



# Understanding purchasing intentions in secondary sports ticket websites

## Keywords

sports website  
perceived risk  
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## Executive summary

The online sports ticket market is one of the most important revenue sources for professional teams in the sports industry. One aspect of online ticketing is the secondary market, which has increasingly received attention from sports marketers as it is rapidly growing as one of the main methods used by sports fans to purchase game tickets. Given this growth,

## Abstract

The purpose of this study was to examine purchasing intentions in online sports ticketing websites. Based on previous research related to business-to-consumer (B2C) e-commerce, this study developed a conceptual model to test the effect of perceived risk, trust and the Technology Acceptance Model (TAM) on purchase intentions in online secondary ticket websites. College students (N = 251) from the northeastern region of the United States were chosen as the sample. Structural Equation Modeling (SEM) was used to investigate the proposed relationships among four major components (i.e. perceived risk, trust, TAM and behavioural intention). The results showed that there were positive effects of key TAM constructs (i.e. perceived usefulness and ease of use) and trust on purchasing intention, but perceived risk was not a significant indicator of purchase intention.

it is important for sports marketing professionals to understand what factors influence users' buying behaviours in the secondary ticket market. No previous study into sports ticketing has focused solely on consumers' buying behaviours in relation to secondary ticket websites.

The current study developed a conceptual model



of user purchasing intention with various potential secondary ticket website variables. In previous e-commerce studies, researchers have focused on two main components to understand user attitude and behavioural intention toward e-commerce websites: (1) consumer acceptance of information technology (e.g. Davis, 1989) and (2) consumer adoption of e-service (e.g. Featherman & Pavlou, 2003).

This study integrated these two components into a structural model and tested the relationships among them. Specifically, the proposed model included the Technology Acceptance Model (TAM) and the key determinants of consumers' adoption of e-services (i.e. perceived risks and trust) to understand users' purchasing decision-making processes with online secondary ticket websites.

The proposed model was tested based on data from a convenience sample of college students (N=251) located in the northeastern region of the United States. The participants answered several sections of a questionnaire, including experience related to secondary ticket websites, extended TAM variables (i.e. perceived ease of use, perceived usefulness, behavioural intention, perceived risks, and trust), three control variables (i.e. knowledge of online shopping, frequency of online shopping, and reputation of the online shopping website) and demographic variables. Structural Equation Modeling (SEM) was utilised to examine the proposed relationships between each constructs, followed by a two-step procedure suggested by Anderson and Gerbing (1988).

The results revealed that the relationships among three key constructs in TAM were statistically significant and positive (H1a -1c), consistent with the findings in previous studies (e.g. Holden & Karsh, 2010). As expected, trust positively influenced perceived ease of use (H3a), perceived usefulness (H3b) and purchasing intentions (H3c), but it was also found to be negatively related to perceived risk (H3d). The impact of perceived risk was significant on perceived ease of use (H2b), but its impact was not significant on perceived usefulness (H2a) and purchasing intentions (H2c).

The findings of this study both extend the scholarly research in this area and assist sports practitioners by providing them with a better understanding of purchasing behaviours related to secondary sports ticket websites. In addition to other important results detailed in the study, a key finding is that trust was a more influential factor than perceived risk in terms of affecting users' purchasing intentions. This implies that a trustful relationship between sellers and buyers is key in consumer engagement with secondary ticket website transactions. Therefore, sports industry professionals engaged in selling online tickets need to develop technology tools to prevent online scams and fraud and to enhance the level of website trust (e.g. through a fan protection policy) held by prospective and current consumers.

## Introduction

The online ticket market has witnessed significant growth over the past several years and become a vital revenue source for sports industry leagues and teams (Ozanian, 2011). Specially, the secondary ticket market has received a huge amount of attention from sports marketers and fans and it is considered a new business model by attracting both buyers and sellers (Drayer, Stotlar & Irwin, 2008). The online secondary ticket market can be described as "ticket transactions where the seller is reselling previously purchased tickets and is not officially affiliated with the league or team associated with the event" (Drayer et al., p.235). Of late, several secondary ticketing websites, such as StubHub and Ticketmaster, have contractual relationships with various major professional leagues (e.g. MLB, NBA) where they are authorised to sell tickets that season ticket holder may not want or need. The size of the secondary ticket market has been estimated to be as much as \$3 billion per year (Belson, 2011).

Drawing on the above perspective, it is important for sports marketers and scholars to be cognisant of users' consumption decisions in online secondary



ticket websites. Recent empirical studies in sports management and marketing literature have investigated on online sports consumers' behaviours in different contexts such as website service quality (Hur, Ko & Valacich, 2011), website motivation (Seo & Green, 2008) and website content (Filo, Funk & Hornby, 2009). However, none of these studies has been solely focused on consumers' psychological perspectives related to online ticketing behaviours. Therefore, the present study specifically investigated consumers' buying intentions in online secondary ticketing and attempted to discover what factors induce sports fans to visit and buy secondary tickets online.

