



Research Article

Online Recreational Gambling Intention: The Effect of Subjective norms, Spitefulness and Gender

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Abstract. Online recreational gambling has grown significantly over recent years. This growth has been aided by increasing global internet penetration, the rise of Web 2.0, and the ubiquitous diffusion of smart phones. It has also been assisted by a weakening in subjective norms that has seen recreational gambling become increasingly accepted as a leisure pursuit and more recently also by Covid-19 measures. This research looks at the relationship between subjective norms and gambling intention and the possible mediation effect of spitefulness as an overlooked social behaviour. The study also investigates whether gender plays a moderating role. Hypotheses of these linkages grounded in established behaviour intention models are proposed, and data are collected from a sample of customers of an online gambling firm based in Malta. Moderated-mediated regression supports the role of gender and the partially mediated effect of spitefulness in the relationship between subjective norms and recreational gambling intention.

Keywords: Recreational online gambling, Subjective norms, Spitefulness, Gambling intention, Gender.

1 Introduction

Services account for at least 50% of the GDP in over half of the world's countries and about 65% of the world's GDP (Carlos, 2019). In Malta, the services sector accounts for close to 76% of GDP (O'Neil, 2021). The growth of services generally has been facilitated by the progress in internet development and penetration. More people are confident and capable of buying services online and many services that have traditionally been of a 'brick and mortar' nature, have now either expanded or moved fully online (Wolfinbarger et al., 2001). With more than 65.6% of the world's population currently hav-

ing access to the Internet and an 88.2% penetration in Europe (Stats, 2021), online services such as online shopping, online banking and online entertainment in its various forms, are providing an ever more important form of commerce. Firms like Netflix and Spotify that provide streaming movies and music in many developed and developing countries have achieved rapid growth. However, the more successful adopter and user of the new technologies is the adult industry, including pornography and gambling (Arlidge, 2002; Edelman, 2009; Gross, 2010; Roberts, 2006; Victor, 2017).

Increased Internet penetration across developed and emerging economies, together with the growth in smart-phone adoption coupled with the development of Web 2.0 capabilities, has meant that online gambling websites are accessible to almost everyone, everywhere, and at any time (Berthon et al., 2012). The steady expansion in online gambling has also, more recently, been aided by Covid-19 restrictions. These developments have turned the industry into a global multi-billion-dollar business with a market in 2020 estimated at US \$59.6 billion and it is expected to grow to US \$127.3 billion by 2027. The European market accounts for \$22.0 billion with sports betting becoming a dominant sector of the market (Grand View Research, 2020). In 2004, Malta became the first EU member state to enact comprehensive legislation in remote gaming (MGA Gaming in Malta, 2021) and the gambling sector today contributes 8% of Malta's total economic value (Evanova, 2021).

The impact of the Internet and web 2.0 on recreational gambling has been fascinating—it has eliminated the importance of location. This development has meant that a customer desiring to gamble no longer has to go to a racetrack to have a wager, or a casino to play a table game or slot machine. Moreover, there is no longer the need to employ hundreds of people (croupiers, slot machine

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mechanics, etc.) or to own physical infrastructure such as buildings, machines, restroom facilities, restaurants, etc. Similarly, for consumers there have been advantages—they do not need to travel, it is always accessible, and it is available from the comfort of their own homes. Customers are virtually spoiled for choice, and technology has made a world of gambling available literally at their fingertips. On the downside customers face a lower level of social contact and easier access to financial resources which may lead to uncontrolled expenditures (Wood et al., 2009).

The underlying motives for gambling have been considered in the behavioural economics and psychology literature. Behavioural economics e.g. Brenner (1985), Friedman et al. (1948), Kahneman et al. (2012), Kwang (1965) and von Neumann et al. (1944) have provided various monetary utility theories. Psychology recognizes that besides monetary utility, gamblers may derive other forms of utility from gambling. Yet, the overriding focus of research on gambling in psychology has been on problem gambling and related issues concerning health and addiction (e.g., Auer et al. (2013), Gainsbury et al. (2014), Griffiths (2013), Philander et al. (2014), Rousseau et al. (2002), Sutton et al. (2007) and Wardle et al. (2011)) coupled with concern for regulatory measures (e.g., Buil et al. (2015), Gainsbury et al. (2013), Leneuf (2011), McAllister (2014), Rose et al. (2009) and Srikanth et al. (2011)). However, the psychology literature has also highlighted the attraction stemming from gambling as a social activity (Wood et al., 2008; Zaranek et al., 2005) starting from an early age with playing bingo (Gupta et al., 1997) and continuing in later life by visits to a casino with friends (Binde, 2013; Calado et al., 2016). This attraction of gambling is augmented by the glamour that the associated lifestyles, as portrayed in films and advertising, invoke (Sklar et al., 2010).

