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# Attitude-Support Relationship in Gambling: A Modified Theory of Planned Behaviour

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## Abstract

In this study, we modified the theory of planned behaviour and proposed that attitude towards gambling explains and predicts gambling support. We explored whether locals and tourists support or oppose the gambling industry and the factors that led to support or opposition. This information is vital, as policy decisions are often made by taking into consideration public support. Using a structured questionnaire, we gathered data from 385 respondents from Goa, a popular tourist and gambling destination in India. Through structural equation modelling, we found that most of the variance (87%) in support of gambling was explained by attitude. Perceived benefits and risks explained the significant variance (58%) in attitude towards gambling, as indicated in the theory of planned behaviour. The coefficients were significant except for the path from social risk to attitude, which was removed from the final model. The direct path from benefits and risk to support were not significant. In addition, the path from personal risk to attitude was moderated by the respondent's gambling behaviour. Although gamblers had a more positive attitude with increasing personal risk, non-gamblers had a more negative attitude with increasing personal risk. This finding confirms the risk-seeking behaviour of gamblers.

**Keywords:** gambling, social benefit, personal benefit, personal risk, gambling attitude, support for gambling, theory of planned behaviour

## Résumé

Cet article modifie la théorie du comportement planifié et avance que l'attitude à l'égard des jeux de hasard explique et prédit l'appui donné à ces jeux. L'étude vise à déterminer si les habitants et les touristes appuient l'industrie des jeux de hasard ou s'ils s'y opposent, et à cerner les facteurs menant à un appui ou à une opposition. Il s'agit d'une information de grande importance, car les décisions d'orientation prennent souvent en considération l'appui du public. Des données ont été recueillies

au moyen d'un questionnaire structuré auprès de 385 répondants de Goa, en Inde, une destination touristique et de jeu très prisée. À l'aide d'une modélisation par équation structurelle, la recherche a révélé que la variance (87 %) dans l'appui aux jeux de hasard s'explique en majeure partie par l'attitude. Comme le suggère la théorie du comportement planifié, les avantages et les risques perçus expliquent la variance importante (58 %) dans l'attitude à l'égard des jeux de hasard. Les coefficients sont significatifs, à l'exception de la piste causale entre le risque social et l'attitude, qui a été retirée du modèle final. Les pistes directes allant des avantages et des risques vers l'appui n'étaient pas significatives. Il est apparu que les comportements de jeu des répondants avaient un effet modérateur sur la piste allant du risque personnel vers l'attitude. L'attitude des joueurs était de plus en plus positive à mesure qu'augmentait le risque personnel, tandis que celle des non-joueurs était de plus en plus négative. Ce résultat confirme l'existence d'un comportement de recherche du risque chez les joueurs.

## Introduction

Gambling is often defined as a human activity that involves taking risks with money in order to gain value (Abbott & Volberg, 2000). As a result, many gamblers end up losing or gaining a substantial amount of money with the associated consequences. Some gamblers become pathological and are unable to keep their habit within limits. Previous studies have estimated that around 7.5% of gamblers experience significant adverse consequences and can be classified as problem or pathological gamblers (Fong et al., 2011; Ministry of Community Development, Youth, and Sports 2008; Productivity Commission, 2010; Wardle et al., 2011; Welte et al., 2008; Williams et al., 2012). Previous studies have also shown that other consequences of gambling include disturbances in family and personal life (Blanco et al., 2006; Echeburúa et al., 2011; Tavares et al., 2001); engagement in associated addictions such as alcoholism and smoking (American Psychiatric Association, 2013; Blanco et al., 2006; Okunna et al., 2016; Potenza et al., 2006); loss of self-esteem, wastage of time, and engagement in crime (Moghaddam et al., 2014); associated bankruptcy (Hodgins et al., 2011); loss of health as a result of addictions and a sedentary lifestyle; an addiction-like tendency towards impulsivity (Rash et al., 2016); and stress related to physical ailments such as heart disease (Afifi et al., 2011; Meyer et al., 2000).

On the other hand, to a fortunate few, gambling is an attraction that provides them with easy money. Gamblers have the potential to win cash and an opportunity to participate in a gaming activity (Douglas, 1995). According to Basham and Luik (2011), gambling is a form of enjoyment and thrill that some consider "a terrific form of entertainment." Many also engage in gambling to alleviate boredom (American Gaming Association, 2000; Hope & Havir, 2002; Tarras et al., 2000).

Casinos have mushroomed in many parts of the world since the late 20th century ("Daily Chart: The House Wins," 2014). Gambling is portrayed as a controversial industry, illegal in many countries, and facing challenges to its legitimacy in many jurisdictions where it is legal (Reith, 2007). For many, the casino is a world of fantasy. An emerging body of research has started to explicitly consider the social and economic impacts of casinos in different settings, mainly the effects of casinos related to patron and venue connectivity. All casino impacts, whether positive or negative, are spatially patterned. For example, casinos that target tourist markets may experience increased local benefits and diminished local harms compared with casinos that rely predominantly on a local market (Calcagno et al., 2010). If the patrons of casinos are tourists, many negative externalities associated with casino gambling, such as taxes, crime, and problem gambling, are exported to the various other states that the patrons belong to. Las Vegas and Macau are examples of this type of setting (Cornell, 2008).

Many states and economies promote casinos because of their benefits (Thomson & Mekoth, 2020) for the local economy, which include increased tax revenues, job opportunities, increased wages, and economic growth (Walker & Walker, 2013). Casinos also provide huge gains to the government through taxes, which can be a source of funding for other local and state programs (Garrett & Marsh, 2002). Associated businesses, such as hotels, those related to the travel industry, restaurants, and other minor business flourish in the region of a casino, as casinos provide direct and indirect employment (Cotti, 2013; Evans & Topoleski, 2002; Garrett, 2004). Many tourists are also attracted to destinations that offer gambling opportunities (Eadington, 1999). Nevertheless, casinos can also degrade society when pathological gamblers are involved in drug use and crime. Thus, gambling involves personal risks and benefits as well as social risks and benefits.