To understand consumers' buying behaviours in business-to-consumer (B2C) e-commerce, two important components have been the focus of previous studies in the areas of Management Information Systems (MIS) marketing and communication: (1) consumer acceptance of information technology (e.g. Davis, 1989) and (2) consumer adoption of e-service (e.g. Featherman & Pavlou, 2003). Even though a great deal of attention has been given to understanding each component or theme, few studies have investigated their aggregate impact on e-commerce, and there has been a lack of understanding of the relationships among them. This study therefore sought to examine how the two independently and collectively influence consumers' potential purchase behaviours in the online secondary sports ticket setting.

Regarding the two components mentioned above, consumer acceptance of internet technology can be described as "consumer's engagement in electronic exchange relationship with web retailers" (Pavlou, 2003, p.71), including various technology-based activities such as searching contents, selecting information, finding products and purchasing products. To understand this perspective, the Technology Acceptance Model (TAM) has been adopted from numerous studies and has been well established as a theoretical framework with three major variables (perceived ease of use, perceived usefulness and intention to use) in various online contexts (Gefen, Karahanna & Straub, 2003; Holden & Karsh, 2010).

In the same manner, this study – based on the assumption that TAM can be a useful and relevant tool to understanding the technology-driven context for e-commerce in the secondary online ticket market – adopted TAM as a theoretical framework for the evaluation of the three major variables.

In addition to the consumer acceptance of internet technology, the component related to consumers' adoption of e-service is related to consumer reactions and perceptions of e-service beyond acceptance of technology (Featherman & Pavlou, 2003), which is more focused on consumers' various psychological perspectives in online transaction process. Although TAM is the well established theoretical framework, TAM only predicts system usage, heavily relying on technological issues related to consumers' use of e-commerce (Ha & Stoel, 2009). It is therefore necessary to search consumer psychological constructs that impact overall consumer decision on e-commerce. In determining which factors significantly affect consumers' adoption of e-service in secondary ticket buying behaviours, it is proposed that perceived risk and trust are key determinants.

While there are many pragmatic benefits of the online secondary ticket marketplace, sports fans also may be exposed to different types of risk, such as technological problems, ticket frauds and scams and the divulging or release of personal information. These perceived risks would significantly reduce the intention to purchase. So how can perceived risk in secondary ticket websites be reduced? Scholars in e-commerce have postulated that building trust is one solution (Kim, Ferrin & Rao, 2008). Previous studies have also supported that these two factors (i.e. perceived risk and trust) are fundamental components in predicting buying behaviour in e-commerce (e.g. Glover & Benbasat, 2011).

In summary, the major contributions of this study are two-fold: (1) to build a theoretical foundation and develop a conceptual model in the burgeoning technological area of online secondary ticket websites; and (2) to integrate key determinants of consumers' e-service adoption factors (i.e. perceived risks and



trust) with the well established e-commerce model (i.e. TAM) to gain a more holistic view of users' purchase decision-making processes in online secondary ticket websites.

### Literature review and hypotheses development

#### The secondary ticket market for sports events

Most sports fans know that there are two general categories or places in the market to buy sports event tickets: the primary ticket market and the secondary ticket market. Fans can buy game tickets at local ballparks or through websites before a game starts (i.e. primary ticket market). Fans can also buy tickets from someone who already bought a ticket but for some reason is interested in reselling the ticket (so it becomes a 'secondary ticket'). The latter market has dramatically grown and become quite popular within the sports industry and among sports fans. For example, almost 8 million MLB game tickets were sold on secondary ticket site StubHub.com in 2011. This figure is more than a 30% increase over the previous year (King & Fisher, 2011).

The online secondary ticketing provides various advantages to sports fans such as availability, affordability, customisation, authenticity and convenience (Sutton, 2011). In terms of examining this from the perspective of the buyers, with the online secondary ticket option they can often find a variety of ticket price options and can even at times secure a ticket that is lower than the official face value (i.e. original price) of the ticket. With several selection options on websites, online buyers can determine the number of games they would like to buy at their expected price range. From the perspective of the sellers, the online secondary ticket option helps season ticket holders sell any unused or undesired tickets they may have already purchased. For instance, there are few season ticket holders who are able to attend the entire season of games in MLB, as there are 81 home regular season games.

Based on these benefits, it can be expected that the secondary ticket market will increasingly be the major destination for sports ticket sales. Thus, it is critical for sports industry practitioners to find out the answer to several questions. For instance, how do consumers adopt the technology in online secondary ticket websites? What factors affect sports fans' potential ticket purchases in online secondary ticketing websites?

#### Technology Acceptance Model (TAM)

TAM was initially developed to predict user adoption of information technology (IT) (Davis, 1989). Because the measure of actual usage of technology is challenging (Davis), TAM utilised users' behavioural intentions to use IT as the main outcome of interest. It contained two key constructs – Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) – to predict behavioural intention. PU is a measure of “the prospective user's subjective probability that using a specific application system will increase his or her job performance within an organisational context” (Davis et al, 1989, p.985). Furthermore, as noted by Davis, PEOU is “the degree to which a person believes that using a particular system would be free of effort” (p.320). The model is constructed in that PU and PEOU positively lead users' behavioural intentions and PEOU has a positive effect on PU.

