand awareness is a strong factor influencing perceived risk, we controlled for different levels of brand awareness as seen in table no. 2.

Table 1

Dependent variables: perceived risk dimensions' definitions

Type of perceived risk	Assessment question	Measurement scale
Financial	What is the risk of losing money if you buy a travel package online, using the travel agency's website? (because of failure of transaction)	1= very low risk 7= very high risk
Performance	What is the risk that a travel package you bought online, using the travel agency's website, would not correspond with the real services to be offered?	1= very low risk 7= very high risk
Social	What is the risk of taking a wrong decision about a travel package in the case of buying it online, using the travel agency's website, since you do not have a travel agent to advice you?	1= very low risk 7= very high risk
Privacy/ Security risk	What is the risk that during an online transaction using the travel agency's website, your personal would not be transmitted in a secure way?	1= very low risk 7= very high risk
Technical risk	What is the risk that technical problems with the travel agency's website would appear during an online transaction?	1= very low risk 7= very high risk
Overall risk	Overall, considering all sorts of factors combined, about how risky would you say it would be to buy a travel package online, using the travel agency's website?	1= very low risk 7= very high risk

Table 2

Variables involved in the research design: awareness vs. price level

	Price similar to competitors	Price lower than competitors
Known brand – previous customer experience	First case	
Known brand – no previous customer experience	Second case	
Unknown brand	Third case	

The research design is appropriate for a quasi experiment and the analysis was done within groups. Respondents were faced with a scenario description that they had to read (table no. 3 shows the case of a known brand and previous customer experience) and afterwards answer questions about perceived risk types by putting themselves in that hypothetical situation. The experiment was developed in the on-line environment using a convenience sample. There were 151 questionnaires, from which we eliminated 51 due to a large number of non-random missing values. The missing values analysis revealed 10 more questionnaires with one missing value within the 100 questionnaires left, however these where random missing values. Following the methodology recommended in this case we replaced the ten missing values using mean imputation, avoiding the contraction of the sample to 90 cases.

Table 3

Scenario description

Case	Scenario
First case Known brand & previous customer experience	Please think about a travel agency that you know and form which you had bought before. Let us assume that this agency offers you the possibility to but online a travel package at **a similar price to its competitors**. Having this hypothetical situation in mind, please rate the types of risk you perceive in this case.
	Please think about a travel agency that you know and form which you had bought before. Let us assume that this agency offers you the possibility to but online a travel package at **a lower price than its competitors**. Having this hypothetical situation in mind, please rate the types of risk you perceive in this case.

Hypotheses

The hypotheses of this research are grouped in three cases issued from the three levels of brand awareness as mentioned before. The cases will be named A. B, C and will describe the following situations:

A: known brand with previous customer experience

B: known brand with no previous customer experience

C: unknown brand

In each case we will have a variation of the price level: a price similar to competitors and a price lower than the competitors' (figure 1).

As a consequence, respondents were put to answer six types of scenarios due to the three levels of the variable representing brand awareness combined with the two levels of price. This was a within group analysis type which means that all 100 respondents answered all six scenarios.

To test the influence of price level on perceived risk in buying online travel services we compared inside each case variation in levels of perceived risk due to the change in the price level. This can be seen in the following hypotheses:

Case A

HA1. In the case of an unknown brand, the level of price has an influence on all types of perceived risk: performance, privacy, social, financial, technical and overall risk.

Case B

HB1. In the case of a known brand without previous buy, the level of price has an influence on all types of perceived risk: performance, privacy, social, financial, technical and overall risk.

Case C

HC1. In the case of an unknown brand, the level of price has an influence on all types of perceived risk: performance, privacy, social, financial, technical and overall risk.

