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Marketing strategies, perceived risks, and consumer trust in online buying behaviour

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ABSTRACT

Despite the rapid increase in online shopping, the literature is silent in terms of the interrelationship between perceived risk factors, the marketing impacts, and their influence on product and web-vendor consumer trust. This research focuses on holidaymakers' perspectives using Internet bookings for their holidays. The findings reveal the associations between Internet perceived risks and the relatively equal influence of product and e-channel risks in consumers' trust, and that online purchasing intentions are equally influenced by product and e-channel consumer trust. They also illustrate the relationship between marketing strategies and perceived risks, and provide managerial suggestions for further e-purchasing tourism improvement.

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1. Introduction

There is a growing need for new knowledge, theories and models of Internet consumer behaviour due to the evolution of electronic commerce as it becomes a vital aspect of customer relations and marketing strategy (Close and Kukar-Kinney, 2010). The online purchasing behaviour needs to be further understood (Herrero and San Martin, 2012) hence, it attracts increasing research attention (Mosteller et al., 2014). As several studies have pinpointed, the key to long-term success for e-retailers is to build consumer trust (Suh and Han, 2003; Pavlou and Fygenson, 2006; Vos et al., 2014), but the latter is negatively influenced by the perceived risks (Hong and Cha, 2013; Kamarulzaman, 2007) associated with both products (Ward and Lee, 2000) and web-vendors (Jiang et al., 2008). Thus, it is important to examine the risk factors affecting trust in Internet shopping, whilst the purchasing intentions of online consumers need to be further investigated.

In tourism, the Internet has considerably altered consumers' behaviour since it gave them the opportunity to directly interact and engage with suppliers and tourist destinations (Buhalis and Law, 2008). Online shopping has changed tourist behaviour since for travel suppliers it represented a new and potentially powerful communication means for product distribution (Law et al., 2004), contributing to the minimisation of the gap between consumers and suppliers (Xiang et al., 2015). Nowadays, tourists use the Internet not only to gather information about tourist products and destinations, but also to buy tourist products, even if this behaviour is less extensive (Law et al., 2010). In 2011 the Internet generated world-wide revenue of more than 340 billion US dollars, establishing it as an important channel for distributing travel and tourism products (Amaro and Durate, 2015). Even if the popularity of Information Technology (IT) has led to extensive research on IT and tourism (Sam Martin and Herrero, 2012), the literature is somehow silent in terms of consumers and their online purchasing intentions (Law et al., 2009; Amaro and Durate, 2015). Thus, further research examining consumer motivations to buy travel and tourism products online is necessary (O'Connor and Murphy, 2004).

The paper focuses on online perceived risks (with reference to travel and tourism products) and synthesises previous research aiming to assess the impact of risks in consumer trust and ultimately in purchasing intentions. In order to achieve this it examines the impact of product (Sparks and Browning, 2011) and web-vendor (Gefen et al., 2003) trust on purchasing intentions (Kim et al., 2008). It also evaluates the effect of product price and quality risks (Sanchez et al., 2006) on consumer trust in products, and in parallel it evaluates web-vendor quality (Ahn et al., 2003; Hong and Yi, 2012) and security (Hong and Yi, 2012) risks with regard to consumers' trust in e-channels. Furthermore, it estimates the effect of marketing strategies (Chikweche and Fletcher, 2010) on risk minimisation associated with both products and web-vendors. The paper contributes to the theoretical domain in two ways.

First it establishes the considerable marketing influence upon the formulation of perceived risks, and the way the latter impact on products and web-vendors. Second, it provides a thorough examination of the way different perceived risks (product price,

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product and web-vendor quality, web-vendor security) are interrelated with each other. From a managerial perspective, the paper also contributes in two ways. First, the study provides substantial evidence for the impact of perceived risks in consumer trust. Finally it enhances our understanding of product and web-vendor consumers' trust in terms of the purchasing intention formulation.

2. Conceptual framework and hypotheses

2.1. Marketing strategies

The literature suggests that appropriate advertising may change the attitudes of consumers towards a specific product (Petty et al., 1983) and decrease the perceptions of product risk (Kopalle and Lehmann, 2006). Even if both direct and indirect marketing can play an important role in consumer decision making, direct marketing initiatives may be more influential in purchase determination than media based methods such as television, radio and print (Brown and Reingen, 1987; Chikweche and Fletcher, 2010). In addition, marketing can significantly influence consumer beliefs about product performance (Nerkar and Roberts, 2004) and finally determine their likelihood to buy (Leenders and Wierenga, 2008). Still, product performance and quality are aspects also connected with branding. The perceived quality of the product is associated with its brand, since consumers evaluate the quality of a product in terms of its brand name (Huang et al., 2004). This creates a causal relationship for many consumers that a recognised brand is usually associated with a high quality product and good performance (or usability), thus, a good brand strengthens the benefits which are expected of a potential purchase (Rubio et al., 2014).

In online shopping, with the passage of time the variety of marketing channels is increasing, as is the complexity of consumers' purchasing behaviour (Coughlan et al., 2001). Consumers tend to switch between e-channels when buying products mainly because of the considerably increased financial, security and performance risks the Internet presents in comparison with offline shopping (Lee, 2009). Thus, they tend to buy the products and use the web-vendors that offer high quality and low risk (Chiu et al., 2011). As a result, e-retailers adjust their marketing strategies and focus on the minimisation of product and web-vendor risks (Chikweche and Fletcher, 2010; Chiu et al., 2011). Still, little is known about the impact of marketing strategies on perceived risks with respect to products and online channels. These discoveries led to the creation of the following hypotheses:

H1. Product marketing strategies have a negative impact upon product price risks.

H2. Product marketing strategies have a negative impact upon product quality risks.

H3. Web-vendor marketing strategies have a negative impact upon web-vendor quality risks.

H4. Web-vendor marketing strategies have a negative impact upon web-vendor security risks.

2.2. Product risks

One of the key elements in buying behaviour is risk (Kumar and Grisaffe, 2004; Pires et al., 2004) which is defined as an attribute of an alternative decision reflecting the variance of its possible outcomes (Gefen et al., 2002). As Dholakia (2001) suggests, perceived risk is somehow involved in all purchase decisions, especially in those where the outcome is uncertain. In online shopping, the consumers who prefer Internet transactions to traditional purchasing are the ones who have low-risk avoidance profiles (Juan, 1999). Thus, whenever consumers alternate, postpone, or cancel their purchase, it is an important indication that they perceive the existence of risk (Hong and Yi, 2012).