TAM has been successfully applied as one of the most preeminent models to predict intentions to use IT, supported by numerous empirical studies in various technology-related contexts over the past two decades (e.g. Davis, 1989; Ha & Stoel, 2009; Venkatesh & Davis, 2000). The studies consistently found that PU and PEOU are two major antecedents to predict behavioural intention in e-commerce, including positive relationship between PEOU and PU. For example, Gefen et al. (2003) confirmed that PEOU and PU are significant determinants of intention to use in online shopping settings (e.g. CDs, e-books). Regarding the relationship between PEOU and PU, Davis (1989)



indicated that PEOU can be an antecedent factor of PU because the easier and simpler the system is to use, the more useful and beneficial consumers perceive it to be. According to Featherman and Pavlou (2003), PEOU is a relative indicator of cognitive effort and development required to learn and utilise new information technologies. Thus, aspects of PU such as productivity, performance and effectiveness can be increased by improvements related to PEOU (Davis, 1989). In addition, empirical studies have consistently supported the positive impact of PEOU on PU (e.g. Ha & Stoel, 2009; Im, Kim & Han, 2008).

Given the wide variety of application in the previous studies, it is assumed that TAM can be also applied to online secondary ticketing websites. Based on this notion, the following hypotheses were formulated:

- H1<sub>a</sub>: Perceived usefulness has a positive effect on behavioural intention in online secondary sports ticketing.**
- H1<sub>b</sub>: Perceived ease of use has a positive effect on behavioural intention in online secondary sports ticketing.**
- H1<sub>c</sub>: Perceived ease of use has a positive effect on perceived usefulness in online secondary sports ticketing.**

Even though TAM is well-established and explains a fairly large variance of online purchase intentions (Holden & Karsh, 2010), the model could not capture other important components influencing consumers' potential buying behaviour due to the parsimony of the model (Vijayasathy, 2004). Thus, many studies attempted to extend the model with fundamental antecedents of technology acceptance (Venkatesh & Bala, 2008). Based on previous literature (e.g. D' Alessandro, Tiangsoongnerin & Girardi, 2012), the current study investigated two major antecedent variables of TAM – perceived risk and trust, which are related to users' psychological perspectives on secondary ticketing websites. Beyond TAM, these two variables would add valuable knowledge by explaining why sports fans would buy (or not buy) tickets through secondary sports ticket websites.

### **Perceived risk**

Online users are likely to perceive more anxiety or uncertainty when they have transactions on the internet due to the absence of face-to-face interaction and the intangibility of products (Lee & Turban, 2001). For these reasons, perceived risk has been considered one of the major factors affecting consumers' reluctance to use a certain website and this has been investigated in different e-commerce contexts (e.g. Belanche et al, 2012). Jarvenpaa, Tractinsky and Vitale (2000) examined intermediary strategies to develop trust in websites and denoted that perceived risk has a negative effect on perceived usefulness in the online shopping environment. Featherman and Pavlou (2003) also found that perceived usefulness and intention to use e-commerce were both significantly impacted by perceived risk. Additionally, other studies have revealed that perception of risk is negatively associated with consumers' perceived usefulness or perceived ease of use before purchasing products or services (e.g. Li & Huang, 2009). Li and Huang (2009) examined the antecedents of consumers' purchase intentions in the business-to-customer segment of online shopping and found that there was a negative relationship between perceived risk and perceived ease of use.

With secondary ticket websites there is an assumption that different types of perceived risk make sports fans hesitant to purchase. For example, consumers may perceive potential risks such as being charged additional administration fees (i.e. financial risk), encountering a technological transaction error (i.e. performance risk), or having personal information mishandled or misused (i.e. privacy risk). These negative factors could increase consumers' uncertainty of transaction and potential dangers to use, which prevents evaluating service value and utility (e.g. perceived usefulness, perceived ease of use) and making a decision to purchase (e.g. purchasing intention) (Featherman & Pavlou, 2003). Thus, the following hypotheses were proposed:



- H2<sub>a</sub>: Perceived risk has a negative effect on perceived usefulness in online secondary sports ticketing.**
- H2<sub>b</sub>: Perceived risk has a negative effect on perceived ease of use in online secondary sports ticketing.**
- H2<sub>c</sub>: Perceived risk has a negative effect on purchase intention in online secondary sports ticketing.**

#### **Trust**

In addition to perceived risk, trust has been investigated as a major variable in the online shopping context (e.g. D'Alessandro et al, 2012; Ha & Stoel, 2009; Kim et al, 2008). The level of trust online is usually lower in e-commerce settings than it is in face-to-face interactions and stores (Naquin & Paulson, 2003) because the two parties (i.e. buyer and seller) cannot see each other online, which usually increases the uncertainty of the transaction. In online transactions, consumers often need to put in personal information such as a credit card number, phone number, address and so on, before purchasing a product. Without trust, it is hard for users to complete e-commerce transactions.

Previous studies have suggested that trust towards web content providers would be one of significant antecedents of perceived usefulness and perceived ease of use (e.g. Awad & Ragowsky, 2008; Gefen & Straub, 2003). Without strong confidence in the provider, users are reluctant to utilise a website, which leads to a discontinuance of their search or purchase task. On the other hand, trustful providers could increase the likelihood of users' expectancy that they could safely use the website (Gefen et al., 2003). Previous studies have also shown a user's high level of trust increases the positive attitude toward service providers and behavioural intention towards products (Awad & Ragowsky, 2008). Another study (Hallegatte & Nantel, 2006) attempted to investigate the relationships between perceived usefulness, perceived ease of use and trust in a website on intention to return. They showed trust in a commercial website

has a positive impact on the perceived ease of use and perceived usefulness of the website. Lai, Huang, Lu and Chang (2013) also discussed the impact of trust on consumers' online booking intentions. The results of their study indicated that consumers' website trust has a direct positive effect on perceived ease of use and perceived usefulness.