People can hold a positive or negative attitude towards gambling. An attitude is "a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols" (Vaughan & Hogg, 2005). As this definition implies, attitude is a favourable or unfavourable disposition towards an object or process. People high in power-prestigious attitudes may hold a positive attitude towards gambling, given portrayals of gambling as glamorous and exciting in the popular media. In contrast, individuals high in retention-time attitudes maintain a negative attitude towards gambling because they see gambling behaviour as a low return on investment (Derevensky et al., 2009). People can also support or oppose gambling regarding their own behaviour.

In this study, we aimed to understand the relationship among beliefs about the outcome of gambling (benefits and risks), attitude towards gambling, and gambling support through survey, analysis, and measurement of the social and personal costs and benefits of gambling. We argue that perceived social benefits and perceived personal benefits will positively influence attitude towards gambling and personal risks, and societal risks will reduce positive attitude towards gambling. Since people

will like or dislike gambling (positive or negative attitude), they will support or oppose society. We also argue that attitude alone determines gambling support because skills and environment that are essential in predicting intention are not applicable to support. The outcome variable is not gambling, but gambling support. We also posit that subjective norms will not be significant, as support does not always involve behaviour. Hence in this study, we proposed testing a modified theory of planned behaviour (TPB), giving full credit to attitude, but leaving subjective norms and perceived behavioural control aside. We intended to examine factors that led to public support for or opposition to casinos as an industry in society. This study is vital, as available support is an essential factor to be considered while government and destination managers make policy decisions.

## The Theory of Planned Behaviour

The TPB is one of the most widely researched models for predicting behavioural intentions by social psychologists (Armitage & Conner, 2010; S. E. Collins & Carey, 2007; Fielding et al., 2008; Norman et al., 2007). This model is an extension of the theory of reasoned action (Ajzen, 1991). The main premise is that an individual's performance of a specific behaviour is determined by his or her behavioural intention to act. This behavioural intention is, in turn, determined by three factors related to the behaviour: the person's attitude, subjective norms, and perceived behavioural control. The TPB model's primary assumption is that most people's behaviour is under their control and is rational. In this study, we postulated that because gambling is not a planned behaviour in a strict sense, perceived behavioural control does not matter for engaging in gambling behaviour or for supporting gambling or casinos. Moreover, support is such behaviour that does not need the skill or mastery of the situation. Hence, we postulated that attitude alone determines gambling support.

The more positive one's attitude, subjective norms, and perceived behavioural control are towards a behaviour, the more strongly one intends to implement it (Ajzen, 1991). Subjective norms refer to individuals' perceptions of social support or social opposition to their performance of a particular behaviour. Although this is generally true, subjective norms were nonetheless found to be negatively associated with taking medication (Peleg et al., 2017). Gambling support is a phenomenon in which subjective norms do not matter for two reasons: First, the supporter need not necessarily perform gambling, and second, support is partly affective and is not behaviour. In a meta-analysis, the subjective norm was the weakest predictor of intention (Armitage & Conner, 2010). Hence, we propose that subjective norms may not play an essential role in predicting support, as attitude will almost entirely explain the variance in support.

Despite the TPB's general usefulness, several studies have aimed to improve the theory's explanatory power by adding constructs within the TPB model (Kaiser & Scheuthle, 2003). Thus, different studies combined or extended the TPB by using

other determinant factors in their research models (Chen & Tung, 2010; Han & Kim, 2010; Han et al., 2010).

Ajzen (1991) defines attitude as "the individual's evaluation (favorable or unfavorable) of the target behavior." Attitude is the psychological emotion and the positive or negative evaluation that arises when an individual engages in certain behaviours. In the TPB model, attitude is a person's positive or negative evaluation of performing a specific behaviour (Ajzen, 1991). According to Taylor and Todd (1995), when individuals have a more positive attitude, their behavioural intention is more positive and vice versa. In our study, we tested the relation between attitude and support of gambling rather than attitude and gambling intention.

## Research Problem and Research Question

Significant decisions such as whether to promote casinos and gambling in society, depend, to a great extent, on whether citizens support or oppose casinos and gambling. Therefore, in this study, we addressed the research problem of identifying the factors that might lead to support for gambling. In exploring the influence of these factors, researchers use the TPB. Our study's research question was whether social and personal benefits and costs lead to a positive attitude towards gambling and the casino industry. We also tested whether a positive attitude leads to public support for gambling.

## Constructs and Hypotheses

### *Benefits of Gambling*

**Social Benefits.** Gambling has significant social benefits as a form of recreation and entertainment. Many studies and statistical reports regarding Chinese residents' behaviours and attitudes in Macau and Singapore (Fong & Ozorio, 2005; National Council on Problem Gambling, 2007) have affirmed gambling as a leisure activity. Gambling is claimed to have production-related benefits, which are a social benefit. Revenues from gambling at the state level provide general income and earmarked funds for various infrastructure development activities. The economic impacts of casinos analysed in the literature include more measurable economic effects of the casino industry such as local employment and wages (Cotti, 2013), government tax revenues, consumer benefits, industry competition, per capita income (Walker, 2013), and economic development. This economic activity level has spawned considerable analysis of gambling's regional economic consequences and many associated social and fiscal issues. It is claimed that gambling confers benefits on the community as a whole in the form of increased employment, tourism, and tax revenue (Forrest, 2013).

Work on gaming impacts provides scholars with two contrasting models to explain casino gambling effects on host communities in the United States: the economic boosterism model (Arkand-Fye & Penlin, 1992) and the social disruption model

(Stubbles, 1992). The economic boosterism model suggests that casino gambling generates economic benefits and that these returns can be used to mute potential externalities, if any. Walker and Jackson (1998) performed a panel test of Granger causality between various gambling forms (casinos and greyhound racing) and per capita income at the state level. The authors found Granger causality between gambling and per capita income at the state level, which confirmed the link between growth and gambling at the state level. The promise of economic benefits in terms of more employment and tax revenue can be considered the main propulsion for casino operations' continuing growth (Lee et al., 2003; Nichols et al., 2002).