Online recreational gambling is a fascinating aspect of human behaviour, yet the stigma that gambling addiction carries may have contributed to business and marketing scholars having given it surprisingly little attention. This is especially astounding given just how much money, time and effort is devoted to gambling in so many countries, and by so many consumers (Mizerski et al., 2013). It therefore comes as no surprise that there exists only a limited number of papers that have explored various forms of gambling from a business or marketing perspective (e.g., Cummings et al. (1987), Konietzny et al. (2018), Moore et al. (1997, 1999) and Oh et al. (2001)). Although marketing scholars have exhibited a reluctance to investigate the marketing side of gambling, the business literature potentially provides a number of theories and models that could be useful to better understand and explain the be-

haviour intention of customers in an online recreational gambling context.

This research looks at the theoretical frameworks that seek to explain behaviour intention in consumer behaviour and marketing and adapts these to understanding recreational gambling intention. A common theme highlighted in the behavioural theories is the role of subjective norms and the impact family and friends have on behaviour intention. Deviations from subjective norms may give rise to shame and guilt (Gottlieb, 2004; Shabad, 2000; Stern, 2004) with those that are shame-prone and exhibit higher levels of guilt likely to be more spiteful. Therefore, this research investigates the role of spitefulness as an overlooked social behaviour that may mediate the relationship between subjective norms and gambling intention. Although few would consider spite a desirable motive, it is likely an important one (Marcus et al., 2014, p. 571). Exploring the individual customer's level of spitefulness in a Theory of planned Behaviour—TpB (Ajzen, 1985) and an online gaming context broadens our knowledge of the effect of social influences on behaviour intention.

In addition, a meta-analysis by Byrnes et al. (1999), who looked at sixteen types of risks, showed that in fourteen of these, greater risk-taking among men was evident. Therefore, the study also investigates whether gender plays a moderating role. Hypotheses of these linkages grounded in TpB are proposed, and data are collected from a sample of customers of an online gambling firm based in Malta. Moderated-mediated regression supports the role of gender and the partially mediated effect of spitefulness in the relationship between subjective norms and recreational gambling intention.

2 Subjective norms, online gambling intention and spitefulness

Several behaviour intention theories and models have been proposed in consumer behaviour and marketing that seek to explain general or specific behaviour intention among customers or employees in different industries. Models that look at general behavioural intentions outcomes among customers include the Theory of Reasoned Action -TRA (Ajzen et al., 1980; Fishbein et al., 1975) and the Theory of planned Behaviour—TpB (Ajzen, 1985). The TRA identifies attitudes and subjective norms as drivers of behavioural intention. Attitudes are affective and based upon beliefs while subjective norms concern what customers perceive their network of family and friends to believe. Subjective norm is defined as 'the perceived social pressure to perform or not to perform the behaviour in question' (Ajzen, 1991, p. 188). The TpB built on TRA by adding perceived behavioural control as a further driver of behaviour intention. The added construct rep-

resents the control which users perceive may limit their behaviour. TAM (Davis, 1985; Taylor et al., 1995) and UTAUT (Venkatesh et al., 2000; Venkatesh et al., 2003; Venkatesh et al., 2012) models adapt TpB to the context of information systems and technologies and specifically employees' behaviour intention toward technology adoption. Instead of subjective norms these latter models use the equivalent term social influence, described as capturing how much users are influenced by the opinion of others about whether they should use a system. The ubiquitous presence of subjective norms, or its equivalent social influence, across all models and its expected direct effect on behaviour intention underlines the importance of this driver.

The importance of subjective norms stems from the fact that an individual's behaviour can often be dependent on the social networks and organization that one belongs to. Therefore, subjective norms incorporate perceptions on whether a particular action is expected by family and friends. There is considerable literature linking subjective norm as an antecedent to purchase intention generally (e.g., Cummings et al. (1987) and Sheppard et al. (1988) as well as to gambling intention specifically. Thus, TpB has been used to investigate gambling behaviour of college students in China (Wu et al., 2012) and in the United States (Martin et al., 2010) with both studies reporting that positive attitude towards gambling and weak subjective norms positively influenced gambling intention. We therefore also hypothesise that:

H1: Weak subjective norms result in higher on-line recreational gambling intention.