Secondary sports ticket websites are exposed to numerous online frauds and piracy. Therefore, users want to be sure that their online transactions are secured and protected. Trust in a website increases users' visits to the website and purchase of products from the website (Pavlou, 2003). The establishment of trust between two parties is critical to success in the secondary sports ticketing business. This notion led to the following hypotheses:

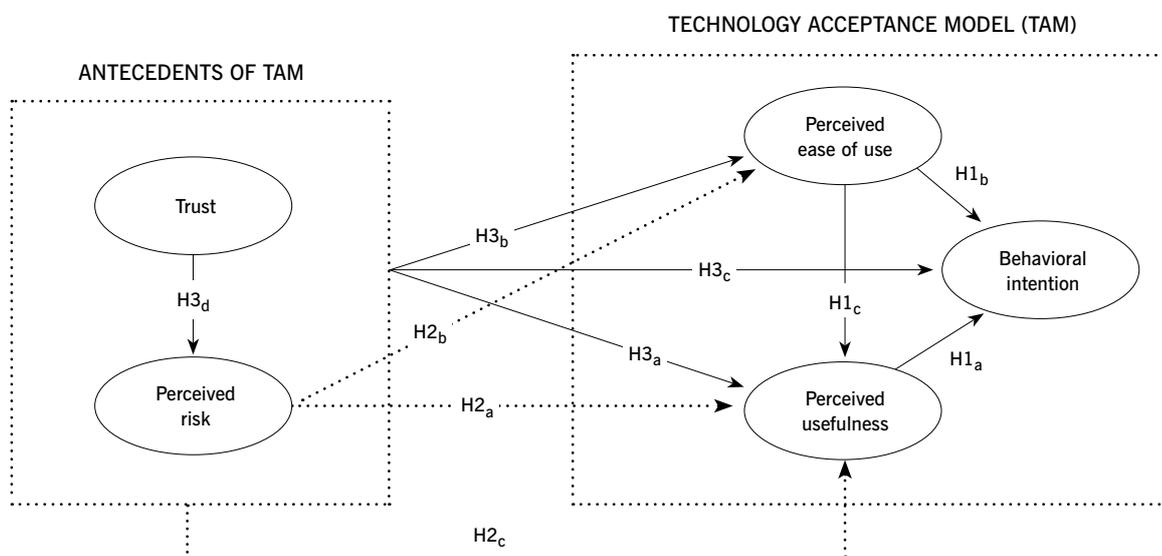
- H3<sub>a</sub>: Trust has a positive effect on perceived usefulness in online secondary sports ticketing.**
- H3<sub>b</sub>: Trust has a positive effect on perceived ease of use in online secondary sports ticketing.**
- H3<sub>c</sub>: Trust has a positive effect on purchase intention in online secondary sports ticketing.**

Trust is also closely related to perceived risk and recent studies have modelled these two constructs together in e-commerce research (e.g. D'Alessandro et al, 2012; Glover & Benbasat, 2011). In general, research along this line has suggested that trust is an antecedent of perceived risk, rather than the other way round. For example, in an early online shopping study, Jarvenpaa et al (2000) mentioned that online shoppers are more likely to perceive less risk if the website provides trust-enhanced content. Consequently, reduced perceived risk enhances users' willingness to engage in web searching and finally increases the chance of resulting in some type of buying behaviour. As a result, the following hypothesis is presented.

- H3<sub>d</sub>: Trust has a negative effect on perceived risk in online secondary sports ticketing.**



**FIGURE 1** Conceptual model involving TAM and the antecedents of TAM (e.g., perceived risk, trust) in secondary sports ticket websites. The dotted line implies a negative relationship.



Including all the hypotheses above, the research model of the current study is detailed in Figure 1. The research model was divided into two parts: (1) TAM and its associated three major components (i.e. perceived usefulness, perceived ease of use and purchase intention) and (2) the antecedents of TAM including perceived risk and trust.

### Control variables

In previous studies related to TAM, other variables have been considered significant and positive antecedents of purchasing intentions involving e-commerce. Examples of these variables include knowledge of online shopping (Ranaweera et al, 2005), frequency of online shopping (Pavlou et al, 2007) and reputation of the online shopping website (Pavlou et al, 2007; Shim et al, 2001). Therefore, the present study included these factors as control variables.

### Methodology

#### Sample

To test the conceptual model, the sample was selected at an institution of higher education in the northeastern region of the United States. The subjects – who were majoring in business administration and sports management at the college – were asked to fill out a questionnaire related to their activities on one of the secondary ticket websites. From this sample, 291 responses were collected and 40 responses were eliminated due to incomplete survey questionnaires and/or the subjects' lack of experience in purchasing tickets from secondary ticket websites; 251 responses were deemed usable for analysis.