Online consumers perceive more risks than those shopping in stores for three reasons: (i) they cannot examine the product before they receive it, (ii) they are concerned about after-sales service, and (iii) they may not fully understand the language used in e-sales (Hong and Yi, 2012). In online purchasing it is impossible for the consumers to evaluate the product quality, because no actual contact for further clarifications with a salesperson is possible (Gutierrez et al., 2010), whilst the e-buyers can not examine the product in person before they receive it (Hong and Yi 2012). As a result, perceived risks have been found to significantly affect the purchasing decisions of online consumers (Antony et al., 2006). This justifies the rationale that in numerous cases online consumers decide to make their purchase only after walking into a store and touching, feeling, or even trying out the product (Kim et al., 2008). When this is not possible because of the product characteristics (i.e. intangibility in tourism industry products), online consumers try to gather as much information as they can before purchasing, whilst they also engage in customer-to-customer (C2C) communication, especially with respect to price and quality (Bjork and Kauppinen-Raisanen, 2012). Moreover, e-commerce itself has intangible qualities, leaving consumers uncertain that a chosen product will both fit their needs and meet their expectations (Weathers et al., 2007). As a consequence, the perceived product risks are greater when the provided product information is limited and consumers have a low level of self-confidence in their brand evaluation (Bhatnagar and Ghose, 2004).

The product elements that crucially determine the consumers' purchasing decisions are price and quality (Sanchez et al., 2006). In terms of price, as the monetary value of the product increases, the perceived risks involved in purchasing the product also increase (Dowling, 1999). The financial risk deals with “the likelihood of suffering a financial loss due to any hidden costs, maintenance costs or replacement cost due to the lack of warrantee and a faulty product” (Kiang et al., 2011). In parallel, the qualitative aspects of a product place value on its final performance, where expectations are compared to the result (Sanchez et al., 2006). Quality is connected with performance risk, and concerns the potential failure of a product to meet the expected quality/performance requirements (Kiang et al., 2011). Hence, the following hypotheses have been formulated:

H5. Product price risks have a negative impact upon product consumer trust

H6. Product quality risks have a negative impact upon product consumer trust

The price–quality schema (according to Lichtenstein et al. (1993, p.236), this is “the generalised belief across product categories that the level of the price cue is related positively to the quality level of the product”) indicates that consumers use price for the evaluation of overall product excellence or superiority (Zeithaml, 1988). Thus, price–quality schema does not focus on actual product quality, but on the consumer's belief in the relationship between quality and price (Lichtenstein and Burton, 1989). As also indicated by Kim and Jang (2013) many consumers perceive that price and quality are highly correlated. The consumers develop these beliefs through their own consumption experiences (Smith and Natesan, 1999), and are likely to pursue high priced products in an effort to achieve better quality (Hauck and Stanforth, 2007). As a result, the correlation of price and quality plays an important role in consumer decision making,

affecting judgements of perceived quality, and influencing perceived value and purchase intention (Zhou et al., 2002). Considering all the above, the study proposes that the relationship between a product's price and quality (the price–quality schema) also exists with regard to price and quality risks. Thus, the following hypothesis has been formulated:

H7. Price and quality risks are interrelated and positively influence one another.

2.3. Web vendor risks

The online purchasing process turns consumers into both product buyers and users of web-based technologies (Wu, 2013). When using the Internet to purchase products, the fundamental risks are associated with privacy issues (Pantano, 2014; 6, P, 2002), the degree to which consumers perceive that using the online environment will be secure (Taylor and Strutton, 2010), the inability of buyers to directly interact with the seller, the difficulty of navigation (Forsythe et al., 2006) the time spent searching for information, and uncertainty about the after sales service warrantee compared with more traditional ways of shopping (Hong and Yi, 2012). Especially in products that are characterised by intangibility (such as in tourism) the perceived risks increase considerably (Laroche et al., 2004), thus services are thought to be riskier to purchase than goods (Mitchell and Greatorex, 1993). The provided product information is important for the minimisation of perceived purchasing risks, thus potential buyers tend to collect and consider more information about the sources' trustworthiness when relatively high product risks are involved (Wang and Chang, 2013). Moreover, the consumers' level of trust in the online platform, and in its safety and security, helps to construct a psychological belief in the e-vendor which ultimately determines the likelihood of a sale being made (Hong and Cho, 2011). Taking into consideration these issues, the research has formulated the following hypotheses:

H8. Web-vendor quality risks have a negative impact upon web-vendor consumer trust.

H9. Web-vendor security risks have a negative impact upon web-vendor consumer trust.

Risk and quality issues are also related to the website vendor themselves (Ahn et al., 2003). The online consumers are likely to purchase from e-vendors that they can trust and recognise the quality of the provided products and services (Jiang et al., 2008). As suggested by Golmohammadi et al. (2012), website vendors need to promote client trust in their provided service quality, in an effort to reduce the perceived risk as this is a vital antecedent for consumer online purchase intention. Thus, e-retailers need to develop mechanisms able to ensure customer privacy and secure money transfer along with the provision of high quality services (Kerkhof and Van Noort, 2010). These relationships were expressed in the following hypothesis:

H10. Web-vendor quality and security risks are interrelated and positively influence one another.

Perceived risk is very important for e-consumers (Doolin et al., 2005) since it is considered as a product-specific variable and varies in terms of product ambiguity and price (Finch, 2007). Kothandaraman and Wilson (2001) suggest that the ideal purchase is the one that has a highly beneficial impact for the consumer, and offers low risk. As indicated by Bhatnagar and Ghose (2004), online shopping magnifies perceived risks, it increases the influence of positive and negative aspects dealing with Internet purchase, and heavily impacts on consumers' final decision. Moreover, all factors that e-retailers use for lowering risks, influence consumer's purchasing behaviour, since different types of risks interact with one another (Crespo et al., 2009; Lin et al., 2010). In addition, the way products are handled by e-retailers and their vendors significantly influence the risk perceptions of customers (Ramanathan, 2011). Thus, product and web-vendor perceived risks are interrelated, whilst Woodwall (2003) identifies risk as a determinant for the perception of values and identification of benefits in purchasing intentions. From a managerial perspective, the comprehension of e-consumers' risks and the way they react to risks can assist e-retailers to optimise their business strategies and prospects (Comegys et al., 2006). These findings have led to the formulation of the following hypotheses:

H11. Product price risks and web-vendor quality risks are interrelated and positively influence one another.