The literature also suggests that "individual differences in personality traits associated with risk, behavioral preferences for risk, and attitudes toward risk are associated with gambling behavior" (Mishra et al., 2010, p. 619). However, while personality is natural and defines the customer, social behaviour is self-constructed and defines reactions in particular settings. Social behaviours can be categorised into four groups according to the resultant positive or negative effect they entail for the actor and recipient. Hamilton (1964), an evolutionary biologist, provides a 2x2 matrix that consider each of these two sets of outcomes for actors and recipients to provide a classification of the four basic social behaviour outcomes possible. Therefore, social behaviour can be cooperative when it is mutually beneficial, altruistic if the actor suffers but recipient gains, selfish if the actor gains and recipient suffers a loss, and spiteful if both actor and recipient suffer a loss (Gardner et al., 2004). On this basis, spitefulness is therefore generally defined in evolutionary biology and behavioural economics, as the willingness of

an individual to incur a cost to oneself in order to inflict harm on another even in the absence of any direct benefits for doing so (Fehr et al., 2005; Smead et al., 2013). Spitefulness has been described as "the shady relative of altruism" (Smead et al., 2013, p. 698) because spitefulness and altruism both involve a willingness to incur a cost to the self in order to impact the outcomes experienced by recipients. In altruism, the costs are incurred in order to confer a benefit on the recipient. In contrast, spiteful individuals are willing to incur costs in order to inflict harm on recipients (Zeigler-Hill et al., 2015). We should look for spite wherever individuals interact with kin and non-kin in highly competitive environments (Gardner et al., 2004). Although spitefulness has long been considered in evolutionary biology (Hamilton, 1964), it has only more recently received attention in psychology (Marcus et al., 2014; Zeigler-Hill et al., 2015) but remains a neglected concept in marketing. This lack of attention is possibly because unlike cooperation that can provide mutual gain to business parties, spitefulness provides no advantage and incurs a cost to both actor and recipient. However, spitefulness as a social behaviour may be relevant in a number of contexts including online recreational gambling. Online gambling customers are aware of the adage in gambling that one cannot beat the house. Therefore, each bet lost incurs a cost to the actor who is precluded by the odds from winning sufficiently big to inflict a bigger loss onto the recipient—the online gambling firm. In these circumstances, the spiteful individual is likely to gamble less. We therefore hypothesise that:

H2: The higher the level of a customer's spitefulness the weaker the recreational gambling intention.

However, an interesting point is the impact of subjective norms and spitefulness. Subjective norms resulting from family and friends are likely to influence spitefulness that in turn acts to augment or dampen the impact of subjective norms on recreational gambling intention. We therefore propose an alternative mediated hypotheses to H2 that states that:

H2 Alt: The effect of subjective norms on recreational gambling intention is mediated via spitefulness.

In their research, Marcus et al. (2014, p. 7) provide empirical support for a demographic difference in spitefulness "with men being more spiteful than women" in both samples considered. Furthermore, we therefore expect that the alternative mediated relationship proposed in H2 Alt may be moderated by gender. The expected relationships discussed above are depicted in the research model in figure 1.

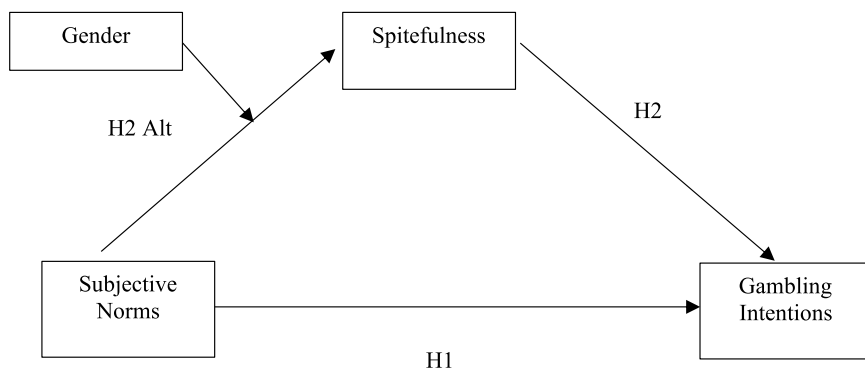


Figure 1: Research Model - subjective norms predicting recreational gambling intention with an interaction between gender and spitefulness.

3 Methodology

Given the nature of the research model in this study, a positivist quantitative research approach is adopted, that requires consideration of questionnaire design, data collection and sample choice issues together with cross cultural data capture challenges.

Questionnaire design: The research approach pursued in this study necessitates the choice of psychometrically sound measures to capture the constructs discussed. Measures used need ideally to have been tried and tested and have acceptable levels of reported internal validity and reliability (Collis et al., 2014; Kothari, 2004) while attention to cross-cultural research challenges related to equivalence also need to be considered (Levine et al., 2007; Marczyk et al., 2005; Sekaren, 1983).