#### Measurement

The questionnaire was designed to three sections: (1) experience related to secondary ticket websites (2) extended TAM variables, including perceived ease of use, perceived usefulness, behavioural intention,



perceived risks (i.e. financial risk, performance risk and privacy risk), trust and three control variables (i.e. knowledge of online shopping, frequency of online shopping and reputation of the online shopping website) (3) demographic information.

To access experience related to secondary ticket websites, respondents were asked to answer whether they had ever purchased game tickets through secondary ticket websites. If the answer was yes, they were also asked to list the names of the websites. For the second section, respondents were asked questions related to the main constructs of the research model. The TAM measures (i.e. perceived ease of use, perceived usefulness and behavioural intention) were adopted and revised from Gefen et al (2003). The scales to measure perceived risk were modified from Featherman and Pavlou (2003), including three sub-constructs: financial risk, performance risk and privacy risk. The scale of trust contained three items adopted and modified from Jarvenpaa et al (2000). Regarding control variables, the scales for knowledge of online shopping and frequency of online shopping were adopted and modified from the research conducted by Wang, Chen and Jiang (2009). The scale related to the reputation of the online shopping website was adopted and modified from the work by Pavlou (2003). All items of measurements are included in Table 1.

#### Data analysis

The Statistical Package for the Social Science (SPSS) 20.0 and AMOS 20.0 were utilised to examine the data and psychometrics of the scale. Descriptive statistics (e.g. demographic information) and internal consistency reliability (e.g. Cronbach's alpha) were examined by SPSS. To evaluate the conceptual model, the study followed a two-step procedure suggested by Anderson and Gerbing (1988). The first step was to validate the measurement model using Confirmatory Factor Analysis (CFA) (e.g. reliability, convergent validity, discriminant validity). The second step applied Structural Equation Modeling (SEM) to examine the proposed relationships between each constructs.

## Results

### Common method bias

Common method variance can cause a potential source of systematic measurement error providing a wrong relationship among proposed constructs (Podsakoff et al, 2003). Because this study was based on self-reported data with a cross-sectional research design, it was essential to evaluate possible common method bias (Lindell & Whitney, 2001; Podsakoff et al, 2003). Malhotra, Kim and Patil (2006) mentioned that there are two commonly used statistical techniques in recent information system literature to evaluate common method variance: (1) Harman's one factor test (e.g. Jayachandran et al, 2005) and (2) partial correlation analysis using marker variable (e.g. Jayachandran et al, 2005; Lindell & Whitney, 2001). In this study, the survey questionnaire did not contain a possible marker variable, so the researchers used Harman's single-factor test which involves an exploratory factor analysis (EFA) of all items to "determine whether the majority of the variance can be accounted for by one general factor" (Podsakoff et al, 2003, p.890). The results of this testing revealed that no single factor explained most of variance (the first and largest factor accounted for less than 30 % of the variance), suggesting that there was no common method bias. Moreover, the CFA also confirmed that the single-factor model did not fit the data well ( $\chi^2$  (230)=2596.392,  $p$ =.000, GFI= .53; IFI/Delta2 =. 53; TLI= .48; RMSEA=.20). The researchers found that the potential impact of common methods variance on the findings of the research was not a pervasive issue.

### Confirmatory factor analysis (measurement model test)

The measurement model was tested using CFA. To assess the goodness-of-fit and the parsimony of the model, the Standardised Root Mean Square Residual (SRMR), CFI, IFI and TLI were examined, which



**TABLE 1** Items of construct, Cronbach's Alpha ( $\alpha$ ), factor loading ( $\beta$ ), construct reliability (C.Rel) and Average Variance Extracted (AVE)

FACTOR ( $\alpha$ )	ITEMS	$\beta$	C.REL	AVE
<b>FINANCIAL RISK (.92)</b>	Using an Internet bill-payment service subjects your checking account to financial risk. (FinRK1)	0.85	0.93	0.81
	My signing up for and using the website would lead to a financial loss for me. (FinRK2)	0.95		
	Using an Internet bill-payment service subjects your checking account to potential fraud. (FinRK3)	0.89		
<b>PERFORMANCE RISK (.88)</b>	The website might not perform well and may create a problem with my credit. (PerRK1)	0.83	0.88	0.71
	The security systems built into the website are not strong enough to protect my checking account.	0.86		
	The website servers may not perform well and process payments incorrectly. (PerRK3)	0.85		
<b>PRIVACY RISK (.95)</b>	Using the website will cause you to lose control over the privacy of your payment information.	0.93	0.95	0.87
	My signing up for and using the website would lead to a loss of privacy for me because	0.95		
	Internet hackers might take control of my checking account if I used this website. (PriRK3)	0.93		
<b>PERCEIVED EASE OF USE (.93)</b>	The website is easy to use. (PEU 1)	0.79	0.94	0.79
	It is easy to become skillful at using the website. (PEU 2)	0.91		
	My Interaction with the website is clear and understandable. (PEU 3)	0.92		
	It is easy to interact with the website. (PEU 4)	0.92		
<b>PERCEIVED USEFULNESS (.96)</b>	The website would enhance my effectiveness in my job. (PU1)	0.92	0.96	0.87
	The website would make it easier to do my job. (PU2)	0.95		
	The website to be useful in my job. (PU3)	0.94		
	The website would improve my performance in my job. (PU4)	0.92		
<b>TRUST (.93)</b>	Based on my experience with the website in the past, I know it is honest. (Trust1)	0.91	0.93	0.82
	Based on my experience with the website in the past, I know it cares about customers. (Trust2)	0.88		
	Based on my experience with the website in the past, I know it is trustworthy. (Trust3)	0.93		
<b>BEHAVIORAL INTENTION (.92)</b>	I predict I would use the website. (BI1)	0.87	0.92	0.8
	I intend to use the website. (BI2)	0.9		
	The website would be one of my favourite technologies for my work. (BI3)	0.92		
<b>KNOWLEDGE OF ONLINE SHOPPING (.93)</b>	I am familiar with online shopping. (KOS1)	0.89	0.93	0.83
	I have sufficient knowledge for online shopping. (KOS2)	0.96		
	I understand the online transaction security issues. (KOS3)	0.88		
<b>FREQUENCY OF ONLINE SHOPPING (.83)</b>	I buy merchandises online frequently. (FOS1)	0.75	0.84	0.65
	I go shopping online frequently. (FOS2)	0.89		
	I have numerous experiences of online purchasing. (FOS3)	0.76		
<b>REPUTATION OF THE WEBSITE (.87)</b>	The website is known to be dependable. (RW1)	0.75	0.88	0.71
	The website has a good reputation in the market. (RW2)	0.94		
	The website has a reputation for dependability. (RW3)	0.83		