H12. Product price risks and web-vendor security risks are interrelated and positively influence one another.

H13. Product and web-vendor quality risks are interrelated and positively influence one another.

H14. Product quality risks and web-vendor security risks are interrelated and positively influence one another.

2.4. Consumer trust

Aspects of trust have been examined in numerous studies in many different fields, such as economics, management, technology, social and institutional contexts, consumer behaviour and psychology (Kim et al., 2008). Trust is based on the buyer's expectations that the seller will not have an opportunistic attitude and take advantage of the situation, but will behave in a dependable, ethical and socially appropriate manner, fulfilling his commitments despite the buyer's vulnerability and dependence (Gefen et al., 2003). Thus, the consumers' perspectives on trustworthiness are likely to determine the final purchasing decision between a buyer and a seller (Gupta et al., 2009). According to Li et al. (2014), trust is even more important for online than for offline retailers, since consumers perceive more risk in e-commerce due to their inability to visit a physical store and examine the product they are interested in buying. It plays a crucial role in determining online purchasing intentions (Hong and Cho, 2011) and shopping decisions (Buttner and Goritz, 2008). Trust is also the key-point for the development of customer loyalty and the establishment of strong and long-lasting relations between buyers and sellers (Santos and Fernandes, 2008). In contrast, a lack of trust is the greatest barrier to consumers making online transactions (Urban et al., 2009). When deception or negative purchasing experiences occur, buyers generate negative attitudes (Gao and Bai, 2014), they no longer trust the seller, and they are likely to turn to alternatives for the fulfilment of their needs and desires (Lee, 2014).

Online retailers place considerable emphasis on consumer trust, since they are more reluctant to purchase the products in which they are interested (Park et al., 2012). Examining the relevance of trust and purchasing intention, Komiak and Benbasat (2004) have concluded that cognitive trust (which focuses on consumers' beliefs based on rational expectations of online retailers' attributes) impacts on emotional trust (which addresses consumer attitudes and emotional feelings), which further impacts upon purchase intention. Moreover, the trust level of buyers exposed to inconsistent product information and revisions significantly influences their purchase intention (Zhang et al., 2014). As a result, the critical role of trust in the determination of consumers' purchasing intentions is affected by satisfaction with both

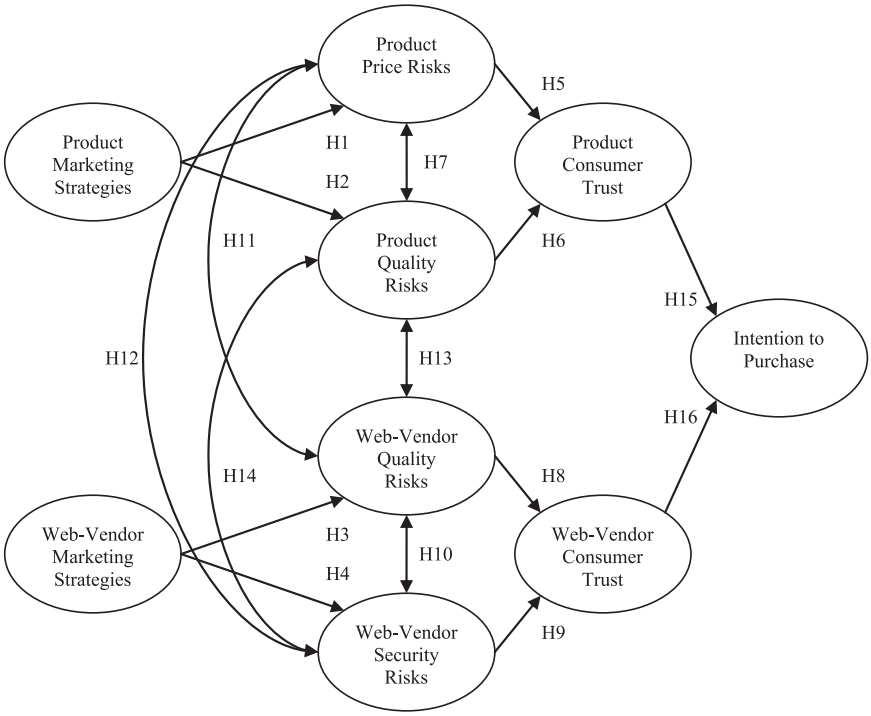


Fig. 1. The proposed model.

products and online stores (Wu, 2013). Thus, if sellers want consumers to buy their products (purchase decision and money transfer), they need to pass the threshold for trustworthy behaviour (Bente et al., 2012). All of the above led to the formulation of the following hypotheses:

H15. The consumer's trust in products has a positive impact on the intention to purchase.

H16. The consumer's trust in web-vendors has a positive impact on the intention to purchase.

2.5. Intention to purchase

In e-retailing, the importance of trust in consumer purchasing decisions is of significant interest to retailers (Park et al., 2012), since it is considered to be the most important factor influencing buying behaviour (Benedicktus et al., 2010; Kim et al., 2012). Understanding the purchase intention of consumers is crucial because their final buying behaviour can be predicted from their intention (Bai et al., 2008). Consumers decide whether they intend to proceed with a purchase based upon the information available to them (Kim et al., 2008). In addition, when risk is involved, the extent of the trust consumers place in the sources of information and the provided recommendations and reviews influences their final purchasing decision (Wang and Chang, 2013), since a reduction in performance and financial risks leads to an increased possibility of a potential purchase (Suwelack et al., 2011). Moreover, the quality and quantity of the provided information positively affects consumers' purchase intention (Park et al., 2007). Currently, e-retailers focus not only on persuading consumers to use vendor websites that sell their products, but also on motivating consumers to make repeat purchases through these channels (Chiu et al., 2012). Thus, it is important to further examine online consumers' perspectives with regard to products offered and to web-vendors, also connecting them with the trust factors affecting the intention to buy online.