Behaviour intention is considered as the last stage before actual customer action takes place. Behaviour intention is conceptualised as a unidimensional construct and the various measures of intention in the literature often seek to capture the construct using a single item measure. However, multi-item measures are to be preferred over single-item measures and therefore the three-item measure from Venkatesh et al. (2003) that has been shown to have performed strongly in previous research was used. The wording of the items was amended to reflect the online gambling context.

Spitefulness has also been conceptualised as a unidimensional construct originally measured by 17 items that describe a wide variety of situations, including politics, work and salary, academics, physical conflict, and problems with neighbours (Marcus et al., 2014). Four of the items were not used in this research because these items dealt specifically with actions in an education environment which were not found to be appropriate during the initial pre-test piloting of the final questionnaire. Given the uni-

dimensional nature of the construct, reducing the number of items should not impact the psychometric properties of the instrument.

In the case of subjective norm, the 10-item measure by Moore et al. (1999) conceptualised as capturing two subjective norm dimensions, one dealing with friends and the other with family, was used. However, unlike the authors' approach, subjective norm is measured as normative belief without including motivation to comply. A number of researchers have concluded that it is not necessary to include motivation to comply, describing measures of motivation to comply as "unsatisfactory" (Ajzen et al., 1972, p. 4) and that including motivation to comply is likely to attenuate the correlation between subjective norm and behavioural intention (Ajzen et al., 1992). In addition, during piloting it was decided to drop the two negatively worded items that were proving problematic to respondents so that the final measure used for subjective norm consisted of eight items with wording adapted to the online gambling context. While the use of positively worded items may have undesirable consequences in terms of an acquiescence bias, research shows that a combination of positive and negative items often affects the internal consistency of scales by causing careless responding and cognitive fatigue (Merritt, 2012). The inclusion of negatively worded questions is especially problematic in cross-cultural research (e.g., (Wong et al., 2003)) as would be the case with the customer database in this data collection. The wording of the questions used for subjective norm is such that high scores on the subjective norm measure represent approval.

The final research instrument therefore consisted of 24 items: three items adapted from Venkatesh et al. (2003) to capture online gambling intention, 13 items from the measure developed and tested by Marcus et al. (2014)

for spitefulness and eight items from the subjective norm measure by Moore et al. (1999). Each item in the subjective norm and spitefulness measures were accompanied by 5-point response scales while gambling intention was measured using a 7-point scale. The end-point descriptors for the scale were 1 = Strongly disagree and 5 or 7 = Strongly agree. The wording for all items of the three constructs in the data collection instrument are provided in table 1.

In addition, four demographic items for gender, age last birthday, highest education completed and nationality of respondents together with two classificatory variables that asked for average time spent gambling online and how many years respondent had been an active online gambler, were also collected. Therefore, the final research instrument used consisted of a total of 30 questions.

Data collection: Collection of data was undertaken via arrangements made with a Malta-based online gambling firm. A total of 1500 potential participants were chosen at random from the database of customers, who had registered but had not made any deposit for 48 hours with the casino brand, of the participating firm. The data collection was part of a series of studies undertaken. At no time did the company influence the focus of this study or the questionnaire employed. Steps were taken to encourage completion. These included the appeal used in the covering email sent, attention to the length and content of the questionnaire and the provision of a small incentive to respondents (Mercer et al., 2015). The latter consisted of twenty free spins for the value of €0.10 per free spin on a well-known online betting game. To receive the gift, all respondents had to do was to contact the customer service support of the casino website with a code that was provided in the questionnaire. The Qualtrics platform was used for the online data collection.

Cross cultural research involves dealing with countries that have different languages, economies, social structures, behaviour, and attitude patterns. Since this research collects data from customers of an online gambling firm who reside across different countries, it was necessary to seek to ensure comparability and equivalency of results obtained from respondents across the different countries. Malhotra (2010) provides a useful typology consisting of four principal types of equivalence in international marketing research, namely construct, operational, scalar and linguistic equivalence. Although full testing of equivalence was not practical, pilot testing in English of the intended questionnaires for the study was carefully undertaken to at least ensure linguistic equivalence, while for construct, operational and scalar equivalence, reliance had to be based on the use of the tried and tested measures employed.