**TABLE 2** Correlations and shared variances between constructs

VARIABLES	FINRK	PERRK	PRIRK	TRUST	PEU	PU	BI	KOS	FOS	RW
FINANCIAL RISK (FinRK)	1	0.62	0.45	0.18	0.19	0.02	0.05	0.05	0.04	0.04
PERFORMANCE RISK (PerRK)	0.79	1	0.68	0.29	0.23	0.08	0.11	0.11	0.08	0.06
PRIVACY RISK (PriRK)	0.67	0.83	1	0.25	0.18	0.07	0.09	0.1	0.06	0.05
TRUST (TRUST)	-0.43	-0.54	-0.5	1	0.43	0.23	0.45	0.38	0.32	0.09
PERCEIVED EASE OF USE (PEU)	-0.44	-0.48	-0.43	0.66	1	0.17	0.33	0.25	0.13	0.09
PERCEIVED USEFULNESS (PU)	-0.13	-0.28	-0.26	0.48	0.41	1	0.29	0.18	0.12	0.05
BEHAVIORAL INTENTION (BI)	-0.23	-0.33	-0.3	0.67	0.57	0.54	1	0.31	0.38	0.17
KNOWLEDGE OF ONLINE SHOPPING (KOS)	-0.23	-0.33	-0.32	0.62	0.5	0.42	0.56	1	0.28	0.14
FREQUENCY OF ONLINE SHOPPING (FOS)	-0.21	-0.28	-0.25	0.57	0.36	0.35	0.62	0.53	1	0.13
REPUTATION OF THE WEBSITE (RW)	-0.19	-0.24	-0.23	0.31	0.3	0.23	0.41	0.37	0.36	1

Note. Correlations are shown below the diagonal and shared variances are depicted above the diagonal.

are relatively stable and insensitive to sample size (Anderson & Gerbing, 1988). The results revealed that the measurement model fit the data well ( $\chi^2_{(149)} = 792.80$ ,  $\chi^2/df = 1.89$ , RMSEA = .06, CFI = .95, IFI/Delta2 = .95, TLI = .94). All Cronbach's alpha values of the scales ranged from .83 to .96, which are above the suggested minimum threshold of .70 (Hair et al, 1998). Construct reliability of measures for each of the latent variables exceeded the recommended standard of .70 (Nunnally, 1978). Convergent validity was measured to test both the significance of the factor loadings and the Average Variances Extracted (AVE). All loadings were statistically significant ( $p < .01$ ) and all of the AVEs were above the suggested minimum threshold of .50 (Fornell & Larcker, 1981), thus providing strong evidence of convergent validity (see Table 1).

To test discriminant validity, a comparison was made between the AVEs of a construct with the shared variances between the construct and all other constructs in the model (Fornell & Larcker, 1981). The results provided that all AVEs of a construct exceeded the shared variances between the construct and all