Evans and Topoleski (2002) and Cotti (2013) found a positive relationship between casinos and employment. The most comprehensive of the published labour market studies was that by Cotti (2013), which reports positive employment and wage impacts in casino-hosting counties. However, most of the employment and wage benefits are confined to the economy's hospitality and entertainment sector (Grinols, 2004).

Wenz (2007) found a positive relationship between casinos and local house prices that was more pronounced in less densely populated areas. Wenz (2008) postulates that casinos are associated with increases in employment and housing units. According to Williams et al. (2011), gambling's liberalization has unarguably resulted in economic development. Leaving aside economic growth and employment creation, perhaps the most critical political motivation for introducing gambling—either lotteries or casinos—has been an effort to increase government tax revenue (Walker & Sobel, 2016).

The social impacts of casinos are more difficult to measure than are the economic consequences. On the social side, recent studies have found a weak link between casinos and crime (except for drunk driving),and bankruptcies. However, casinos have also created social benefits in employment and revenue (Walker & Sobel, 2016). These positive impacts lead to a positive attitude towards casinos and the growth of the gaming industry.

H1: There is a positive relationship between social benefits and attitude towards gambling.

**Personal Benefits.** Games of chance produce enjoyable recreation for the vast majority of those who engage in them, such as those who participate in gambling activities voluntarily and, in return, receive intrinsic benefits from their consumption (Walker, 2007). If consumers are gambling for entertainment purposes, they are purchasing gambling, just as they buy tickets for the cinema or a symphony. Adults who gamble for this purpose find themselves at play, interacting and socializing in a safe environment among their peers. The principal benefit of gambling is the diversion and pleasure it provides to millions of people. Despite the inextricable connection between personal interests and gambling, few empirical studies have

examined the role of individuals' attitudes about the benefits of their gambling behaviour.

Gambling provides relief from stress and boredom. It can help promote better emotional health and physical health (Basham & Luik, 2011). A rather lengthy list of benefits are attributable to leisure activities such as gambling. Included in this list is a sense of freedom, independence, and autonomy; enhanced self-competence and an improved sense of self-worth or self-esteem, self-reliance, and self-confidence; better ability to relate to others; enhanced creative ability; increased cognitive efficiency, including better problem-solving ability; greater adaptability and resilience; an improved sense of humour; greater joy from life and an enhanced perceived quality of life; more balanced competitiveness; a more positive outlook; and a reduced personal sense of social alienation (American Gaming Association 2000; Hope & Havir, 2002; Tarras et al., 2000). Evidence is mounting that the systems of social support and companionship inherent in gambling also contribute to a longer, more disease-free, and higher quality life.

Gambling helps players enhance their ability to cope with problems by building skills such as memory enhancement, problem-solving through game tactics, mathematical proficiency, concentration, and hand-to-eye coordination. Mental activity, such as the pattern recognition involved in playing multi-line bonus slots, helps pensioners stave off the effects of degenerative mental diseases such as Alzheimer's by keeping their brain active and developing new connections between brain cells (Winstone, 2002). Bingo, in particular, is found to help improve concentration and short-term memory. Since gambling involves risks, it can teach the player to deal with real-life threats, training the mind to handle risk (Winstone, 2002). Gambling can thus help the brain practice taking real-life risks. Entrepreneurship and risk taking are essential components of a progressive and progressing society. If the public perceives that they benefit from casinos and that these benefits outweigh the costs, they are inclined to develop and hold positive gambling attitudes.

According to Ap's (1992) social exchange theory, residents who perceived personal benefit from tourism development expressed positive attitudes towards it. Social exchange theory is a behavioural theory that attempts to understand and predict individuals' reactions in an interactive situation such as gambling. In continuation of the social exchange theory, a study on gambling by Perdue et al. (1995) indicated that personal benefits were strongly correlated with support for gambling and the positive impacts of gambling, such as jobs and recreation opportunities. Many studies showed this correlation in support of the social exchange theory in those residents who perceived personal benefits from gaming such as employment. These residents were more likely to express a positive attitude towards the economic benefits in assessing the effects of casinos and to give higher scores for gambling on the quality-of-life scale (Lee et al., 2003; Perdue et al., 1995; Roehl, 1999). These results indicate that residents who perceive personal benefits from casino development are likely to express more positive attitudes towards the economic and social impacts of casinos.

H2: There is a positive relationship between personal benefits and attitudes towards gambling.

### *Risks of Gambling*

**Social Costs.** If customers' actions are determined by the perceived cost of these actions and it is less than their actual value, the difference between the two can be viewed as a social cost. According to Markandya and Pearce (1989), because individuals in general do not adjust their behaviour, these costs are unaccounted for. The Australian Productivity Commission (1999) defines social benefits and costs as "the proportion of the internal benefits and costs which an individual did not rationally take into account when deciding to undertake the activity; plus all externalities, which are the effects of an activity which are imposed involuntarily on others in society." Walker and Barnett (1999) approach the definition of social costs from a different point of view by indicating that the social cost of an action is the amount by which that action reduces aggregate societal real wealth. This denotes that they, too, arrive at substantially the same conclusion as the Australian Productivity Commission.

The social disruption model (Stubbles, 1992) contends that gambling produces primary adverse outcomes by creating problematic and pathological behaviour among citizens and changing the host communities' social fabric. Thompson et al. (1997) argue that casinos lead to a decline in worker productivity. Grinols and Mustard (2001) support this proposal by identifying several categories of social costs, including the externalities of problem gaming, such as crime and worker productivity.