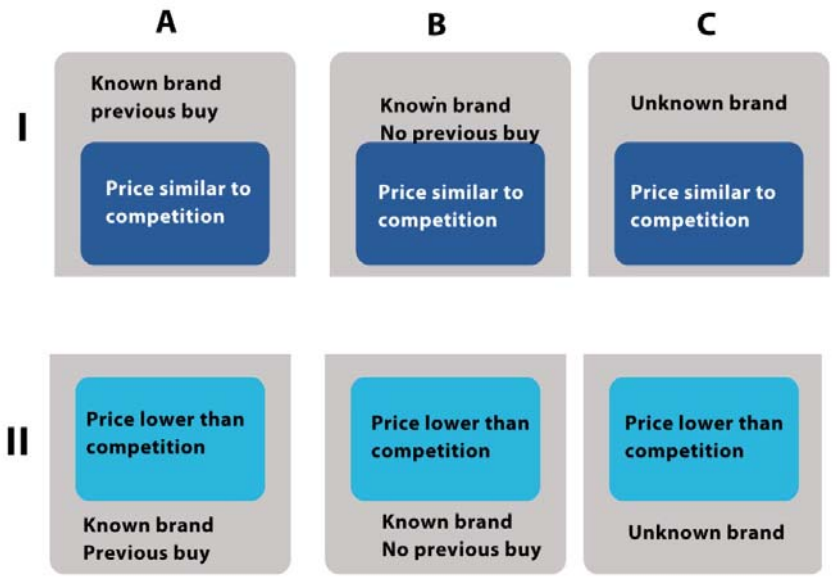

Figure 1. Experimental design

Data analysis

To test the above hypotheses, we first tested for the normality of variables, in order to decide whether to use parametric or non-parametric tests. We performed a Kolmogorov-Smirnov test which proved to be significant for all types of risk (table no. 4), thus resulting a non-normal distribution.

Table 4

Normality check

Type of risk	N	Normal Parameters[a..b]		Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
		Mean	Std. Deviation		
A1_PerformanceRisk	100	3.1300	1.20315	2.052	.000
A1_PrivacyRisk	100	3.5200	1.41049	1.668	.008
A1_FinancialRisk	100	2.7900	1.35061	2.007	.001
A1_SocialRisk	100	3.3300	1.62714	1.697	.006
A1_TechnicalRisk	100	3.2400	1.30361	1.601	.012
A1_OverallRisk	100	3.3400	1.12115	1.892	.002

Having decided what type of distribution we are dealing with, we selected the non- parametric Wilcoxon Signed Ranks test which is the correspondent of the Paired Samples T test, which is a parametric test. We further used the Wilcoxon test to see which hypotheses can be rejected.

The first hypothesis: *HA1. In the case of an unknown brand, the level of price has an influence on all types of perceived risk: performance, privacy, social, financial, technical and overall risk* - was rejected for privacy risk, social risk, technical risk and overall risk (table no. 5)

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Table 5

Wilcoxon test – Case A

A1 – similar price / A2 – lower price	Z	Asymp. Sig. (2-tailed)
A2_PrivacyRisk - A1_PrivacyRisk	-.654[a]	.513
A2_PerformanceRisk - A1_PerformanceRisk	-2.400[b]	.016
A2_FinancialRisk - A1_FinancialRisk	-3.772[b]	.000
A2_SocialRisk - A1_SocialRisk	-.790[b]	.429
A2_TechnicalRisk - A1_TechnicalRisk	-.436[b]	.663
A2_OverallRisk - A1_OverallRisk	-1.912[b]	.056

a. Based on positive ranks. b. Based on negative ranks. c. Wilcoxon Signed Ranks Test

The test was significant only for performance risk and financial risk (table no. 5), which means that there is a significant difference in each type of perceived risk due to the change of price level. As presented in table no. 6, performance risk and financial risk are both higher when the price level is lower than the competitors'.

Table 6

Means for types of risks

	A1 – similar price / A2 – lower price	Mean	N
Pair 1	A1_PerformanceRisk	3.1300	100
	A2_PerformanceRisk	3.3500	100
Pair 3	A1_FinancialRisk	2.7900	100
	A2_FinancialRisk	3.1300	100

The second hypothesis: *HB1. In the case of a known brand without previous buy, the level of price has an influence on all types of perceived risk: performance, privacy, social, financial, technical and overall risk* - was rejected for performance risk, privacy risk, financial risk and overall risk. The test was significant for social risk and technical risk (table no. 7).

