

## Research Article

# For it is in giving that we receive: Investigating gamers' gifting behaviour in online games

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## ABSTRACT

Social interactions in online games have led gamers to form lasting social relationships. This has caused a tremendous increase in gift-giving on online gaming platforms. This study aims to identify factors that impact gamers' gifting behaviour in online games. A conceptual framework is developed by incorporating the Social Identity Theory, Social Exchange Theory, and Theory of Planned Behaviour. This study adopts a quantitative research methodology that collects data from 404 Clash of Clans gamers. The findings show that gaming team identification and compliance with gaming team norms are positively associated with gaming team commitment. Gifting reciprocity, pleasure, relationship support, and convenience were positively associated with the perceived worth of gift-giving while perceived cost was negatively associated. Gaming team commitment, attitude, subjective norms, perceived behavioural control, and perceived worth were positively associated with online game gifting intention. It was also found that gifting behaviour is an immediate consequence of gifting intention in online games. This paper contributes to the under-researched literature on gifting behaviour in online games. It provides novel insights into gamers' gifting behaviour that can allow game developers to enhance revenue by increasing the sale of virtual in-game items.

## 1. Introduction

The online gaming industry is an electronic commerce application that is expected to attract over 6.2 billion gamers by 2023 (Liao, Pham, Cheng, & Teng, 2020). This growth in popularity is attributed mainly to incorporating social elements in online gaming platforms (Gong, Zhang, Cheung, Chen, & Lee, 2019). This social element is in the form of competition, cooperation, and an amalgam of cooperative-competitive gameplay in online gaming platforms (Liu, Li, & Santhanam, 2013). The ability of online gamers to interact with other gamers worldwide has further increased its attractiveness. Gamers can now play as part of a team, exchange virtual items, and build relationships with each other (Animesh, Pinsonneault, Yang, & Oh, 2011; Suh, Kim, & Suh, 2011). Popular online gaming platforms include PC gaming, mobile gaming, Xbox, Nintendo, and PlayStation. This growth in popularity and revenue-generating opportunity (Huang, Cheng, Huang, & Teng, 2018; Teng, 2017) has captured academics and practitioners' attention to better understand gamer gifting behaviour in online gaming platforms (Dwivedi et al., 2021; Sreejesh, Ghosh, & Dwivedi, 2021).

The concept of gift-giving is a universal phenomenon practised in

traditional (offline) and online contexts (Kim, Kankanhalli, & Lee, 2018). This practice has benefited gift receivers, gift-givers, and the businesses from which these gifts are purchased. Due to online gaming's social element, the practice of gifting has become popular in online games. This feature has the potential to change the way many individuals give gifts in an online setting. Gift giving in online games allows a gamer to send virtual items to their team members. This action is different from traditional gifting practices in several ways. First, gifting usually takes place on special occasions (for example, anniversaries and birthdays). However, in online gaming, special occasions are not a factor, and gifts can be given at any time. Second, unlike standard gifting practices requiring the giver to make a purchase involving money, in online gaming, the gamer can make the purchase using real-world money or use items and resources that they have earned in the game. Third, gifting in online games does not require a giver to physically go to a shop, purchase, or use a delivery method to send the gift. Here, gamers can use the online game's gift feature to conveniently send gifts to each other, which provides a high degree of convenience. Fourth, there is a high degree of impersonality in gift-giving in gaming platforms compared to traditional and online gift-giving. It becomes

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challenging to convey gift-givers emotions when giving gifts in online games. This study defines online gaming gift-giving as the act of sending gifts to other gamers in their team that involves virtual items (for example, resources, supplies, troops) that are either earned in the game or purchased from the in-game store.

The objective of this study is to identify factors that impact gamers' gifting behaviour in online games. Gifting in online games can become a profitable business model due to billions of active gamers (Aswani, Kar, Ilavarasan, & Dwivedi, 2018). This study is driven by the lack of understanding of this phenomenon, especially in motivating gamers' gifting behaviour. Studies that have explored gifting behaviour in the offline context have found symbolic (Ward & Broniarczyk, 2011), social (Giesler, 2006), and hedonic motivators (Ruth, Otnes, & Brunel, 1999) driving gifting intention. Other studies conducted in online and social network gifting also remains scarce and fragmented (Kim et al., 2018). Online gifting studies have typically used broad definitions of gifts and have primarily been qualitative or conceptual (Kim et al., 2018). Researchers have called for more empirical studies to be conducted in the online gifting context (Chakrabarti & Berthon, 2012; Kim et al., 2018; Skågeby, 2010). Also, due to the differences in online gaming gifting from gifting in online games, studies are needed to understand gamers' behaviour. To date, there have been no studies carried out that have explored online gaming gifting behaviour.