Many researchers identified the social costs of crime and quality of life associated with casinos, such as traffic congestion and a negative influence on the town's historical value (Evans & Topoleski, 2002; Grinols & Mustard, 2006; Reece, 2010). Nichols et al. (2002) examined the adverse social effects of casino gambling, such as crime, on local citizens' day-to-day life. Another study conducted by Stitt et al. (2005) highlighted social costs such as serious crimes and publicly visible nuisance crimes, such as drinking in public, vandalism, and prostitution. Their findings were similar to those of Pizam and Pokela (1985). While examining the potential impact of casinos on a community, Spears and Boger (2002) pointed out residents' main concerns: crime, noise, and traffic congestion. They assessed perceptions and attitudes towards the tribal casino in the State of Kansas and highlighted environmental externalities such as traffic conditions; air, water, and noise pollution; and overcrowding.

Garrett (2004) also provided an analysis of the commercial economic impacts associated with gambling. According to him, retail trade experienced considerable declines in employment, regardless of the casino's overall effect.

In her study, Vong (2009) perceived negative impacts of casinos on the environment and cost of living. She assessed that there had been a phenomenal rise in property prices and the general cost of living in the city. Moreover, increased visitor volume and new

tourism facilities caused a visible deterioration in the environment. Although in their study, Williams et al. (2011) acknowledge economic development as a result of gambling, they also mention that gambling was associated with a suite of negative social impacts, including pathological gambling and criminality.

Janes and Collison (2012) surveyed eight community leaders about how their area was affected by a significant expansion of a tribal casino. These leaders associated embezzlement and divorce cases in the area with casino gambling.

H3: There is a negative relationship between social costs and attitudes towards gambling.

**Personal Risk.** The Australian Productivity Commission (1999) defines personal benefits and costs as "those impacts of an activity which are borne by those who were party to a decision to undertake the activity and were rationally considered when they decided to undertake the activity."

The *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; American Psychiatric Association, 1994) identified preoccupation (with gambling), tolerance (in wagering increasing amounts), withdrawal, escape, chasing losses, lying, loss of control (to sit back or stop gambling), illegal acts, risking significant relationships (including job or career opportunities), and bailout (taking money from others) as characteristics of pathological gamblers. All of these are also personal risks.

Ladouceur et al. (1994) examined personal debts and medical costs and showed that problem gamblers have these losses. According to Raisamo et al. (2013), the most commonly reported harm among frequent gamblers was feeling guilty or shameful due to gambling, followed by problems with relationships and daily rhythm disruptions. Problem gamblers reported significantly more difficulties such as having arguments with family and friends. These arguments were significantly related to participants' hiding their gambling behaviours. Many problem gamblers had sold personal property to gamble and committed illegal acts to obtain money. They were also more likely to have experienced other risky behaviours, such as smoking and drug taking (Splevins et al., 2010).

Problem gamblers tend to lose or quit their jobs because of gambling. They also steal money to gamble. Many studies have shown that a vast majority of compulsive gamblers have committed crimes to finance their gambling addiction. Many serious problem gamblers wish to die. Gambling studies have also reported very high suicide rates for persons with gambling problems, indicating that more than one-fifth of compulsive gamblers may attempt suicide (Hardwick, 1984; Lesieur, 1989). The rates of attempted suicide are several times those in the general population. All of these outcomes lead to individuals having a negative attitude towards gambling.

Intangible costs and benefits are costs and benefits that cannot be readily valued in the marketplace. When reduced, they will not yield resources to the community for

consumption or investment purposes. If the head of a family gambles and, as a result, the family suffers from bankruptcy, crime, personal health issues, loss of life, grief and bereavement, poor quality of life, stress related to crime victims and gamblers, or family problems such as divorce (D. Collins & Lapsley, 2003; Grinols, 2004; Grinols & Mustard, 2001; Nichols et al., 2002; Policy Analytics, 2006), and the amount of gambling is then reduced, significant related benefits will accrue. But these benefits cannot be bought, sold, or transferred to anyone else. These costs are very much more personal than social.

Researchers have reported that casinos are associated with an increase in bankruptcies (Barron et al., 2002; Janes & Collison, 2012; Nichols et al., 2000). Casinos cause local patrons to borrow money to gamble, thereby precipitating a financial crisis and an increase in defaults (Goss & Morse, 2011). Gamblers who overestimate the expected rate of return tend to overspend and run the risk of going bankrupt (with overconsumption exceeding available resources over time) if they continue to live in that imagined frame of mind. By adjusting their behaviour, gamblers might trade overconsumption costs for non-consumption costs (spending less on non-gambling goods) or increase their income, draw from their savings, or increase borrowing.

H4: There is a negative relationship between personal risks and attitudes towards gambling.

### *Attitude Towards Gambling*

Kwan and McCartney (2005) associated different stages of tourism development to resident perceptions of gaming impact by using a gaming impact perception matrix. From subjective evaluations of benefits and costs brought about by gaming development, they found that resident perceptions were in a constant state of flux, being optimistic, neutral, or sceptical, in association with the development cycle. Depending on subjective cost-benefit opinions at later stages of casino development, resident perceptions became hopeful or sceptical (Vong, 2009). In another study, Macau's female residents held more positive attitudes towards establishing casino gambling than did male residents because they believed that casino gambling development would contribute to "positive economic impacts" (Wu & Chen, 2015).

Although most of the benefits from casino gambling accumulate to the casino jurisdiction, social harms may transpire elsewhere. Except for consumer surplus, the positive impacts of casino development can all reasonably be expected to be highest in the areas closest to casino development. Ko and Stewart (2002) conducted a study of the viewpoints of the residents of Cheju Island of South Korea in 2002. They found that the levels of resident satisfaction towards the community's environment, such as the protection of natural habitats and ecological resources, conservation of history and heritage, and improvement in public transportation, public medical facilities, electrical facilities, and so forth influenced their attitudes towards casinos. They also found that those respondents who displayed higher levels of satisfaction

with the environment held more positive attitudes towards casinos. Similar findings were reported by Perdue et al. (1995) and Carmichael et al. (1996). Moreover, many of the harmful impacts of casino gambling, including taxation and gambling-related harm, are, in large part, divided among the gambling patrons' states (Eadington, 1985). Therefore, when gamblers travel to a casino venue, a spatial disjunction between casino costs and benefits may occur.