3. The proposed model

The model is a combination of the Theory of Planned Behaviour (TPB), which is an extension of the theory of reasoned action (Ajzen and Fishbein, 1980), and the Perceived Risk Theory (PRT), based on the undesirable impacts of uncertainty in the process of making a purchasing decision (Bauer, 1960).

According to TPB, individuals intend to perform a given behaviour (in our case the consumer's intention to purchase), whilst the generated assumptions from these intentions aim to identify and explain the motivational factors that influence this behaviour (Ajzen, 1991). The ability of TPB to predict human behaviour has led to its application in several research fields, including online retailing (Picazo-Vela et al., 2013), since it is considered to be one of the most widely used models for the explanation and prediction of individual behavioural intention and acceptance of Information Technology (Hsu et al., 2006). TPB has also been used to predict the intention of consumers to purchase tourism products, and foresee the impact of several factors such as risk and uncertainty in travel decision making (Quinta et al., 2010).

In PRT the potential risks associated with the purchasing process influence consumers' decisions (Yu et al., 2012). Cunningham (1967) suggested that the extent of a perceived risk is dependent on the size of the potential loss. According to Bauer (1960), in order for consumers to reduce uncertainty when information is limited and when they do not expect potentially favourable consequences during the shopping process, they develop or adopt strategies for the reduction of risk. Thus, consumers adopt information handling as a strategy for risk reduction; either they seek new information, or they refer to and evaluate already existing information (Cox, 1967). In terms of online shopping, the consumers “seek and assess information regarding product performance through virtual product experience in order to reduce risk and increase certainty that the consequence of product performance will be favourable” (Yu et al., 2012, p. 253). In PRT, the components of perceived risk are finance (price), product performance (quality), physical, privacy and time loss related (Kaplan et al., 1974), but online transactions do not incur any physical risk,

such as threat to human life (Lee, 2009). Thus in this study PRT has focused on the remaining four perceived risks, divided between product (financial) and web-vendor (privacy; time loss) risks, whilst the performance aspects have been examined for both products and e-channels.

Fig. 1 illustrates the model of the study, which has its theoretical basis in TPB and PRT and builds on previous research by Ahn et al. (2003), Chikweche and Fletcher (2010), Gefen et al. (2003), Hong and Yi (2012), Kim et al. (2008), Sanchez et al. (2006), and Sparks and Browning (2011). It suggests that the online intention to purchase (with special reference to tourism products) is influenced by the extent of product and web-vendor trust, whilst trust constructs are formulated from the product (in terms of price and quality) and web-vendor (in terms of quality and security) perceived risks, and the interaction amongst them. Finally it proposes that marketing strategies, focused on both products and e-vendors, can directly influence the extent of perceived risks.

4. Method

4.1. Participants

The research focused on holidaymakers returning to Manchester international airport who had used the Internet in order to book a part (i.e. travel, accommodation, destination tourism activities) or the whole spectrum of their holidays. The research was conducted during June and July 2014. This study used structured personal interviews with structured questionnaires as the most appropriate method of obtaining the primary data. Personal interviews were the best method of achieving the study's objectives since they are the most versatile and productive method of communication (Pappas, 2014). They facilitate spontaneity and also provide the potential to guide the discussion back to the outlined topic when discussions are unfruitful (Sekaran and Bougie, 2009). The participants' selection was based on an exclusion question at the beginning of the interview which asked whether they had used online purchasing of tourist products for their current vacations. Although the proportion of missing data was low, listwise deletion (the entire record is excluded from the analysis) was used because this is the least problematic method of handling missing data (Allison, 2001).

4.2. Sample determination and collection

Appropriate representation was a fundamental criterion in determining the sample size. According to Akis et al. (1996), when there are unknown population proportions, the researcher should choose a conservative response format of 50/50 (meaning the assumption that 50 per cent of the respondents have negative perceptions, and 50 per cent have not) to determine the sample size. The same study indicates that the maximum acceptable sampling error should not exceed five per cent. As a result, a confidence level of at least 95 per cent and a five per cent sampling error were selected. Moreover, for researches with a minimum of 95 per cent confidence level (and five per cent sampling error) the *t*-table gives as cumulative probability (*Z*) 1.96 (Sekaran and Bougie, 2009). Following Akis et al. (1996) sample determination formula, the sample size was

$$N = \frac{Z^2(hypothesis)}{S^2} \Rightarrow N = \frac{1.96^2(0.5)(0.5)}{(0.5)^2} \Rightarrow N$$

$$= 384.16 \textbf{ Rounded to 400}$$

The calculation of the sampling size is independent of the total population size, hence the sampling size determines the error (Aaker and Day, 1990). Participants were approached in the airport's train station (400 people), bus station (400 people), and car parking facilities (400 people). Of the 1200 holidaymakers asked, 735 completed the questionnaire (response rate: 61.25 per cent). The overall statistical error for the sample population was 3.6 per cent.

4.3. Measures

The questionnaire was based on prior research, and consisted of 41 Likert Scale (1 strongly agree/7 strongly disagree) statements, plus one exclusion question concerning online purchasing of tourist products. The reliability and validity of this selection rationale is supported by studies such as Kyle et al. (2003) and Gross and Brown (2008). The statements were selected from seven different studies. These studies were those of: Chikweche and Fletcher (2010) for the statements evaluating the product and web-vendor marketing strategies, Sanchez et al. (2006) for the statements dealing with product risks in price and quality, Ahn et al. (2003) and Hong and Yi (2012) for the statements focusing on web-vendor quality risks, Hong and Yi (2012), for the statements examining the web-vendor security risks, Sparks and Browning (2011) for the statements focusing on product consumer trust, Gefen et al., (2003) for the statements addressing web-vendor consumer trust, and Kim et al. (2008) for the intention to purchase statements.

4.4. Data analysis

The collected data were analysed using descriptive statistics (means, standard deviation, kurtosis, skewness), factor analysis, and regression. The research and components' validity and reliability were examined using KMO-Bartlett, loadings and Cronbach A, whilst a Structural Equation Model (SEM) was also implemented. The findings were significant at the .05 level of confidence.