4 Results

From the 1500 questionnaires sent via email to a sample of customers from the database of the supporting Malta-based gambling firm, 282 replies were received after two weeks. No follow-up emails were sent and no tracking for number of unopened emails was undertaken. Out of the replies received, 266 completed surveys could be used in the analysis. This represents an effective response rate of 17.6% which is in line with similar research with these parameters (Kaplowitz et al., 2004). Men account for 50.4% of respondents, the average age was 35.12 ($SD = 9.04$), and in terms of nationality 56.3% were from Australia, New Zealand and South Africa while the rest were from European countries (excluding the United Kingdom where the supporting firm did not operate). In terms of highest education completed, 56.7% completed secondary education, 25.6% completed a diploma or vocational school and 16.7% completed a university degree. Comparisons of the demographic characteristics collected for respondents were in line with those of the entire customer base of the participating firm providing some support for the absence of non-response bias. In terms of classificatory variables collected, 5% reported an average time spent gambling online of less than 10 hours while 49.2% had been active online gamblers for less than two years.

A challenge of undertaking questionnaire-based research using scales is the possible presence of common method bias (Podsakoff et al., 2003; Podsakoff et al., 2012). This occurs when use is made of similar scale-type measures, and it becomes possible that the results obtained may not be coming from any real difference in the population but rather from the characteristics of the instrument being used. To control and minimize the possibility of this, care was taken in the way the questionnaire was structured. For instance, Podsakoff et al. (2012) mention that it is important that respondents are able to understand the questions asked. This was achieved by conferring with experts in the gambling industry as well as in the piloting stage about the content of the questions as well as the way they were presented to respondents. Second, cover emails were sent to prospective respondents, detailing the nature of the study. Furthermore, respondents were given the contact details of one of the researchers should they have questions about the research. Once collection takes place, one of the simplest ways to test for common method bias is Harman's single factor score, which asserts whether the latent items used in a questionnaire load onto one common factor. The presence of common method bias is said to be within acceptable limits if the single factor explains less than 50% of the total variance (Podsakoff et al., 2003). Testing for

this on the data collected showed multiple factors with high loadings providing no support for the existence of common method bias.

Descriptive statistics in terms of means and standard deviations for items and constructs were computed and are shown in [table 1](#). It can be seen that the subjective norm effect from friends is on the low side as the reported means are all greater than the mid-point on the 5-point scale used. The scores are marginally lower for the items dealing with the subjective norm effect from family. These results suggest that online gamblers face fairly broad acceptance of online recreational gambling by family and friends. The spite scores are below the mid-point across all the items and fairly consistent across items. The intention items all have means that exceed the midpoint on the 7-point scale used showing a fairly strong intention to indulge in recreational gambling. This is understandable given that these are respondents who are customers of an online gambling firm.

To investigate the psychometric properties of the three measures used, a principal components exploratory factor analysis followed by a varimax rotation was undertaken. The results of the loading shown in the last four columns of [table 1](#), provide support for convergent and discriminant validity of the three constructs used. The subjective norm construct splits into the two theoretical dimensions envisaged by Moore et al. (1999), with one dealing with the subjective norm coming from friends and the other from family. The spitefulness items load together on a separate and distinct factor confirming the unidimensional nature of the construct (Marcus et al., 2014) as also happens for the gambling intention items and construct (Venkatesh et al., 2003). Reliability of the measures was tested using Cronbach alpha with results exceeding the 0.70 threshold (Nunnally, 1967). Taken together these results provide support for the psychometric properties of the measures used. The items making up the three constructs were therefore summed and used for further analyses.

Scatterplots of the constructs were investigated prior to computation of Pearson correlations between subjective norm and gambling intention and between subjective norm and spitefulness which provided correlation coefficients of .13 ($p < .05$) and .19 ($p < .01$) respectively, while that between spitefulness and gambling intention provided a coefficient of -.12 ($p < .05$).

To test the research model and hypotheses in [figure 1](#), data was inputted to a moderated-mediated regression model via the PROCESS plug-in in SPSS that corresponds to Model 7 (Hayes, 2017). Gambling intention was entered as the dependent variable, subjective norm as the independent variable, spitefulness as the mediator

and the nominal values for gender as moderator. Bootstrapping inferences for model coefficients were requested in order to overcome any possible variations of the normality assumptions while to overcome any heteroscedasticity concerns, the computation of robust standard errors HC4 were requested. Finally, in running the analyses, mean centering of the continuous variable that is part of the product of the independent variable and moderator, was undertaken. The results of the bootstrapping show that the index of moderated-mediation is significant with a value of $-.025$ while the indirect effect resulting from the categorical values for gender shows that this holds for men but not for women. In addition, there is a direct effect of subjective norm on gambling intention as well as a mediated effect via spitefulness (see beta value results in [figure 2](#)), while the moderated regression effect of subjective norm on spitefulness by gender is shown graphically in [figure 3](#). These results provide support for H1 and H2Alt indicating a partially mediated effect of subjective norms on gambling intention via spitefulness that is moderated by gender.