### *Support for Gambling*

In recent years, several studies have examined host residents' perception of the impact of gambling development on their community, which continues to be an essential issue (Greenwood & Dwyer, 2017;; Wu & Chen, 2015). A primary reason for this rising interest has been the increasing shreds of evidence that casino development leads to much more positive than adverse outcomes at the local level.

Without resident support, it would be challenging for policymakers and gaming operators to push through reforms, policies, and business plans to further the gaming sector (Vong, 2009). Within the web of mixed issues posed by the economic boosterism model and the social disruption model, residents' goodwill and cooperation have been deemed essential elements for consideration of the future expansion of gaming tourism. This view is reflected by the fact that the benefit to residents and their well-being has often been touted as the foremost priority by policymakers and gambling tourism operators (Nichols et al., 2002).

In a recent study that examined residents' support for legalized gaming, Hsu (2000) found that such support declines over time because of an undesirable lag in the realization of benefits to the community during which negative impacts set in, such as an increasing crime rate and deterioration of community amenities and activities.

Positive economic factors predict the perceived impacts of gaming and its support, whereas social and environmental factors have little direct effect on support. The perceived economic benefits usually override social and environmental concerns. This perception is prevalent among those who directly receive advantages from the gaming sector in terms of employment, salary, and other associated income. Recent evidence such as that reported by Forrest (2013) suggests that legalized gambling benefits far outweigh these costs, which leads to a positive attitude and support for gambling.

H5: There is a positive relationship between attitude towards gambling and support for gambling.

### *Gambling Status*

Because gamblers are not thought to be risk averse, the relationship between personal risk and attitude towards gambling is supposed to be either weak or positive. Although personal risk generally dissuades people from gambling, those

who gamble are not threatened by personal risks. Hence, in this study, we also attempted to examine the differential impact that personal risk has on attitude towards gambling for gambling groups and non-gambling groups.

Mishra et al. (2010) provided evidence that gambling represents a general manifestation of "taste for risk." They also found that higher gambling involvement was associated with risk-prone attitudes in many content domains (i.e., investment, gambling, ethics, health, and safety). They postulated that gambling tendencies were associated with risky personality (impulsivity, sensation-seeking, and self-control), risk attitudes, and behavioural risk taking. Many studies about gamblers' behaviours and attitudes have affirmed that gamblers are not afraid to take risks (Fong & Ozorio, 2005; National Council on Problem Gambling, 2007). This may suggest that perceptions of harm do not necessarily translate into behavioural choices. Hence, the relationship between personal risk and attitude is negative for non-gamblers and positive or weak for gamblers.

H6: The gambling status of the respondent moderates the relationship between personal risk and attitude towards gambling.

## Method

We developed the scale used in this study by following a well-established scale development procedure based on the steps discussed by Boateng et al. (2018) and Slavec and Drnovšek (2012). We first undertook an extensive literature review to understand the constructs and the dimensions that needed to be measured and conducted a pilot study. The items were developed on the basis of conceptual definitions. We removed some of the questionnaire items from the analysis by using an accepted scale development procedure and considering fit indices and loadings. Common factor analysis and factor extraction were conducted to determine the number of factors. Confirmatory factor analysis was performed to establish the reliability and validity of the scale.

We gathered data from 375 respondents by administering a structured questionnaire. Participants were contacted at tourist attractions, hotels, travel agencies, and residences. Of the 385 respondents, 205 were tourists and 170 were residents (10 missing responses); 81 were gamblers and 291 were non-gamblers (13 missing responses); 187 were male and 192 were female (6 missing data); 110 were undergraduates, 159 were graduates, and 103 were postgraduates (13 missing data); 145 were working and 119 were businesspersons (121 missing data); and 174 were married and 195 were unmarried (15 missing data). The average age of the respondents was 33 years.

The structural model was developed and tested by hypothesizing the relationships as suggested by the TPB. Both benefits and risks were categorized into social and personal and related to attitude towards gambling and gambling support. Fit indices and coefficients were evaluated by comparing them with standard norms.

We tested the moderation effects of gambling status in the structural model. Gambling status was divided into two response categories: gamblers and non-gamblers. We used nested model comparisons to test moderation effects by comparing the difference in chi-square values between the unconstrained and the constrained models. Models were constrained by equating the path coefficients of the paths to be compared between two groups. Further inferences were drawn by comparing the standardized path coefficients for each path.

## Results

The reliability measures of Cronbach's alpha given in Table 1 suggest that all constructs had adequate reliability except for personal benefit, indicating that this construct requires further measurement development.

The measurement model was tested with Amos by including all the independent and intermediate variables and the dependent variable of support (Figure 1).

The model had excellent fit indices. The chi-square-based fit measure, minimum discrepancy per degree of freedom (CMIN/DF), was 2.191 and the root-mean-square error of approximation (RMSEA) was 0.056, which are excellent. The other fit indices, including comparative fit index (CFI) at 0.947, goodness-of-fit at 0.941, and probability of close fit (PClose) at 0.193) were also excellent. On the whole, the data fit the model well. The validity measures of the measurement model are shown in Table 2. Some of the validity measures need improvement, and hence developing better scales for measuring the constructs is suggested for future research.

The path diagram of the hypothesized relationship with standardized coefficients after running the structural model is shown in Figure 2.