A theoretical model is constructed that combines the Social Identity Theory, Social Exchange Theory, and the Theory of Planned Behaviour (TPB) to accomplish this study's objective. TPB is a psychological theory that links beliefs to behaviour. The use of this theory is appropriate to understand factors gamers' beliefs that influence their gifting intention in online games. This theory has been used by several studies studying gamer behaviour in online games (Alzahrani, Mahmud, Ramayah, Alfarraj, & Alalwan, 2017; Lee & Tsai, 2010). The components of the TPB have been included in this study, namely attitude, subjective norms, and perceived behaviour control, behavioural intention, and actual behaviour. These three constructs are seen to influence an individual's behavioural intention and actual behaviour. In the context of this study, behavioural intention is replaced by gamers' gifting intention, while actual behaviour is replaced by actual gifting behaviour. Therefore, this study is appropriate to understand the factors influencing gamers' gifting behaviour.

Second, the Social Identity Theory is used to extend the TPB. According to the Social Identity Theory, individuals identify themselves to which they perceive themselves as members. This theory is appropriate due as online games require gamers to play as part of a team. Previous studies have used this theory to understand online gamer's identification (Liao et al., 2020; Setterstrom & Pearson, 2019; Teng, 2017). The Social Identity Theory introduces three factors, namely, team identification, compliance with team norms, and gaming team commitment, influencing gamers' gifting intention to extend the TPB. Also, Gaming team identification and compliance with gaming team norms have been included theorized as antecedents to gaming team commitment, while gaming team commitment is a factor influencing gamers' gifting intention.

Third, the Social Exchange Theory is incorporated to extend the TPB further. According to the Social Exchange Theory, an individual's decision is based on the assessment of net benefits. Studies conducted previously on gifting behaviour has used the Social Exchange Theory (Kim et al., 2018). The use of this theory is justified as gamers consider the cost-benefit implications of engaging in social interactions (gifting) in online games. This theory introduces perceived worth as an additional factor influencing gamers' gifting intention. Gift reciprocity, symbolic representation, pleasure, relationship support, convenience, immediacy, and perceived cost are added as antecedents to the perceived worth of gifting giving. Thus, the combination of three theories (Social Identity Theory, Social Exchange Theory, and TPB) offering different perspectives form a comprehensive model to meet this study's objective.

The following sections of this paper consist of the following layout:

Section 2 reviews the literature on gifting behaviour and three theories used in this study (i.e., the Social Identity Theory, Social Exchange Theory, and the Theory of Planned Behaviour). Section 3 goes on to outline the hypotheses of this study and provides the conceptual model figure. Section 4 outlines the research methodology employed in this study. Section 5 presents the results derived from the analysis of the collected data. Section 6 provides the discussion of the results for this study in conjunction with existing literature. Section 5 also provides the theoretical and practical implications of this study and the direction for future research. Section 7 concludes the paper by outlining the key aspects of the study.

## 2. Literature review

### 2.1. Gifting behaviour

Gifting refers to the act of voluntarily giving an item to another party (Kim et al., 2018). The literature on gifting has identified different drivers of gifting behaviour. These can be categorized as social, hedonic, symbolic, and normative (Belk, 1979; Sherry, 1983). The social motivation of gifting is driven by the desire to build and maintain a social relationship with the recipient (Giesler, 2006). The hedonic motivation is driven by pleasure and emotion invoked by giving gifts (Wolfenbarger & Yale, 1993). The symbolic motivation is driven by the gift-giver's desire to communicate a symbolic message (Belk, 1979). Finally, the normative motivation of gifting is driven by established social norms (Giesler, 2006).

Studies on online gifting have been focused on the emotions (Chakrabarti & Berthon, 2012; De Hooge, 2014), value (Corciolani & Dalli, 2014; Romele & Severo, 2016), and online gift-giving adoption (Mamonov & Benbunan-Fich, 2017). Trezn, Frey, and Veit (2018) indicated that gift-giving does not involve monetary compensation and is an act of sharing. Recent studies have started to explore gifting on social media platforms (Kim et al., 2018). The study by Kim et al. (2018) found that the number of social media friends, gifting experience, and perceived worth influenced gifting frequency. Kim et al. (2018) confirmed that gift frequency was affected by perceived costs and benefits (i.e., immediacy, convenience, relationship support, pleasure, and reciprocity) through perceived worth. Lee, Choi, and Kim (2019) examined the factors affecting gift giving on social networking platforms. The study found norms, pleasure, relationship support, symbolic representation, and convenience to be motivating gifting behaviour on social networking platforms. Li, Lu, Ma, and Wang (2020) examined gifting behaviour on live streaming platforms. The study found that social and personal identities differently affect viewers' gifting choices, and the relationship between viewers' class identity and gifting-giving behaviour is moderated by social density (Li et al., 2020). Lawry (2021) conducted a study to investigate hedonic behaviour whereby self-gifting influenced the acceptance of 'phygital' shopping experiences together with fashion opinion leadership and status-seeking. Despite these studies conducted on online gift giving, gifting behaviour in online games remains unexplored.