The analyses of cross tabulations of the demographic and classificatory variable with the constructs provides a number of additional insights. Like Marcus et al. (2014, p. 568) who report a decrease in spitefulness with increasing age ($r(295) = -.27, p < .001$), we also find a similar result ($r(260) = -.16, p < .01$). However, age is not found to affect either subjective norms or gambling intention. Gambling intention increases with the number of years respondents have been active online gamblers ($r(260) = .13, p < .01$) but this has no effect on either subjective norm or spitefulness. Hours spent on online gambling per week provided no statistically significant effect on subjective norms and gambling intention but is significant with spitefulness ($r(260) = .13, p < .01$). In terms of nationality, independent sample *t*-tests provided no difference in group means between the two categories of European and Australian, New Zealand and South African customers but the latter group exhibited both higher subjective norm ($M = 25.80, SD = 6.65$ vs $M = 21.95, SD = 6.52; t(259) = -4.70, p < .001$) and gambling intention scores ($M = 18.03, SD = 3.24$ vs $M = 15.69, SD = 4.05; t(259) = -5.18, p < .001$). A one-way Anova test across the three groups for highest education completed for the three constructs provided no statistically significant difference in the group means for spitefulness but there was a statistically significant difference in mean score between at least two groups in the case of subjective norms ($F(2, 244) = [3.84], p < 0.05$) and gambling intention ($F(2, 244) = [3.08], p < 0.05$). Tukey's HSD Test for multiple comparisons shows that the mean value for subjective norm was significantly dif-

Q	Item	Mean	SD	1	2	3	4
1	Most of my friends approve of gambling.	3.23	1.03	.74			
2	Most of my friends gamble sometimes.	3.49	1.05	.84			
3	My friends often visit websites where gambling occurs.	3.41	1.15	.80			
1. Subjective Norms—Friends (Cronbach $\alpha = 0.82$)		10.13	2.78				
4	My family approves of gambling.	2.76	1.12		.64		
5	People in my family gamble sometimes.	3.14	1.19		.78		
6	People in my family often visit websites where gambling occurs.	2.84	1.24		.84		
7	My family members spend £20 (€23) or more per week on gambling.	2.81	1.41		.88		
8	My family members spend £100 (€115) or more per week on gambling.	2.40	1.32		.80		
2. Subjective Norms—Family (Cronbach $\alpha = 0.88$)		13.95	5.18				
Subjective Norms		24.08	6.90				
9	It might be worth risking my reputation in order to spread gossip about someone I did not like.	2.32	1.19			.74	
10	If I am going to my car in a crowded parking lot and it appears that another driver wants my parking space, then I will make sure to take my time pulling out of the parking space.	2.39	1.22			.73	
11	I hope that elected officials are successful in their efforts to improve my community even if I opposed their election.	2.32	1.11			.76	
12	If my neighbour complained that I was playing my music too loud, then I might turn up the music even louder just to irritate him or her, even if it meant I could get fined.	2.65	1.29			.68	
13	There have been times when I was willing to suffer some small harm so that I could punish someone else who deserved it.	2.45	1.19			.78	
14	If I opposed the election of an official, then I would be glad to see him or her fail even if their failure hurt my community.	2.35	1.22			.81	
15	I would be willing to take a punch if it meant that someone, I did not like would receive two punches.	2.41	1.22			.84	
16	I would be willing to pay more for some goods and services if other people I did not like had to pay even more.	2.41	1.22			.87	
17	If my neighbour complained about the appearance of my front yard, I would be tempted to make it look worse just to annoy him or her.	2.50	1.22			.84	
18	I would take on extra work at my job if it meant that one of my co-workers whom I did not like would also have to do extra work.	2.64	1.22			.81	
19	Part of me enjoys seeing the people I do not like fail even if their failure hurts me in some way.	2.41	1.22			.87	
20	If I am at the checkout at a store and I think that the person in line behind me is rushing me, then I will sometimes slow down and take extra time to pay.	2.50	1.22			.84	
21	It is sometimes worth a little suffering on my part to see others receive the punishment they deserve.	2.64	1.22			.81	
3. Spitefulness (Cronbach $\alpha = 0.95$)		31.98	12.63				
22	I intend to use online gambling systems in the next month.	5.51	1.56				.88
23	I predict that I will gamble online in the next month.	5.90	1.26				.83
24	I plan to use an online gambling system in the next month.	5.61	1.46				.89
4. Gambling Intention (Cronbach $\alpha = 0.85$)		17.00	3.79				

Table 1: Descriptive statistics, reliability and results of factor analysis with varimax rotation.