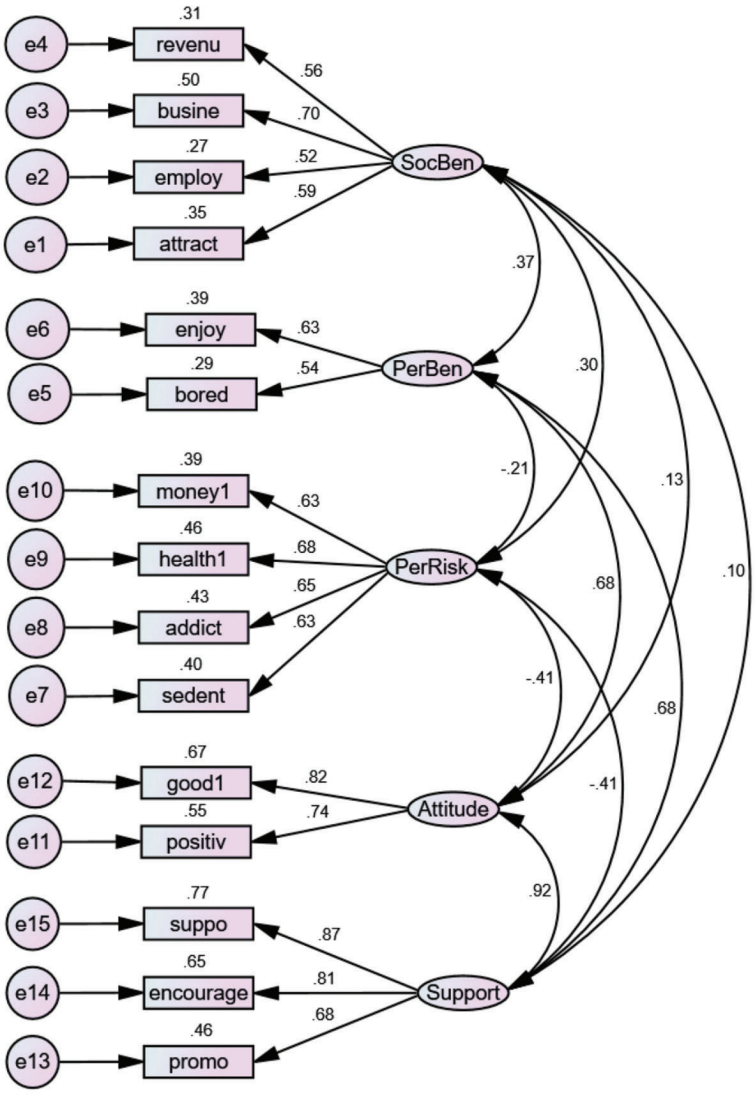
The model had acceptable fit indices. The chi-square-based fit measure CMIN/DF was 2.526, which is excellent. The other fit indices (CFI at 0.930, Tucker-Lewis index at 0.910, RMSEA at 0.063, and PClose at 0.023) were also acceptable. On the whole,

**Table 1**
*Reliability Measures*

| Sr. No. | Construct | Item | Alpha |
|---|---|---|---|
| 1 | Social benefit | 4 | .680 |
| 2 | Personal benefit | 2 | .506 |
| 3 | Personal risk | 4 | .741 |
| 4 | Attitude | 2 | .757 |
| 5 | Support | 3 | .832 |

*Note.* Sr. No = Serial number of the constructs.

**Figure 1**
*Measurement Model.**




*Note.* SocBen= Social Benefit; PerBen=Personal Benefit; PerRisk= Personal Risk; revenue= revenue; busine=business; employ=employment; attract=attraction; enjoy=enjoyment; bored=boredom; addict=addiction; sedent=sedentary; positive=positive; suppo=support; promo=promote.
*Measurement Model measuring latent variables in the ovals based on the observed variables.

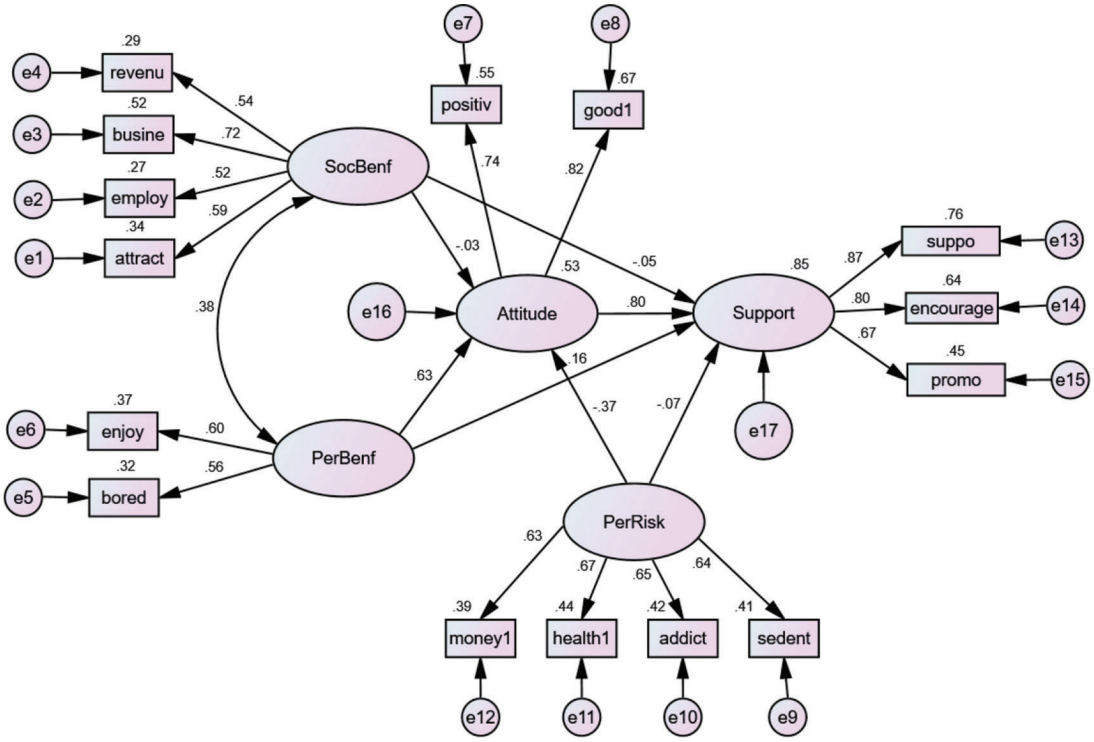
the data fit the model well. The path coefficients indicating the regression weights of all paths are shown in Table 3 with corresponding significance values. According to the path regression estimates reported, attitude was significantly affected by personal benefits and personal risks, which supports hypotheses H2 and H4. Social benefits did not have any influence on gambling attitude. Hence the hypothesized relationships in H1 were not supported. Attitude had a significant direct effect on support for