### 2.2. Theory of planned behaviour

The TPB explains that subjective norms, attitude, and perceived behavioural control motivate an individual's intended behaviour (Ajzen & Fishbein, 1980). Subjective norm is individuals' perception about their significant others' beliefs that drive them to engage in a behaviour. Attitude is an individual's evaluation of the expected outcomes of their actions that lead them to make an assessment (Dwivedi, Rana, Tamilmmani, & Raman, 2020). Positive assessment leads to a positive attitude that motivates an individual's behavioural intention (Sharma, Singh, Sharma, Jones et al., 2020). Perceived behavioural control is an individual experience that affects their ability to control the behaviour. TPB is appropriate to understand gaming gifting behaviour as it a widely

used theory to understand individuals' behaviour in online settings (Rana, Slade, Kitching, & Dwivedi, 2019; Sharma, Singh, Sharma, Jones et al., 2020).

2.3. Social identity theory

The Social Identity Theory was introduced by Tajfel and Turner (1986). It states that individuals identify themselves by the group of which they are a member of. This theory has been used in online gaming (Liao et al., 2020; Setterstrom & Pearson, 2019). According to the literature, groups refer to identification with gaming groups or the norms of the group. Applying the social identity theory implies that a gamer's knowledge belongs to a group motivating them to identify with the group (Moon, Hossain, Sanders, Garrity, & Jo, 2013). Also, gamers comply with the norms of these gaming groups (Verhagen & Johansson, 2009). Due to the importance of social interactions and relationship building in an online game, the Social Identity Theory is appropriate to understand gifting behaviour.

2.4. Social exchange theory

According to Blau (1964), the Social Exchange Theory explains an individual's behaviour through a socio-psychological standpoint when engaging in social exchanges. Individuals engaging in social exchanges do so with an expectation of returns in the future but without clarity of the return's exact nature. This implies that one-off exchanges do not happen, but rather long-term relationships exist (Molm, 1997). This theory has been applied to understanding gifting behaviour in studies by Belk (1979); Mathur (1996), and Kim et al. (2018). According to Belk (1979), as gifts assist in defining, forming, and sustaining social relationships between the receiver and the giver, they are a form of social exchange. Hence, it is an appropriate theory to understand online gamers' gifting behaviour.

Therefore, this study will bring together the TPB, Social Identity Theory, and Social Exchange Theory. As these theories have different emphases, combining them would provide a more comprehensive understanding (Li, 2012; Schwarz, Mehta, Johnson, & Chin, 2007).

Together, the three theories will allow for a holistic understanding of gamers' gift-giving behaviour.

3. Conceptual framework and hypotheses

Fig. 1 presents this study's hypotheses and outlines how the three theories come together to develop the conceptual framework. It highlights the nine hypotheses that have been proposed subsequently in this section to meet this study's objective.

An individual's commitment towards a team can boost the team's performance (Haines, 2014). The Social Identity Theory can be used to explain the formation of commitment towards a team (1974). According to Tajfel (1974), this theory states that individuals attempt to make a positive impression on the team with which they are associated. This is done in an attempt to improve the team (Liao et al., 2020). As such, in online game gifting, gamers that identify positively with the group will positively be related to their commitment to improving the team performance by showing dedication towards the team (Huang, Wei, Watson, & Tan, 2003). Liao et al. (2020) conducted a study with 344 massively multiplayer online role-playing gamers found that gaming team identification positively influences a gamer's commitment towards the game team. Therefore, the following hypothesis is developed for this study:

H1. Online gaming team identification positively influences online gaming team commitment.