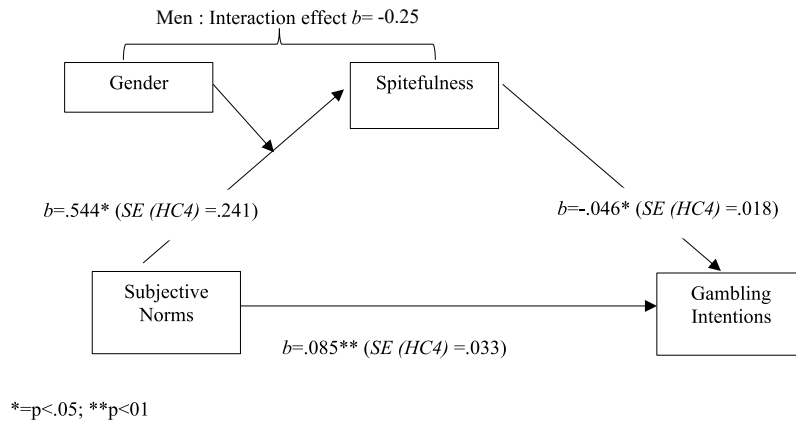


Figure 2: Results of moderated-mediation (Model 7) with subjective norms significantly predicting gambling intention alongside a significant interaction effect between gender and spitefulness.

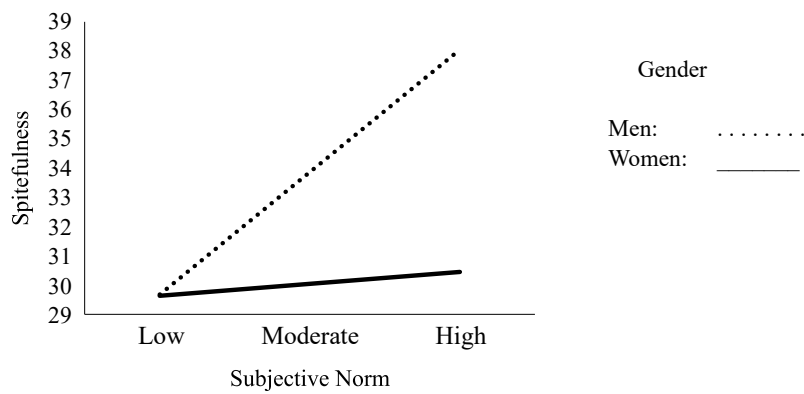


Figure 3: Moderated regression effect of subjective norms on spitefulness by gender.

ferent between those who completed secondary education ($M = 24.60$, $SD = 7.08$) and those who completed university education ($M = 21.41$, $SD = 6.45$), while in the case of gambling intention the difference is between those that completed secondary education ($M = 17.47$, $SD = 3.26$) and those that completed a diploma or vocational school ($M = 16.11$, $SD = 4.32$).

4.1 Findings and Implications

The research possibly represents the first application of spitefulness in the area of consumer behaviour and marketing. The study considers the framework of the Theory of Planned Behaviour (TpB) adapting it to the context of online gambling focusing on the link between subjective norms and gambling intention. Its contribution is primarily theoretical with support for H1 and H2 Alt suggesting the presence of spitefulness as a mediating variable. Therefore, the effect of subjective norms on gambling intention is not only direct but partially mediated by spitefulness which acts to decrease gambling intention. However, the research shows that this effect is gender dependent as support was found for gender acting as a moderator so that the resultant partial mediation is salient only in the case of men. Women report lower levels of spite.

The study also provides a contribution to the psychometric properties of the spitefulness instrument developed and proposed by Marcus et al. (2014). Although the original 17 item instrument was reduced to 13, the factor analysis undertaken shows that the instrument performed well with strong convergent and discriminant validity from the other two constructs of subjective norm and gambling intention. The reduction of items with the elimination of questions linked to spiteful behaviour in the classroom retained the unidimensional conceptualisation envisaged by the developers. Indeed, given its unidimensional conceptualisation there is an argument for further pruning of the instrument for use in future research thereby providing a more parsimonious instrument. The reply to fairly vexatious behaviour described in the items may lead to eye-saying and possibly a less than completely truthful response. A shorter instrument could reduce data collection fatigue among respondents.