4.5. SEM analysis

Structural Equation Modelling (SEM) using MPlus was employed due to the multivariate nature of the proposed model and the examination of the relationships between the model constructs, since the main advantage of SEM “is its capacity to estimate and test the relationships among constructs” (Weston and Gore 2006, p. 723). As Gross and Brown (2008) suggest, the multivariate statistical analysis of SEM is capable of measuring the concepts and the paths of hypothesised relationships between concepts. According to Wang and Wang (2012), when using MPlus it is best to measure the grouping variables as continuous, and also to measure those assessed through a five-point (or more) Likert Scale in this way, although they are in fact ordered categorical measures. Thus, the study measured the variables as continuous. As suggested by Anderson and Gerbing (1992) a two-step approach was adopted. The first part dealt with the assessment of the factor structure of each of the measurement models using Confirmatory Factor Analysis (CFA). The examined constructs for the determination of model fit were: product marketing strategies, web-vendor marketing strategies, product price risks, product quality risks, web-vendor quality risks, web-vendor security risks, product consumer trust, web-vendor consumer trust, and intention to purchase. Then, the complete structural model was examined for the identification of causal relationships among the constructs, and the determination of structural model fit.

5. Results

The descriptive statistics (Table 1) reveal that the most important aspect for consumers, with regard to product marketing activities, is the branding of the actual product (PMA3: 2.18), whilst direct marketing has a considerably higher influence on purchasing decisions (PMA1: 2.29) than 'above the line' promotions (PMA2: 3.02). The findings are similar for web-vendor marketing activities in terms of branding (WMA3: 1.78), and promotional activities (WMA1: 2.05; WMA2: 2.72). Moreover, the results have identified that the most important concerns for consumers are to purchase a tourism product at a reasonable price (PPR2: 1.42) which is also of sufficient quality when compared with other similar products (PQR3: 1.51). On the other hand, the main determinants for selecting an e-channel are the extent to which the web-vendor reduces consumers' uncertainty by creating a feeling of trust (WQR4: 1.52), keeps its promises (WQR3: 1.70), and understands its users' specific needs (WQR5: 169). In terms of security, consumers' main fear seems to be potential online fraud (WSR5: 1.88). The significance of trust was also pinpointed by the results, whilst the product orientation (PCT1–PCT4) seems to be more important for the final purchase than web-vendor trust (WCT1–WCT4). Finally, the participants agreed that they would continue to buy products online (IP1: 2.24; IP3: 2.07), and also suggest this shopping pattern to their friends (IP2: 1.90).

5.1. Model fit

In order to ensure that the data support the relationships amongst the observed variables and their respective factors, the model had to examine the individual factors. The most common measure of SEM fit is the probability of the χ^2 statistic (Martens, 2005), which should be non-significant in a good fitting model (Hallak et al., 2012). Since the research sample was big ($N=735$), the ratio of χ^2 divided by the degrees of freedom (χ^2/df) was considered a better estimate of goodness-of-fit than χ^2 (Chen and Tsai, 2007). According to Schermelleh-Engel et al. (2003), a good fit is provided if $0 \leq \chi^2/\text{df} \leq 2$. Other model fit indices were also used in the analysis. These were

1. The Comparative Fit Index (CFI), which specifies no relationships among variables, and indicates a better fit when it is closer to 1.0 (Weston and Gore, 2006).
2. The Root Mean Square Error of Approximation (RMSEA), where a value of .05 or less reflects a model of close fit (Browne and Cudeck, 1993).
3. The Standardised Root-Mean-Square Residual (SRMR), which is the square root of the discrepancy between the sample covariance matrix and the model covariance matrix, and should be less than .08 (Hu and Bentler, 1999).

As recommended by Kline (2010) amongst several other indices, these four (χ^2, CFI, RMSEA, and SRMR) are the most appropriate for the examination and evaluation of model fit. The CFA results have shown that the χ^2 model value was 312.844 with 189 degrees of freedom ($p<.01$) and the χ^2/df ratio was 1.655, providing a good fit. The remaining model fit indicators were CFI=.922, RMSEA=.041, and SRMR=.075 ($p<.01$), indicating a model of good fit.

Factor analysis was used in an effort to focus on the important components of the research (Table 2). Thus, for higher coefficients, absolute values of less than .4 were suppressed. The correlation matrix revealed numbers larger than .4 in 37 out of 41 statements, and four of them did not score over .4, which is the minimum acceptable value (Norman and Streiner, 2008). The KMO of Sampling Adequacy was 0.892 (higher than the minimum requested .6 for further analysis), whilst statistical significance also existed ($p<.01$). In order to examine whether several items that propose to measure the same general construct produce similar scores (internal consistency), the research also made an analysis using Cronbach's Alpha, where the overall reliability was .828 and all variables scored over 8 (minimum value 7; Nunnally, 1978).

The research model explains the endogenous variables of the study (Fig. 2): product price risks ($R^2=.316$), product quality risks ($R^2=.432$), web-vendor quality risks ($R^2=.335$), web-vendor security risks ($R^2=.453$), product consumer trust ($R^2=.487$), web-vendor consumer trust ($R^2=.420$), and intention to purchase ($R^2=.558$). For the correlated constructs, discriminant validity was also employed. The research revealed ten item pairings. The average inter-item correlation was .40, whilst the individual correlation rating was from .32 to .50. For the examined factors of Product Price Risks (PPR), Product Quality Risks (PQR), Web-vendor Quality Risks (WQR), and Web-vendor Security Risks (WSR) the average inter-item correlation results are the following: PPR–PPR=.48; PQR–PQR=.50; WQR–WQR=.44; WSR–WSR=46; PPR–PQR=37; PPR–WQR=36; PPR–WSR=33; PQR–WSR=40; PQR–WQR=32; and WSR–WQR=34.