Gamers experience social satisfaction due to compliance with team norms (Teng & Chen, 2014). Gamers that comply with the norms of the team are considered social capital or assets of the team. This consideration motivates gamers to contribute to the team (Hau & Kang, 2016). Social satisfaction is also derived from the gamer's predictability and social acceptance due to compliance with team norms (Teng & Chen, 2014). This is likely to build trust, which in turn leads to team commitment. Liao et al. (2020) empirically supported this by finding a positive relationship between compliance with team norm and team commitment with online role-playing gamers. Therefore, it is hypothesized that:

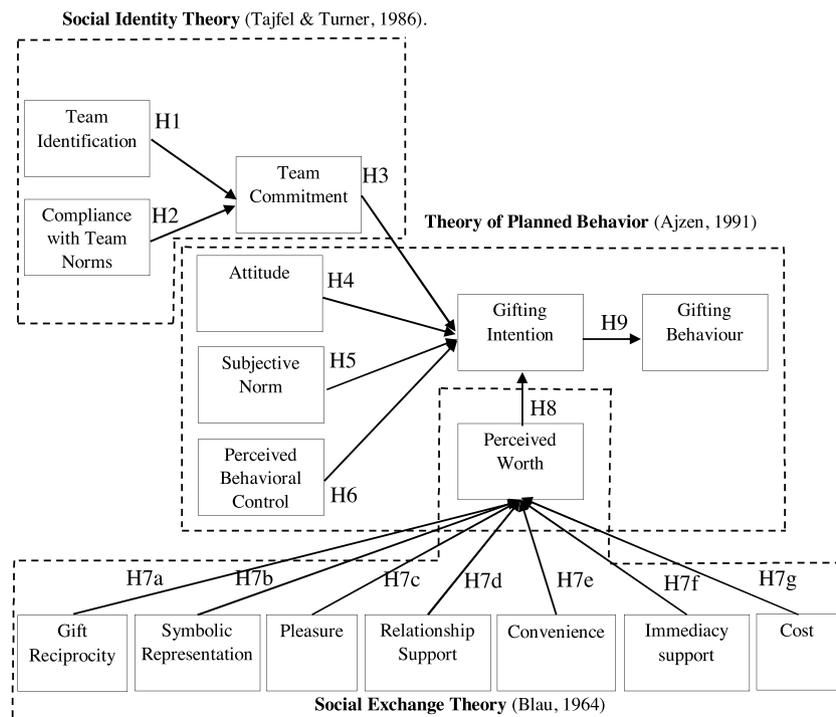


Fig. 1. Conceptual Framework.

**H2.** Compliance with online gaming team norms positively influences online gaming team commitment.

Team commitment is found to influence an individual's behaviour towards helping the team to be successful (Wombacher & Felfe, 2017). Studies have shown that commitment leads to organizational citizenship behaviour at the workplace (Cooper-Hakim & Viswesvaran, 2005; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). This can take the form of helping other members of the team (Park, Sohn, & Ha, 2016; Wombacher & Felfe, 2017). According to Morschheuser, Riar, Hamari, and Maedche (2017), commitment towards online gaming teams can lead to "we-intention." This commitment towards a team leads to the desire to contribute to the team (Teng, 2018) to improve team performance (Haines, 2014). Based on the above studies, it is expected that gamers that are committed to their online gaming teams would be willing to engage in online game gifting. This willingness would be driven by the desire to help of members and for the success of the online gaming team. Therefore, it is hypothesized that:

**H3.** Online gaming team commitment positively influences online game gifting intention.

According to TPB, attitude is a critical factor driving an individual's intention behaviour (Zhu & Kanjanamekanant, 2020). Simply, attitude is how an individual's overall behaviour is evaluated. In the context of this study, attitude is the gamer's negative or positive assessment of gift-giving to other online gamers. This definition has been adapted from Shiau and Chau (2016) and modified to the context of online gaming. Studies conducted in various context have confirmed the positive association between attitude and behavioural intention (Dwivedi, Rana, Jeyaraj, Clement, & Williams, 2019; Dwivedi, Khan, & Papazafeiropoulou, 2007; Sharma, Singh, & Pratt, 2020; Sharma, Singh, Pratt, & Narayan, 2020; Slade, Williams, & Dwivedi, 2014). Studying on online gaming have also confirmed similar results. A study conducted by Hsu and Lu (2004) found that a positive attitude towards playing online games leads to an intention to play online games. Lee (2009) found that attitude positively influences intention in online gaming. This finding was also confirmed by Kim, Chang, Chong, and Park (2019) in online gaming. As such, it is expected that gamers that have a positive attitude towards gifting in online games would be willing to engage in online game gifting. Therefore, it is hypothesized that:

**H4.** Attitude towards gifting in online games positively influences online game gifting intention.

Subjective norms refer to the social normative pressure that an individual perceives, which influences their behavioural intention or actual behaviour (Ajzen & Fishbein, 1980). Individuals tend to be swayed by other members' actions in their social network or society (Dwivedi, Ismagilova et al., 2020; Krishen, Dwivedi, Bindu, & Kumar, 2021; Yang, Asaad, & Dwivedi, 2017). Sharma, Singh, and Sharma (2020) found social influence to influence consumers' online behavioural intention. This normative pressure can be from an individual's peers, family, or friends. In the context of online gaming, subjective norms can be defined as the perception of social pressure by other gamers to engage in gift-giving behaviour. This definition has been adapted from Ajzen (1991) and modified to fit the context of online gaming. Studies conducted on online gaming have confirmed the positive association between subjective norms and online game gifting intention. A study conducted with 530 Chinese gamers found that subjective norms influence gaming behavioural intention (Wang et al., 2017). Sharma et al. (2021) found that subjective norms influence a gamer's divergent behavioural intention in online games. Gong et al. (2019) also reported that subjective norms influence gamers addiction to online games. Based on this discussion, it is expected that subjective norms would positively influence gamers online game gifting intention. Therefore, it is hypothesized that:

**H5.** Subjective norms positively influences online game gifting

intention.

The perceived behavioural control has been added to the Theory of Reasoned Action to develop the TPB. It is described as the "the perceived ease or difficulty of performing the behaviour" (Fishbein & Ajzen, 1977). Prior studies have confirmed that perceive behavioural control (Hansen, Saridakis, & Benson, 2018; Perri, Giglio, & Corvello, 2020; Ru, Wang, & Yan, 2018). In the context of online gaming, the perceived behavioural construct can be defined as an online gamer's perception of the degree of control they have to perform gifting behaviour. This definition has been adapted from Ajzen (1991) and modified to fit the context of online gaming. Studies relating to online gaming have confirmed consistent findings. Lee and Tsai (2010) found that perceived behavioural control influenced a gamer's intention to continue playing online games. Another study confirmed that gaming behavioural intention was influenced by perceived behavioural control (Wang et al., 2017). Lee and Tsai (2010) found perceived behavioural control influences a gamers' continued gaming intention. Based on these studies, it is expected that perceived behavioural control would also influence gamers' online game gifting intention. Therefore, it is hypothesized that:

**H6.** Perceived behavioural control positively influences online game gifting intention.

According to Blau (1964), when social interactions are expected to persist over time and not one-off, reciprocity becomes the primary motivator driving individuals to engage in social exchanges. The practice of gifting is one such social exchange (Pearson, 2007). Individuals expect to receive gifts in the future for giving a gift (Giesler, 2006). This study defines gift reciprocity in online gaming as believing that giving a gift will lead to returns or future gifts from the receiver. Due to a fear of sanctions for not complying with the community's norms or social approval, reciprocity is an expected benefit (Ajzen, 1991). Sanctions can come in the form of loss of interaction with the gift receiver due to not reciprocating. The positive relationship between gift reciprocity and perceived worth has been confirmed by Kim et al. (2018) in the context of gifting on social networking sites. This implies that future benefits can be expected by engaging in gifting behaviour, which increases the overall benefit of gifting (Zeithaml, 1988). Therefore, it is hypothesized that:

**H7a.** Gift reciprocity positively influences the perceived worth of online game gifting.

Gifts express various symbolic messages, such as expressing the giver's identity or the relationship status between the two parties (Belk, 1979). As such, symbolic benefits drive gift-giving behaviour. This study defines the symbolic benefits of gifting in online gaming as the perception of gamers that gifting would communicate and express symbolic messages to the receiver (Shareef, Dwivedi, Kumar, & Kumar, 2017). Literature confirms that individuals purchase items not only for their experiential value but also for their symbolic value (Kim, Chan, & Kankanhalli, 2012; Smith & Colgate, 2007). Gifts can be used to convey special meaning (Giesler, 2006; Skågeby, 2010) or emotion (Sherry, 1983; Ward & Broniarczyk, 2011) to the receiver. The positive relationship between the symbolic benefit of gift-giving and perceived worth has been confirmed by Kim et al. (2018) in the context of gifting on social networking sites. Therefore, it is hypothesized that:

**H7b.** Symbolic representation positively influences the perceived worth of online game gifting.

Gifting literature has confirmed that there are pleasurable experiences and positive emotions linked to gift-giving for the gift-giver. The practise of giving gifts yields a pleasurable experience (Ruth et al., 1999) and positive emotions for the giver (Wolfenbarger & Yale, 1993). This study defines pleasure as the feeling of happiness derived from giving gifts in online games. This definition is adapted and modified from the definition of pleasure by Holbrook, Chestnut, Oliva, and Greenleaf