Table 7

Wilcoxon test – Case B

	Z	Asymp. Sig. (2-tailed)
B2_PerformanceRisk - B1_PerformanceRisk	-1.284[a]	.199
B2_PrivacyRisk - B1_PrivacyRisk	-.832[a]	.405
B2_FinancialRisk - B1_FinancialRisk	-1.269[a]	.204
B2_SocialRisk - B1_SocialRisk	-2.594[a]	.009
B2_TechnicalRisk - B1_TechnicalRisk	-2.493[a]	.013
B2_OverallRisk - B1_OverallRisk	-1.893[a]	.058

a. Based on negative ranks. b. Wilcoxon Signed Ranks Test

For the types of perceived risk that were found to have a significant difference due to the change of price level, the phenomenon is the same in case B as in case A: risks perceived when the price is lower are higher than when the price is similar to competitors' (table no. 8).

Table 8

Means for perceived risk types

	B1- similar price / B2- lower price	Mean	N
Pair 1	B1_SocialRisk	3.5800	100
	B2_SocialRisk	3.7700	100
Pair 2	B1_TechnicalRisk	3.2700	100
	B2_TechnicalRisk	3.4300	100

The third hypothesis: *HC1. In the case of an unknown brand, the level of price has an influence on all types of perceived risk: performance, privacy, social, financial, technical and overall risk* – was rejected for all types of risk except for the performance risk (table no. 9).

Table 9

Wilcoxon test – Case C

	Z	Asymp. Sig. (2-tailed)
C2_PerformanceRisk - C1_PerformanceRisk	-2.109[a]	.035
C2_PrivacyRisk - C1_PrivacyRisk	-.992[a]	.321
C2_FinancialRisk - C1_FinancialRisk	-.883[a]	.377
C2_SocialRisk - C1_SocialRisk	-.054[a]	.957
C2_TechnicalRisk - C1_TechnicalRisk	-1.486[a]	.137
C2_OverallRisk - C1_OverallRisk	-1.051[a]	.293

a. Based on negative ranks. b. Wilcoxon Signed Ranks Test

The difference in performance risk was found to be significant when the price level changes. As seen in table no. 10, performance risk is higher when price is lower.

Table 10

Mean for perceived performance risk

		Mean	N
Pair 1	C1_PerformanceRsik	4.6800	100
	C2_PerformanceRisk	4.8600	100

Conclusions

The analysis revealed that not all types of risk are influenced by the change in price level. In the first case where we tested the influence of price when the consumers know the travel

agency and have bought at least once from it, there are significant differences only for performance and financial risk. This shows that even if the customer has previous experience with the agency, when it comes to lower prices than the competitors' the customer has doubts and may find the lower price as a source of risk.

The second case where the respondents had to think about an agency that they know, but they did not experience any purchases with it, revealed a difference for social risk and technical risk. The explanation could be that compared with the first situation where they have experience with the agency and they know the agency's personnel, in this case the lack of human contact – social risk – appears to be important. Technical risk rises as significant as well probably due to the same lack of human contact, lack of previous experience which could induce lack of trust into the e-commerce system.

The third case exposed an interesting situation: only one type of risk was found to be influenced by price level and that is performance risk. It looks that when the consumers has no previous contact, no previous information about the agency, the most significant influence of price is reflected in the amount of performance risk that is perceived. This means that the consumer is most afraid of not getting the real services he pays for online on the unknown agency's website.

Limits

There are some important limits of this research that should be mentioned. First of all, being an experimental study there is no claim for representative results. The small sample used is one of the reasons for that. Second of all, the experiment was done within group, which means that the 100 respondents had to answer all six scenarios and that lead to a learning effect which in experiments is a essential problem. Finally, the length of the questionnaire due to the six scenarios previously mentioned was a problem which was reflected in the number of non-valid questionnaires – 51 – that had non-random missing values.

Future research

Future research should concentrate on repeating the experiment using a between groups design in order to eliminate the learning effect. In this way the problem of the questionnaires length will be solved, as each respondent will have to answer to a maximum of two scenarios.

An appealing study could also be one that deals with the interaction effect between price level and brand awareness on perceived risk in e-tourism. Moreover, the research could be further developed to see how perceived risk can influence e-tourism adoption.

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