**Table 2**
*Validity Measures of the Measurement Model*

| Construct | CR | AVE | MSV | MaxR(H) | Attitude | SocBen | PerBen | PerRisk | Support |
|---|---|---|---|---|---|---|---|---|---|
| Attitude | 0.761 | 0.615 | 0.839 | 0.768 | **0.784** | | | | |
| SocBen | 0.686 | 0.357 | 0.139 | 0.701 | 0.135 | **0.597** | | | |
| PerBen | 0.509 | 0.343 | 0.466 | 0.514 | 0.675 | 0.373 | **0.585** | | |
| PerRisk | 0.741 | 0.418 | 0.166 | 0.742 | -0.407 | 0.301 | -0.213 | **0.646** | |
| Support | 0.831 | 0.624 | 0.839 | 0.856 | 0.916 | 0.105 | 0.683 | -0.408 | **0.790** |

*Note.* SocBen= Social Benefit; PerBen= Personal Benefit; PerRisk= Personal Risk. Bold numbers indicate the square root of AVE of the construct.

**Figure 2**
*Structural Model.**




*Note.* SocBen= Social Benefit; PerBen=Personal Benefit; PerRisk= Personal Risk; revenue= revenue; busine=business; employ=employment; attract=attraction; enjoy=enjoyment; bored=boredom; positive= positive; addict=addiction; sedent=sedentary; suppo=support; promo=promote.
*The Structural model tests all the hypothetical dependencies on the path analysis (Hoyle 1995, 2011; Kline 2010).

gambling, supporting H5. The coefficient was insignificant on the path from social risk to attitude, as hypothesized in H3, which has been removed from the final model. The direct paths from personal benefit, social benefit, and personal risk to support were not significant. We also found that the latent constructs significantly explained the manifest variables.

**Table 3**
*Regression Weights: (Group Number 1 - Default Model)*

| DV ← IV | Estimate | *SE* | CR | *p* |
|---|---|---|---|---|
| Attitude ← SocBen | -.039 | .122 | -.320 | .749 |
| Attitude ← PerBen | .959 | .186 | 5.170 | *** |
| Attitude ← PerRisk | -.488 | .089 | -5.490 | *** |
| Support ← Attitude | .899 | .118 | 7.652 | *** |
| Support ← SocBen | -.081 | .090 | -.902 | .367 |
| Support ← PerBen | .264 | .177 | 1.496 | .135 |
| Support ← PerRisk | -.098 | .088 | -1.109 | .267 |

*Note.* DV= Dependent Variable; IV= Independent Variable; CR= Composite Reliability. ***$p < 0.001$.

**Table 4**
*Nested Model Comparisons (Assuming Unconstrained Model to be Correct)*

| Model | *df* | CMIN | *p* | NFI Delta-1 | IFI Delta-2 | RFI rho-1 | TLI rho2 |
|---|---|---|---|---|---|---|---|
| Constrained model | 1 | 8.423 | .004 | .005 | .005 | .004 | .005 |

*Note. df* = degrees of freedom; CMIN = Minimum value of the discrepancy function; NFI = normed fit index; IFI = incremental fit index; RFI = relative fit index; TLI = Tucker-Lewis index.

**Table 5**
*Group-Wise Comparison of Path Coefficients*

| Group | Path | Estimate | *SE* | CR | *p* | Group No |
|---|---|---|---|---|---|---|
| Gamble group Unconstrained | Attitude ← PerRisk | .028 | .149 | .190 | .850 | a |
| Non-gamble group Unconstrained | Attitude ← PerRisk | -.575 | .110 | -5.223 | *** | b |

*Note.* CR = Critical Ratio.
***$p < 0.001$.

We tested the moderation effect of the respondents' residence status and gambling status on the relationship between personal risk and attitude towards gambling by making a nested model comparison. Respondents' residence status did not have any moderation effect on the relationship. The nested model comparison for gambling status is shown in Table 4, which indicates that the chi-square difference was large and significant, with a *p*-value of .004. Thus, the moderation test results support H5, demonstrating the moderating role of gambling status. Further examination of the coefficients of gambling and non-gambling groups (Table 5) indicates that although gamblers have a positive coefficient for the relationship, non-gamblers have a negative and statistically significant coefficient.

In addition, moderation by gambling status was tested by group comparison of groups, gamblers, and non-gamblers, as shown in Table 6. The differences in coefficients were

**Table 6**
*Group Difference Between Gamblers and Non-Gamblers*

| Overall model | Chi-square | *df* | *p*-Value | Invariant? | Interpretation |
|---|---|---|---|---|---|
| Unconstrained | 327.022 | 170 | | | |
| Fully constrained | 364.36 | 184 | | | |
| Number of groups | | 2 | | | |
| Difference | 37.338 | 14 | .001 | No | Groups are different at the model level. Check path differences. |

**Table 7**
*Moderation Results Representing the Difference Between Gamblers and Non-Gamblers*

| | Gamblers | | Non-Gamblers | | |
|---|---|---|---|---|---|
| DV ←IV | Estimate | *p* | Estimate | *p* | *z*-Score |
| Attitude ← Social benefit | 0.076 | .805 | 0.128 | .311 | -0.614 |
| Attitude ← Personal benefit | 0.96 | .024 | 0.979 | *** | 0.038 |
| Attitude ← Personal risk | 0.028 | .85 | 0.575 | *** | -3.261*** |
| Support ← Attitude | 1.094 | *** | 0.995 | *** | -0.418 |

*Note*. DV=Dependent Variable; IV=Independent Variable.
***$p < 0.001$.