(1984)). Decision-making literature considers pleasure as an emotional benefit considered by individuals (Sweeney & Soutar, 2001). Studies have confirmed that emotional benefits increase the perceived worth of gift-giving (Zeithaml, 1988). Kim et al. (2018) also confirmed that pleasure has a positive influence on the perceived worth of gift-giving in the context of social networks. Therefore, it is hypothesized that:

**H7c.** Pleasure positively influences the perceived worth of online game gifting.

Individuals engage in gift-giving as a means of developing social relationships with others (Belk, 1979). The ability to maintain or build social relationships through gift-giving is seen as a social benefit (Pearson, 2007; Skågeby, 2010). This study will define relationship support as the ability of gifts in online games to establish, enhance, and maintain relationships with other online gamers. This definition is adapted and modified from the previous study by Bowlby (1969). Decision-making literature has acknowledged the consideration of social benefits in terms of relationship support by individuals in decision making (Sweeney & Soutar, 2001). Gift-giving helps build friendship and emotional connections between the giver and recipient of gifts (Belk, 1979). This benefit increases the perceived worth of gifts (Zeithaml, 1988). The positive relationship between relationship support and perceived worth has been confirmed by Kim et al. (2018) in the context of social networking gifts. Therefore, it is hypothesized that:

**H7d.** Relationship support positively influences the perceived worth of online game gifting.

Individuals put in time and effort when it comes to gift-giving (Kahle & Homer, 1991). With electronic gift-giving, individuals can easily send gifts to recipients regardless of time or location (Kim et al., 2018). This allows the giver to experience convenience when engaging in electronic gifting. In the context of online gaming, the convenience of gifting can be defined as the effort and time saved by an individual in choosing, acquiring, and giving gifts to others in online gamers. This definition has been adapted from Berry, Seiders, and Grewal (2002) and modified to fit gifting in the online gaming context. This can be considered a functional benefit of gift-giving. According to Blau (1964), the social exchange benefit of giving increases the perceived net worth. Kim et al. (2018) found a positive relationship between the convenience of gift-giving and perceived net worth in gifting on social networks. Therefore, it is hypothesized that:

**H7e.** Convenience positively influences the perceived worth of online game gifting.

Delivery of gifts to the recipient is a crucial factor that the gift giver considers when buying a gift. With electronic gifting, this issue has been almost eliminated. This study defines gift-giving immediacy in online gaming as the absence of delays in sending gifts to other online gamers. This definition has been adapted from Kim et al. (2018) and modified to fit the online gaming context. This is considered a utilitarian or functional benefit of gifting (Sweeney & Soutar, 2001). According to Zeithaml (1988), this benefit of gifting increases an individual's perception of net worth. The study by Kim et al. (2018) found a positive relationship between the immediacy of gift-giving and perceived net worth in gifting on social networks. Therefore, it is hypothesized that:

**H7f.** Immediacy support positively influences the perceived worth of online game gifting.

The cost of the gift is a critical issue that the gift giver considers. In the context of online gaming, this can be defined as the transaction cost (i.e., in-game resources used) to acquire items for gifting to other online gamers. This definition has been adapted by Wang, Lin, Wang, Shih, and Wang (2018) and modified to fit the context of online gaming. Cost/price is a fundamental issue that affects an individual's decision-making and adoption in the literature (Slack, Singh, & Sharma, 2020; Wang et al., 2018). Individuals are more likely to adopt actions when the cost

is less expensive (Luarn & Lin, 2005; Wu & Wang, 2005). The perceived value is also negatively affected by cost (Gupta & Kim, 2010; Liu, Zhao, Chau, & Tang, 2015). Therefore, it is hypothesized that:

**H7g.** Perceived cost negatively influences the perceived worth of online game gifting.

In the context of social exchange, the evaluation of the costs and benefits (both intangible and tangible) is conceptualized as perceived worth (Blau, 1964; Molm, Takahashi, & Peterson, 2000). This study defines perceived worth as the potential net benefit likely to be obtained by the gift giver when deciding to give online gaming gifts. This definition has been adapted from the study by Kim and Gupta (2009). The literature on social exchange theory states that individuals evaluate the overall worth by comparing the costs and benefits of engaging in social exchange (Kim et al., 2018). If the perceived benefits exceed the costs, this will make it more likely for the individual to engage in the social exchange (Molm et al., 2000). The positive relationship between perceived worth and gift-giving frequency has been empirically supported by Kim et al. (2018) in the context of social network gifts. Therefore, it is hypothesized that:

**H8.** Perceived worth positively influences online game gifting intention.

According to Ajzen (1991), "usage behaviour is the manifest, observable response in a given situation with respect to a given target." This is considered to be a consequence of an individual's willingness to engage in a particular activity. Baabdullah et al. (2019) have confirmed the positive relationship between intention and behaviour in a technology acceptance study. The positive relationship between intention and behaviour was also confirmed by Vimalkumar, Sharma, Singh, and Dwivedi (2021) in the context of voice-based digital assistants. Sharma, Singh, Sharma et al. (2020) has also confirmed this relationship in information technology adoption study. Therefore, it is hypothesized that:

**H9.** Online game gifting intention positively influences game gifting behaviour.

## 4. Research methodology

### 4.1. Data collection procedure

An online survey was created using SurveyMonkey. The population for this study were Clash of Clan gamers. Clash of Clans is a very popular mobile game developed by Supercell. It has around 29 million players worldwide each day. This population is considered the most appropriate to examine online gaming's social aspects (Liao et al., 2020; Yang, Tong, & Teo, 2015). When a player joins a group (referred to as 'Clan' in the game), they can send and receive gifts (referred to as 'donation' in Clash of Clans). This exchange of gift items can only happen between clan members. A gamer can only be part of one clan at any given time. However, a gamer may leave the clan and join another clan. There are no penalties or restrictions on leaving a clan. However, being loyal to a clan has its benefits. A gamer can progress in the clan from being a 'member' to 'elder' and subsequently a 'co-leader'. Each position has its own benefits. For example, the elder can invite, accept, and remove members from the clan. Apart from having these benefits, the co-leader can promote and demote clan elders, promote new co-leaders, remove elders from the clan, and start a clan war and decide who participates in it. The amount of support provided by way of gifts (donations) is one of the factors that is considered for promotion within the clan.

Before conducting the full survey, a pilot study was carried out with 10 PhD students who were Clash of Clan players at the University of the South Pacific. Small changes were made to the wording of the questions from the pilot study results to increase readability and understandability. Data for the full survey was collected using Facebook. Facebook ranks as the most popular social networking sites Sharma, Singh, and

Aiyub (2020). The largest (i.e., in terms of the number of members) Clash of Clans group on Facebook is named *Clash of Clans "India"* with 329,000 members. The group is also very active, with approximately 121 posts by members per day. A list of all members of this group was extracted. From this list, 12,000 members were selected randomly, and links to the questionnaire and invitation messages were sent. The reason for selecting only 2000 members was because the group administrator had only permitted these many survey invitations. This method is similar to what was adapted by Sharma et al. (2021). Data collected was done for three weeks, with two reminders sent after 7-days intervals. To ensure that the respondents were actual Clash of Clans players, they were required to enter their Clash of Clans gamer identification. Respondents were given the incentive to enter a draw to win a \$50 (USD) Google Play Gift Card.

#### 4.2. Measures

The scales for the constructs were obtained from prior studies. Within the Clash of Clans game, sending members items (troops, spells, and siege machines) is referred to as 'donation' (Clash of Clans Support, 2020). Therefore, the construct items (Table 4) use the word 'donation' instead of 'gifting.' Gaming team identification was adapted from Moon et al. (2013), compliance with gaming team norms was adapted from Teng and Chen (2014), and gaming team commitment was adapted from (Teng, 2018). The TPB constructs (attitude, subjective norms, and perceived behavioural controls) were adapted from Bagozzi, Dholakia, and Basuroy (2003). Perceived worth was adapted from Sirdeshmukh, Singh, and Sabol (2002) and Kim, Gupta, and Koh (2011). Gifting reciprocity was adapted from Kankanhalli, Tan, and Wei (2005), while symbolic representation and pleasure were adapted from Holbrook et al. (1984). Relationship support was adapted from Bowlby (1969), convenience was adapted from Torkezadeh and Dhillon (2002), while immediacy and perceived cost were adapted from Kim and Gupta (2009). Gaming gifting intention and gaming gifting behaviour were adapted and modified from Venkatesh, Thong, and Xu (2012). These scales were measured using a seven-point Likert scale that ranged from "strongly disagree" to "strongly agree".

### 5. Results

#### 5.1. Demographic profile of respondents

This study shows that 47.3 percent ( $N = 191$ ) of the respondents were males, while 52.2 percent ( $N = 211$ ) were females. Two respondents (0.5 percent) did not wish to indicate their gender. Looking at the age distribution of the respondents, 19.1 percent were between 18–21 years, 64.4 percent were between 21–30 years, 12.1 percent were between 31–40 years, 3.2 percent were between 41–50 years, 0.7 percent were between 51–60 years, while the remaining 0.5 percent did not wish to indicate their age. The detailed demographic profile of the respondents is given in Table 1 on the next page.