The calculation of discriminant validity revealed that

$$\frac{PPR-PQR}{\sqrt{PPR-PPR\times PQR-PQR}}=\frac{0.37}{\sqrt{0.48\times 0.50}}=0.75$$

$$\frac{PPR-WQR}{\sqrt{PPR-PPR\times WQR-WQR}}=\frac{0.36}{\sqrt{0.48\times 0.44}}=0.78$$

$$\frac{PPR-WSR}{\sqrt{PPR-PPR\times WSR-WSR}}=\frac{0.33}{\sqrt{0.48\times 0.46}}=0.70$$

$$\frac{PQR-WSR}{\sqrt{PQR-PQR\times WSR-WSR}}=\frac{0.40}{\sqrt{0.50\times 0.46}}=0.83$$

$$\frac{PQR-WQR}{\sqrt{PQR-PQR\times WQR-WQR}}=\frac{0.32}{\sqrt{0.50\times 0.44}}=0.68$$

$$\frac{WSR-WQR}{\sqrt{WSR-WSR\times WQR-WQR}}=\frac{0.34}{\sqrt{0.46\times 0.44}}=0.76$$

According to Pappas (2014), if the discriminant validity is less than .85 the examined constructs do not overlap, meaning that they measure different things. The results indicate that discriminant validity exists in all components. Considering all the above, this model is able to evaluate the importance of the examined factors.

5.2. Hypothesis testing

As shown in Fig. 2 most hypotheses have been confirmed. More specifically, product marketing strategies have a negative impact upon product price risks (H1: $\beta=.235$; $p<.01$) and product quality risks (H2: $\beta=.203$; $p<.01$). In parallel, web-vendor marketing activities also negatively affect perceptions of web-vendor risk associated with quality (H3: $\beta=.258$; $p<.01$) and security (H4: $\beta=.197$; $p<.01$). Product price risks have the only positive interrelationship with product quality risks (H7: $\beta=.287$; $p<.05$), whilst they negatively influence product consumer trust (H5: $\beta=.247$; $p<.05$). Product quality risks have two positive interrelationships, with web-vendor's quality (H13: $\beta=.325$; $p<.01$) and security risks (H14: $\beta=.178$; $p<.05$), whilst they have a negative impact upon product consumer trust (H6: $\beta=.352$; $p<.01$). Web-vendor quality risks positively interrelate with web-vendor security risks (H10: $\beta=.314$; $p<.05$), and have a negative influence on web-vendor consumer trust (H8: $\beta=.278$; $p<.01$). The

Table 1
Descriptive statistics.

	Statement	Means	Std. dev.	Kurtosis	Skewness
Product Marketing Activities					
PMA1	Direct marketing activities (i.e. direct mail and e-mails) influence my online purchasing decisions	2.29	.563	.835	.734
PMA2	The 'above the line' promotional activities (i.e. TV and radio advertisements) influence my online purchasing decisions	3.02	.573	.945	.780
PMA3	The tourism product's branding influences my online purchasing decisions	2.18	.437	.831	−.915
PMA4	The online promotions influence my decision to select the tourist product/package I intend to buy	2.35	.254	.−635	.830
PMA5	The offline promotions influence my decision to select the tourist product/package I intend to buy	2.97	.659	−.893	.911
Web-Vendor Marketing Activities					
WMA1	Direct marketing activities (i.e. direct mail and e-mails) by web-vendors influence the e-channel I select when buying tourism products	2.05	.580	1.205	−.837
WMA2	The 'above the line' promotional activities (i.e. TV and radio advertisements) by web vendors influence the e-channel I select when buying tourism products	2.72	.681	−.720	.742
WMA3	The branding of web-vendors influences the e-channel I select when buying tourism products	1.78	.366	.832	.789
WMA4	The online promotions influence my decision to select a particular e-channel when buying a tourist product/package	2.15	.482	1.089	.866
WMA5	The offline promotions influence my decision to select a particular e-channel when buying a tourist product/package	2.63	.395	1.132	−1.147
Product Price Risks					
PPR1	I think about the risk of not having made a good purchase bearing in mind the price I pay	1.75	.705	1.251	.985
PPR2	The tourist product/package I purchase should be reasonably priced	1.42	.823	−.795	−.880
PPR3	The price is the main criterion for my purchasing decision	2.43	.634	−.980	1.304
Product Quality Risks					
PQR1	When buying a tourist product/package I consider the potential risks in the way the product/package is organised	1.70	.492	.789	.973
PQR2	When buying a tourist product/package I consider the potential risk that I will not receive what I expected	1.55	.420	.821	−.765
PQR3	When buying a tourist product/package I consider its quality compared with other relevant tourist products/packages	1.51	.389	.969	−1.077
Web-Vendor Quality Risks					
WQR1	It is important that the Website vendor provides detailed information	1.82	.537	.858	.917
WQR2	It is important that the Website vendor provides accurate information	1.97	.599	−.927	.780
WQR3	It is important that the Website vendor can be depended upon to provide whatever is promised	1.70	.846	−.658	.751
WQR4	It is important that the Website vendor creates a feeling of confidence in users through the reduction of uncertainty (i.e. joint problem-solving)	1.52	.735	1.074	.586
WQR5	It is important that the Website vendor understands and adapts to the user's specific needs	1.69	.623	1.125	−746
WQR6	It is important that the website vendor deals with high quality products	2.46	.410	.880	.978
WQR7	It is important that the Website vendor deals with various tourism products	2.88	.455	.832	.753
WQR8	Purchasing online would involve a trivial payment procedure when compared with more traditional ways of shopping	2.21	.361	.742	.758
WQR9	Purchasing online would involve taking more time to seek out information when compared with more traditional ways of shopping	5.28	.450	.841	.532
Web-Vendor Security Risks					
WSR1	Purchasing online involves the risk of credit loss when compared with more traditional ways of shopping	2.55	.782	.835	.864
WSR2	Purchasing online involves the risk of loss of private information when compared with more traditional ways of shopping	4.06	.698	.815	.689
WSR3	Purchasing online involves after sales service warrantee risks when compared with more traditional ways of shopping	3.87	.438	−.934	.901
WSR4	In general, providing credit card information through online shopping is riskier than providing it over the phone to an offline vendor	4.85	.482	−734	1.239
WSR5	Purchasing online involves the risk of fraudulent behaviour on the part of the website owner(s)	1.88	.711	.910	1.014
Product Consumer Trust					
PCT1	The tourist product/package I purchased is trustworthy	1.85	.573	1.235	.853
PCT2	The tourist product/package I purchased is reliable	1.69	.824	−.845	.963
PCT3	The tourist product/package I purchased fills me with confidence	1.65	.466	−.773	.828
PCT4	The tourist product/package I purchased gives me the impression that it is of good quality	1.57	.553	−.695	−.934
Web-Vendor Consumer Trust					
WCT1	Shopping online is a trustworthy method of shopping	2.95	.688	.792	.813
WCT2	The Website vendor I use gives the impression that they are honest	2.87	.548	.897	−.836
WCT3	The Website vendor I use gives the impression that they care for their users	2.41	.492	.811	−.955
WCT4	The Website vendor I use gives the impression that they have the ability to fulfil my needs	2.56	.776	.798	.663
Intention to Purchase					
IP1	I am likely to purchase tourism products online	2.24	.512	1.290	.907
IP2	I am likely to recommend online shopping to my friends	1.90	.587	.933	1.070
IP3	I am likely to make another online purchase if the products I buy prove to be useful	2.07	.474	.967	1.003

negative impact of web-vendor security risks on web-vendor consumer trust was also confirmed (H9: β=.345; $p<.01$). Finally, the intention to purchase is positively influenced by both product (H15: β=.357; $p<.01$) and web-vendor (H16: β=.311; $p<.01$) consumer trust.