**Table 8**
*Fit Indices for the Nested Model Comparison*

| Measure | Estimate Unconstrained | Estimate Constrained | Threshold | Interpretation |
|---|---|---|---|---|
| CMIN | 327.022 | 335.445 | -- | -- |
| *df* | 170 | 171 | -- | -- |
| CMIN/DF | 1.924 | 1.962 | Between 1 and 3 | Excellent |
| CFI | 0.905 | 0.901 | >0.95 | Acceptable |
| RMSEA | 0.050 | 0.051 | <0.06 | Excellent |
| PClose | 0.492 | 0.410 | >0.05 | Excellent |

*Note.* CMIN = Minimum value of the discrepancy function; *df* = degrees of freedom; CFI = comparative fit index; RMSEA = root-mean-square error of approximation; PClose = "p value" for testing the null hypothesis of close fit.

also tested and the results are provided in Table 7. Pathwise comparison indicated that a significant difference existed between coefficients of the path of personal risk to attitude. This result corroborates the findings of the nested model comparison.

The fit indices for the unconstrained and constrained models by various moderation effects were tested and are shown in Table 8. The fit indices were either excellent or acceptable.

## Discussion

Gambling attitudes refer to the favourable or unfavourable evaluations of risking money or valuables on events that can have uncertain outcomes, for example, which horse wins a race or which numbers come up on a pair of dice. The study results suggest that personal benefits and personal risks are essential in forming positive and negative attitudes towards gambling, which supports the findings of previous studies. Notably, social benefits and social risks do not determine attitude. One reason for this is that real costs represent a withdrawal of resources from other potential uses—that is, a subtraction from society's total welfare. Pecuniary damages represent costs that are borne by some community members but are precisely matched by the benefits to others. Thus, there are no net costs to society as a whole. These findings substantiate the idea that individuals (tourists and residents) value self-interest above social interest. The result is in line with what Thomas Hobbes proposed nearly 4 centuries ago: "self-interest is the most fundamental human motivation." In social psychology, many study topics, theoretical perspectives, and research programs reflect the assumption of self-interest. Research and theory in evolutionary psychology (Alicke & Sedikides, 2011; Murray et al., 2006; Neel et al., 2016) often assume that people are fundamentally self-centred.

An individual's opinion about whether gambling is good or bad depends on personal benefits and risks rather than considerations about society. In addition, attitude explains almost all of the variance in support, such that the role of subjective norms and perceived behavioural control is made insignificant. The significant relationship between a positive attitude towards casinos and support for casinos or approval for casinos was established in an earlier study of the Cheju Island residents of South Korea in which it was reported that residential satisfaction levels towards the community's environment influenced attitudes toward casinos. The investigators concluded that support is a construct that does not require an explanation of approval by others or mastery of oneself. This is possible because the individuals who support casinos need not be involved in gambling. Hence, the need for skill or consent does not arise. Thus, support is a specific case of a behavioural variable, which will be almost entirely explained by attitude. The importance of support is in public policy: Government, policymakers, and implementers need the support of the public and of stakeholders for effective policymaking and implementation.

This study has established that support for gambling is related to personal costs and benefits rather than to social costs and benefits. The perception of costs and benefits first leads to a positive or negative attitude towards gambling. Both residents and tourists support gambling if they have a positive attitude towards gambling. Because attitude alone explains most of the support, we conclude that what significant others think and whether people have mastery over situations does not support gambling. Therefore, in some sense, the TPB applies to gambling support in a different way. This is an important finding for policymakers such as government and destination managers.

## Conclusions

In this study, we have explicitly been able to unearth the nature of the construct support in the context of the TPB. Support is solely predicted and explained by attitude rather than by other constructs in the model because of its specific nature. Support does not involve indulgence in or performance of actual behaviour, but only mental support or other behaviour in support of the phenomenon in question. It is also true that personal risks and benefits rather than social risks and benefits predict and explain attitude towards gambling. In addition, gamblers' attitude towards gambling is not influenced by personal risks, whereas non-gamblers develop negative attitudes towards gambling because of personal risks. Notably, like gamblers, non-gamblers are also positively affected by personal benefits. Regarding the influence of personal benefits on attitude towards gambling, there is no significant difference between gamblers and non-gamblers.

## Managerial and Policy Implications

The potential impact of casino gambling in a region is an essential consideration for policymakers and residents. Government and casino managers will not be able to promote responsible gambling by highlighting the personal risks of gambling among gamblers. In addition, policymakers may not be able to mobilize support for a ban on casinos by emphasizing the social risks of gambling. Similarly, it is not possible to garner support for casinos by upholding social benefits. However, casinos will be able to help individuals develop a positive attitude towards gambling, even among non-gamblers, as well as support, by promoting personal benefits, particularly thrill and enjoyment. Messages related to the feelings of significant others such as friends or relatives about gambling or gamblers' mastery over the game cannot mobilize support for or against gambling by policymakers or casino managers. Non-gamblers' attitudes and opposition to gambling and casinos can be quickly developed by highlighting personal risks rather than social risks. It is also crucial that personal risks do not dissuade gamblers from liking or supporting gambling. These managerial implications are significant for government and casino owners and managers.

## Directions for Future Research

We propose a modification to the TPB in the context of support for gambling based purely on the fact that most of the variance in support is explained by attitude alone. However, future research could include subjective norms and perceived behavioural control as control variables in the model. Future research could also expand the theory in the context of other behaviours in cases in which public interest and support are vital for government and policymakers. There is a need to understand the nature of support as a seminal construct and the development of measures for it. Focusing on moderating effects based on involvement or participation in other contexts may be relevant. Identification and exploration of other moderators in the model are also of importance.

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