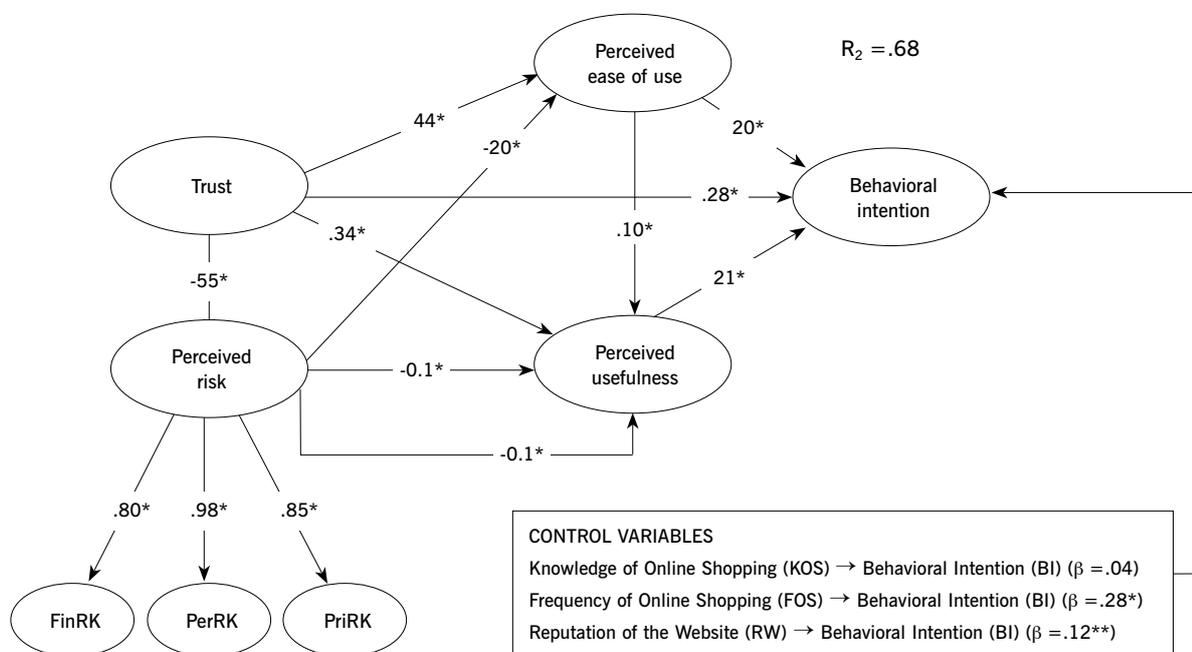
other constructs in the model (Fornell & Larcker, 1981) (see Table 2).

### Structural Equation Model

Following the confirmation of the measurement model, the conceptual model was evaluated by SEM including the test of path estimates and the explained variance of behavioural intention (see Figure 2). The results indicated that the model provided a good fit to the data with several different indices ( $\chi^2_{(438)} = 811.33$ ,  $\chi^2/df = 1.85$ , RMSEA = .06, CFI = .95, IFI/Delta2 = .95, TLI = .94) and all paths between constructs were significant ( $p < .01$ ) except for the paths of perceived risk  $\rightarrow$  perceived usefulness and perceived risk  $\rightarrow$  behavioural intention. The model explained approximately 68% of the variance related to behavioural intention. Regarding the three control variables, frequency of online shopping and reputation of the website significantly influenced behavioural intention, whereas knowledge of online shopping was not significantly related to behavioural intention.



FIGURE 2 Structural model testing for the proposed model.



### Path coefficients of the research model

Hypotheses 1<sub>a</sub> – 1<sub>c</sub> investigated the relationships among the three key constructs in TAM. The results supported all of the hypotheses:

1<sub>a</sub> (perceived usefulness → behavioural intention;  $\beta = .21$ ,  $p < .01$ )

1<sub>b</sub> (perceived ease of use → behavioural intention;  $\beta = .20$ ,  $p < .01$ )

1<sub>c</sub> (perceived ease of use → perceived usefulness;  $\beta = .10$ ,  $p < .01$ ).

All relationships were statistically significant and positive.

Hypotheses 2<sub>a</sub>– 2<sub>c</sub> were associated with the impact of perceived risk on perceived usefulness (H2<sub>a</sub>;  $\beta = -.01$ ,  $p = n.s.$ ), perceived ease of use (H2<sub>b</sub>;  $\beta = -.20$ ,  $p < .01$ ) and purchase intention (H2<sub>c</sub>;  $\beta = -.10$ ,  $p = n.s.$ ) in the secondary ticket website. While H2<sub>a</sub> and H2<sub>c</sub> were not supported, H2<sub>b</sub> was supported.

Hypotheses 3<sub>a</sub> – 3<sub>d</sub> were related to the impact of trust on perceived usefulness (H3<sub>a</sub>), perceived ease of use (H3<sub>b</sub>), purchasing intention (H3<sub>c</sub>) and perceived risk (H3<sub>d</sub>). The results related to these hypotheses revealed that trust significantly affected perceived usefulness ( $\beta = .34$ ,  $p < .01$ ), perceived ease of use ( $\beta = .44$ ,  $p < .01$ ) and purchase intention ( $\beta = .28$ ,  $p < .01$ ) in online secondary sports ticketing. In addition, as expected, the impact of trust on perceived risk ( $\beta = -.55$ ,  $p < .01$ ) in online secondary sports ticketing was significantly negative.



### Discussion

The study confirmed the robustness of TAM in the special form of an online provider, a secondary sports ticket website. As with previous online TAM research, perceived usefulness and ease of use were significantly related to online users' purchase intentions. In addition, perceived usefulness indirectly affected purchase intentions through perceived ease of use. The relationships among the TAM constructs were positive and significant, which is a finding that is consistent with the previous studies in different contexts, such as health information technology (Holden & Karsh, 2010), online shopping (Kim et al, 2008), internet banking (Alsajjan & Dennis, 2010) and e-learning (Landry et al, 2006). Such results imply that when users perceive that the secondary sports ticket website is easier to use, they are more likely to perceived usefulness of the website. The results also show that users who feel ease of use and perceive usefulness are more likely to act by purchasing products on the secondary sports ticket website.