Two hypotheses were not confirmed. These dealt with the construct of product price risk and its interrelationship with web-vendor risk in terms of quality (H11: β=.189; $p>.05$) and security (H12: β=.226; $p>.05$).

6. Discussion

6.1. Theoretical issues

The study contributes to the theoretical domain in two different ways. The first focuses on the impact of marketing strategies upon perceived risks. To begin with, the research establishes the significant influence of marketing upon the formulation and extent of product (H1; H2) and web-vendor (H3; H4) perceived risks. Thus, it provides evidence that marketing can contribute to a reduction in the financial, security and performance risks involved in Internet transactions, as suggested by Lee (2009). In addition, marketing strategies appear to mostly influence product price (H1) and web-vendor quality (H3) risks. Moreover, the impact on consumers of direct marketing activities focusing on both products (PMA1) and web-vendors (WMA1) is considerably higher than that for 'above the line' (PMA2; WMA2) promotional initiatives. These findings confirm the results of previous studies such as Brown and Reingen (1987), and Chikweche and Fletcher (2010). Still, with regard to the examined activities, the brand names of products (PMA3) and e-channel branding (WMA3) seem to have the greatest influence. Even if the importance of branding has been highlighted previously (Huang et al., 2004), it seems that in online retailing branding associations are the main marketing determinants for the minimisation of perceived risks.

The second contribution concerns the examination of the interrelationship between perceived risks. As the findings indicate, not only do interrelationships exist between the risks within groups of products (H7) and web-vendors (H10), but product and web-vendor risks also positively influence one another (H13; H14). Furthermore, H7 extends the price–quality schema, as expressed

Table 2
Cronbach's Alpha and loadings produced by factor analysis.

Statement	Cronbach's Alpha	Product Marketing Activities	W-vendor Marketing Activities	Product Price Risks	Product Quality Risks	W-vendor Quality Risks	W-vendor Security Risks	Product Consumer Trust	W-vendor Consumer Trust	Intention to Purchase
PMA1	.826	.735								
PMA2		.797								
PMA3		.612								
PMA4		.805								
PMA5		.747								
WMA1	.829		.642							
WMA2			.587							
WMA3			.650							
WMA4			.698							
WMA5			.534							
PPR1	.820			.723						
PPR2				.795						
PPR3				.742						
PQR1	.831				.839					
PQR2					.904					
PQR3					.756					
WQR1	.838	Eliminated from factor analysis based on a low commonality				.344				
WQR2						.721				
WQR3						.623				
WQR4						.802				
WQR5						.556				
WQR6						.728				
WQR7						.670				
WQR8		Eliminated from factor analysis based on a low commonality				.281				
WQR9						.644				
WSR1	.817						.478			
WSR2							.507			
WSR3		Eliminated from factor analysis based on a low commonality					.315			
WSR4							.579			
WSR5							.482			
PCT1	.824							.611		
PCT2								.745		
PCT3								.798		
PCT4		Eliminated from factor analysis based on a low commonality						.267		
WCT1	.835								.877	
WCT2									.820	
WCT3									.913	
WCT4									.842	
IP1	.817									.851
IP2										.866
IP3										.847
Total rotation sums of squared loadings		4.204	4.764	5.017	6.563	5.356	6.248	5.285	6.821	6.967
Percent of total variance explained		11.863	10.258	12.637	16.290	12.763	15.364	14.963	16.750	15.142

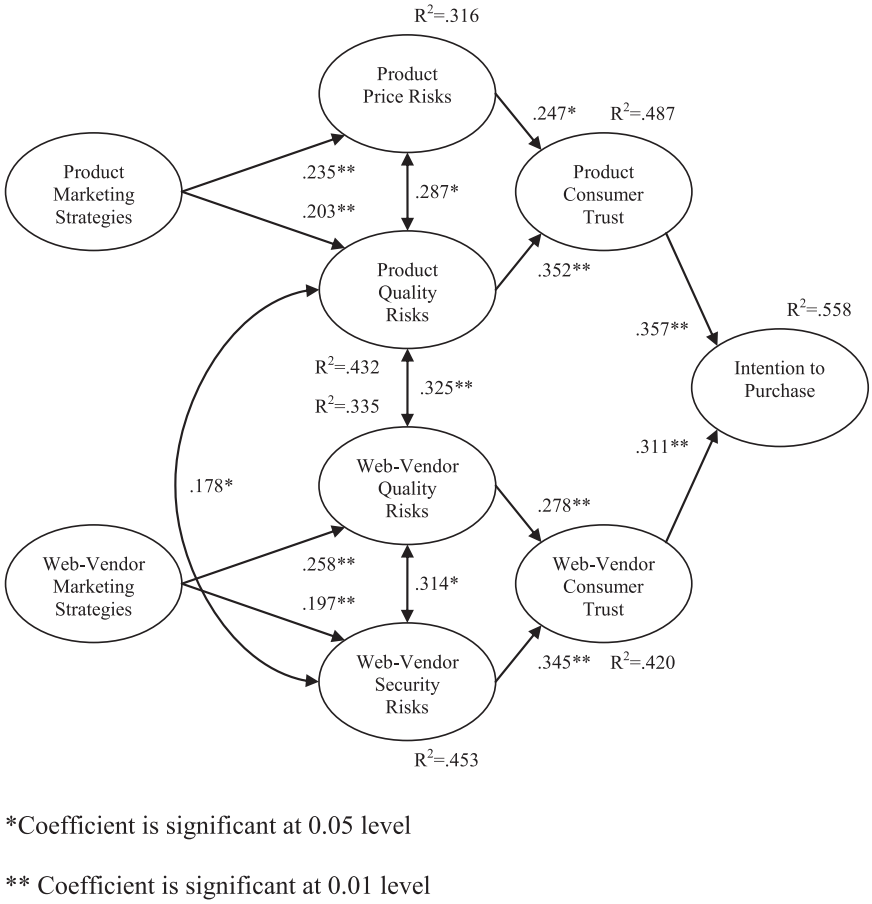


Fig. 2. Risk and marketing influences in online buying behaviour. *Coefficient is significant at 0.05 level, ** coefficient is significant at 0.01 level.