Subjective norms concern customers' perceived social pressure to perform or not to perform a particular behaviour. This pressure coming from family and friends and the wording of the subjective norm measure used indicates that higher scores signify approval of a particular behaviour. The findings related to subjective norms are interesting in that the results show a very strong link to spitefulness underlined by the reported standardised beta value of .54 thereby contributing to the nomological network of spitefulness with subjective norms as an important

driver. The effect of spitefulness on gambling intention is small, thereby restricting its application to practical management. However, the crosstabulations of demographic and classificatory variables with the three constructs of interest in the research model provide some interesting additional insights.

The differences reported in the analyses of the impact of demographic on the constructs investigated suggest that the subjective norms related to gambling are more relaxed among Australia, New Zealand and South African respondents than among European respondents (UK not included). Moreover, in terms of highest education level completed, those whose formal education ended on completion of secondary education report higher approval levels from family and friends on subjective norm and higher gambling intentions.

The findings from the cross tabulations have implications for marketing of online gambling products. Women represent an important cohort representing 49.6% of respondents in this survey and gambling intention has been found to increase the longer customers have been active online. Moreover, subjective norms and gambling intention are higher among Australia, New Zealand and South African respondents as well as among those whose highest education level completed is secondary schooling. While further data mining is required, these findings suggests that women, who have been customers for some time, coming from Australia, New Zealand and South Africa whose highest level of education is at a secondary level, may make for a potentially more appealing target for marketing effort than men from Europe with higher formal education achievement. In making such an observation, it needs to be made clear that the authors make no ethical or moral judgements about the potential addiction/harm that may result from the marketing of online gambling services.

4.2 Limitations and Future Research

The current study has a number of limitations. First, the sample was taken from a database of customers who had registered at an online casino, that predominantly offered online gambling on slot machines. The findings reported here may therefore not hold for other forms of online gambling, such as sports betting, poker or other table games. Second, the response rate achieved, although in line with similar online data collections, is somewhat on the low side. Although, generally lower than for paper-based surveys, online response rates are known to vary considerably depending on the extent to which supporting survey completion measures have been undertaken. However, it is to be noted that comparison of the demographics collected to those on the database of customers

provides some comfort for the absence of non-response bias. Of course, in generalising findings academic research does not rely on representative samples but on replication.

Third, it is worth keeping in mind that this study was conducted with the customers of a single firm and any generalisations of findings to all online gambling firms needs to be undertaken with caution. Moreover, the research model used focussed on a particular subset of the nomological net and like most such studies necessarily suffers from specification error. Any attempt at a fuller understanding of gambling intention needs to look at additional drivers that can explain more of the variance in the gambling intention outcome. Future research should consider replicating the study with additional variables across the different types of online gambling forms available.

Fourth, respondents in this survey were offered a small incentive to participate to help improve response rates. However, it may also have encouraged participation from customers who were primarily interested in the incentive and who may not have completed the questionnaire with the desired care. The risk of adding this confounding error has to be counterbalanced by a potentially weaker response rate.

Fifth, there is a distinct possibility that respondents may have tended to underscore the items of the spitefulness scale. This may have occurred despite assurances of confidentiality of responses, and the questionnaire cover email specifically stating that the research was of an academic nature. Notwithstanding, this and the fact that the analyses provided psychometric support for the spitefulness instrument, the possible underscoring of responses should be borne in mind when considering results. Future research could investigate a more parsimonious scale with items that can perhaps be less likely to be under-scored.

Finally, it is possible that the finding of significant differences in the means for the constructs employed in the study may indicate cross-cultural differences in the way respondents react to multiple-point scales rather than real differences in perception across the different respondents. However, given the consistency of respondents from different nationalities across the constructs investigated, it appears unlikely that this may have had an effect on resulting correlations among the constructs investigated. Still, retesting of the model with larger samples across different nationalities could be useful in investigating issues of equivalence.

5 Conclusion

Spitefulness represents an interesting social behaviour that has received minimal attention in business and marketing. It is a construct that has potential in allowing for a better understanding of customers in different situ-

ations. Spitefulness reduces the potential for cooperation in business transactions. It can be relevant in situations of individuals' sensitivity to fairness and equity imbalance in business transactions and in situations of whistle-blowers. It may also be relevant in situations of human resources management where a manager or an aggravated employee may seek to cause maximum inconvenience to an employee or employer. It may also be relevant in the context of partisan politics. Fortunately, the measure used has exhibited acceptable psychometric properties allowing for adaptation and use in different contexts. The measure also permits the development of the nomological network of the constructs that can provide a better understanding of drivers and consequences. In addition, it could also make for better profiling of the spiteful individual.

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