In addition to confirming the traditional TAM, this study extended the model with two key antecedents of online purchase intention: perceived risk and trust. The results revealed these two variables as antecedents of leading secondary sports ticket buyers' potential purchasing behaviours with a fairly large amount of variance explained. Interestingly, trust was a significant antecedent of technology acceptance, representing the strong positive impact of perceived usefulness (PU), perceived ease of use (PEU) and behavioural intentions (PI). This was consistent with previous work in e-commerce which has found that it is much more important to focus on how to increase the level of trust rather than how to reduce the perceived risk possibly affecting perceived trust with e-transactions (Ba & Pavlou, 2002; Gefen et al, 2003). The high level of trust on a certain commercial website is more likely to reduce the uncertainty outcome related to the e-transaction, which increases the levels of perceived usefulness and perceived ease of use (Gefen et al, 2003). Eventually, these positive influences of trust

are more likely to increase potential buying behaviour in commercial websites (Ba & Pavlou, 2002). Beyond trust as a strong predictor of potential buying behaviour, Flavian et al (2006) also mentioned that a high level of trust is more likely to lead to a high degree of website loyalty among the consumers.

Interestingly, the results of this study also showed that perceived risks do not significantly influence the major constructs of TAM (i.e. perceived risk → behavioural intention and perceived risk → perceived usefulness). This is inconsistent with previous studies in which users' decision-making processes were strongly related to the levels of perceived risk (e.g. Belanche et al, 2012). The possible explanation is that recent improvements in secondary website technology have significantly reduced potential risks related to web usage. For example, recent online consumers express less concern about monetary loss or security of personal information (e.g. credit card number, phone number, address), because secondary ticket websites provide stronger security and protection tools than in years past (Ozarian, 2011). In addition, compared to other demographic segments of the population, college students are to be considered more savvy in terms of their use of technology. This might have led to the high perceived ease of use and less perceived risk on e-commerce found in this study.

### Implications and limitations

From an academic standpoint, the findings offer a contribution to the body of literature regarding online sports consumers. The proposed theoretical framework in the current study might be a basis for understanding sports fans' needs and concerns when they purchase secondary tickets in online environments. The results of this study should also help scholars in understanding how sports fans accept internet technology as and help identify the psychological components of sports fans (e.g. perceived risk, trust).

This research helps to clarify that perceived ease of use and usefulness have significant effects on



the purchasing of secondary sports tickets online. Furthermore, user friendly interfaces on secondary sports ticket websites make customers feel that the websites are more practical and effective. The research also supports the notion that trust plays an important role in increasing website utility and positive intentions related to the purchase activities affiliated with online secondary ticket websites.

This study also has implications for practitioners, offering a better understanding of purchasing behaviours surrounding secondary sports ticket websites. This study implies that a trustful relationship between sellers and buyers is the key to the completion of transactions on a secondary ticket website.

One of critical issues to threaten trust in the secondary ticket market has been counterfeit tickets. Sometimes, sports fans use a secondary website (e.g. Craigslist) and pay a high price for what is considered a great seat only to realise that the ticket is a counterfeit. Such a discovery not only leads to financial loss by the consumer, but also has a negative impact on the image of the website, league and team brands. Because all major leagues now have official relationships with commercial secondary sports ticket providers, they need to monitor how they protect against online scams and fraud. To build trust with this issue, it is important to implement trust-enhancement policies. For example, Ticketmaster has its "fan guarantee", which includes statements such as "we sell only 100% official tickets". StubHub has a "FanProtect Guarantee" associated with eBay (e.g. eBay buyer protection). Just as previous scholars have mentioned that trust offsets perceived risk (e.g. Gefen et al, 2003), these efforts are directly connected to the reduction of consumers' perceived risks toward online secondary sports ticket websites.

Perceived usefulness and perceived ease of use were conceived as significant issues which influence consumers' purchase intentions. Therefore, online secondary ticket providers need to develop user-friendly interfaces to enhance purchase intentions among consumers. For example, developing effective communication tools (e.g. live chat rooms

and discussion boards) can increase the number of interactions between provider and consumer. Furthermore, the reputation of a website can be built by consumers' comments and reviews of products (e.g. electronic word of mouth). The more positive the feedback from consumers, the better the reputation for the sellers. For this reason, interactive communication between sellers and buyers in the online environment might be key to increasing the level of trust and assurance in a secondary sports ticket website.

There are several limitations that should be addressed in future studies. First, future research needs to improve the issue of external validity. As previously mentioned, the sample of this study was drawn from a student population, which causes small variances of demographic information related to age, income, education and so on. Future research should extend the sample to include other demographic profiles, to help in the generalisability of the results. Second, it is recommended that future researchers investigate other influential factors of e-commerce acceptance beyond the variables proposed in this study. Despite the large amount of variance of purchasing intention that was explained by the four variables (i.e. 68%), additional factors would provide a more holistic picture of secondary sports ticketing website usage, especially the moderating effects of users' characteristics (e.g. demographics, previous experience) on e-commerce. Many loyal fans purchase their favourite team's tickets on secondary sports ticket websites, so it would be interesting to investigate the effect of team identification (e.g. different levels of attachment toward a team) on online purchasing behaviours. This which would extend the line of research related to the effects of different consumer characteristics on buying behaviours in an online context.

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