by Lichtenstein (1993), from product orientation to risks. In contrast, product price risks have no interrelationship with web-vendor risks (H11; H12), whilst product quality risks interrelate with both web-vendor constructs, underlining the significance of quality aspects in online transactions. The findings also confirm the existence of perceived risk components (financial, performance privacy and time loss), as presented by Kaplan et al. (1974) and Lee (2009). Amongst product related risks, the most important appears to be the financial risk associated with reasonable price (PPR2), followed by the performance risks of quality comparison with similar products (PQR3) and the expected performance result (PQR2). In terms of web-vendors, the quality aspects of confidence through uncertainty reduction (WQR4), the coverage of users' specific needs (WQR5) and the need for e-channels to keep their promises (WQR3) have been highlighted as the most important. Concerning security, the potential for online fraud (WSR5) was the most important risk according to the responses of the examined population. These findings are in accordance with the results from the studies of Hong and Cho (2011), Taylor and Strutton (2010), and Wang and Chang (2013), which also present the importance of web-vendors' trustworthiness and consumers' concern for potential fraud during online transactions.

From a managerial perspective the first contribution of the study concerns the influence of perceived risks on consumer trust. Even if the impact of risks upon trust has been repeatedly discussed in the literature (Hong and Cho, 2011; Dowling, 1999; Laroche et al., 2004; Kiang et al., 2011), this study reveals that product (H5; H6) and web-vendor oriented risks (H8; H9) influence trust (and ultimately purchasing decisions) to almost the same extent. More specifically, amongst the product risks the quality construct seems to have a higher impact (H6) upon product consumer trust. However, for risks associated with the web-vendor, the importance of the security construct (H9) overweighs the quality aspects (H8) in terms of the influence on web-vendor consumer trust.

Finally, the study contributes to the understanding of product and web-vendor consumers' trust with regard to the formulation of purchasing intention. As the results indicate, product (H15) and web-vendor (H16) trust almost equally influence the consumers' intention to purchase. The most important aspect for holiday-makers when selecting tourist products/packages is their quality (PCT4) and the impression that the web-vendor cares about its users (WCT3). Thus, as also stated by Gefen et al. (2003), the findings confirm that an opportunistic attitude on the part of e-retailers will result in a decrease in consumer trust with a parallel reduction in willingness to purchase, and finally a considerable loss of clients. Conversely, if buyers are satisfied with their online purchase, they are likely to suggest this mode of shopping to their friends (IP2). This is the pathway to further e-retailing development and the strengthening of online shopping.

6.2. Managerial implications

The study identifies a number of managerial implications which could help e-retailers with the development of further online sales and reduction of the risks perceived by consumers. The findings suggest that online retailers should mainly focus their marketing strategies on the strengthening of the brand image of both products and web-vendors. The development of trustworthiness in online transactions is considerably affected by branding aspects, as they seem to be the main factors involved in minimising the perceived risks involved with both products and web-vendors. As suggested by Li et al. (2014), this is due to the fact that trust is more important

for online than for offline retailers, because of the higher perceived risk in using e-commerce. This risk perspective is even higher for services such as tourism, due to their intangible character. Moreover, retailers should mainly (but not only) focus on direct marketing campaigns since their influential impact upon risk formulation is higher in an online environment. The provision of detailed and accurate information for the products of interest combined with reasonable prices and the consumer's expectation of a beneficial purchase can further boost Internet sales.

The interrelationship of risk aspects and their influence on consumers' trust formulation is one more issue e-retailers need to focus upon. As the results indicate, consumer trust is equally important for products and e-channels, and is similarly affected by perceived risks. Furthermore, the interrelated positive influence of risk is shown to have an effect in the whole spectrum of risk and finally the formulation of trust constructs. Thus, companies that sell their products on the Internet need to understand that trustworthy web-vendors can increase the perceived quality of the products they sell. Accordingly, good quality products are likely to assist in online uncertainty reduction, increase trust in the web-vendor that sells these products, and strengthen the feeling that e-channels care for their users and understand their specific needs.

7. Conclusion

The study has examined the influence of marketing on the development of perceived risks in online buying behaviour and the formulation of consumers' trust. By using TPB and PRT it has presented the interrelationships between risk factors and the creation of Internet purchasing intentions, with a special focus on tourist products. It has also evaluated the impact of marketing strategies upon the minimisation of perceived risks associated with both products and e-vendors. Moreover, it has illustrated the formulation of product and e-channel related consumer trust, and the extent to which it is influenced by perceived financial, performance, security and time loss risks. This study has contributed further understanding of the way in which online risks can be influenced by marketing strategies, and ultimately have an impact upon purchasing intentions, especially in tourism where consumers perceive the products to be high risk.

Despite the research contribution, the limitations of the study need to be highlighted. First, the examination of different e-channels, product brand names or destination images can produce different outcomes. Thus, if this study is repeated for specific website vendors or tourism products and destinations the research implementation should be made with caution. Second, further research into e-retailers and different stakeholder groups (i.e. social media and online purchasing channel administrators, tourism and hospitality enterprises selling their products both online and in high streets, tour operators, etc.) may produce different outcomes. Thus, the interpretation of findings should be made carefully. Finally the inclusion of respondents' personal characteristics, such as frequency of, and familiarity with, online purchasing or disposable income for tourism activities, could further contribute to the evaluation of e-buying intentions and perception variations. Such examination could provide useful findings for the formulation of e-buyers' perspectives and purchasing behaviour.

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