#### 5.2. Common method bias

Adopting a survey methodology to collect data leads to the likelihood of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To test for common method bias, Harman's single-factor test was employed. The computed common method factor was 33.61 % which is less than the 50 % threshold. This confirmed the absence of the common method bias issue.

#### 5.3. Measurement model

Analysis was performed to confirm the validity and reliability of the scales used in the survey instrument. To assess the internal consistency, the Cronbach's alpha test was performed, and the following results were

**Table 1**  
Profile of Respondents.

	N	%
<b>Gender</b>		
Male	187	47.40
Female	203	51.79
Do not wish to indicate	2	0.50
<b>Age</b>		
18–21 years	75	19.13
21–30 years	254	64.80
31–40 years	46	11.73
41–50 years	12	3.06
51–60 years	3	0.77
61 years and above	–	–
Do not wish to indicate	2	0.51
<b>Income</b>		
I do not earn a fixed income	134	34.95
Under \$15,000	95	24.34
\$15,000–\$29,999	70	17.86
\$30,000–\$44,999	57	14.54
\$45,000–\$59,999	19	4.85
\$60,000–\$74,999	8	2.04
\$75,000–\$89,999	3	0.77
\$90,000 +	–	–
Do not wish to indicate	6	1.53

Note: Aggregate percentage can be slightly more or less than 100 because of rounding off.

obtained: Gaming team identification (0.91), Compliance with game team norms (0.83), Gaming team commitment (0.91), Attitude (0.95), Perceived behavioural control (0.82), Subjective norms (0.96), Perceived worth (0.93), Gift reciprocity (0.92), Symbolic representation (0.93), Pleasure (0.93), relationship support (0.94), Convenience (0.91), Immediacy (0.94), Gaming gifting behaviour (0.94), Gaming gifting intention (0.95), Perceived cost (0.90). The Cronbach's alpha values range from 0.82 to 0.96 (see Table 2). These scores confirm the internal consistency of the study's variables.

Table 2 presents the mean and standard deviation of all constructs and their respective items. The mean values range between 3.11 and 3.96. The standard deviation range between 0.31 and 0.49 which suggest a wide range of opinions of gamers. Table 3 below provides results that confirm discriminant validity. Table 4 outlines the confirmatory factor analysis results for the measurement items. After assessing the measurement model's appropriateness, the structured model was examined to tests the hypothesis proposed by this study. A good model fit of the measurement model was also confirmed ( $\chi^2/df = 2.89$ ,  $CFI = 0.94$ ;  $TLI = 0.94$ ;  $GFI = 0.95$ ;  $RMSEA = 0.04$ ).

#### 5.4. Structural model test

Tests performed in AMOS derived the following model fit indexes: ( $\chi^2/df = 2.71$ ,  $CFI = 0.94$ ;  $TLI = 0.93$ ;  $GFI = 0.95$ ;  $RMSEA = 0.05$ ). According to Hair, Black, Babin, Anderson, and Tatham (1998), the structured model of this study surpassed the minimum benchmark model fit. After achieving an appropriate model fit, the hypotheses of this study were tested, and the following results were derived: Compliance with gaming team norms ( $\beta = 0.53$ ,  $P < 0.001$ ) and gaming team identification ( $\beta = 0.41$ ,  $P < 0.001$ ) have a positive impact on gaming team commitment. Gaming team commitment ( $\beta = 0.14$ ,  $P < 0.01$ ), attitude ( $\beta = 0.13$ ,  $P < 0.001$ ), subjective norm ( $\beta = 0.16$ ,  $P < 0.001$ ), and perceived behavioural control ( $\beta = 0.16$ ,  $P < 0.001$ ) have a positive influence on gaming gifting intention. Gift reciprocity ( $\beta = 0.17$ ,  $P < 0.001$ ), pleasure ( $\beta = 0.11$ ,  $P < 0.001$ ), relationship support ( $\beta = 0.11$ ,  $P < 0.001$ ), and convenience ( $\beta = 0.31$ ,  $P < 0.001$ ) positively influences perceived worth, while perceived cost ( $\beta = -0.11$ ,  $P < 0.01$ ) negatively influences it. Perceived worth ( $\beta = 0.42$ ,  $P < 0.001$ ) is found to have positive influence on gaming gifting intention. Finally, results show that gaming gifting intention positively influences gaming gifting behaviour

**Table 2**  
Mean and Standard Deviation of constructs.

Variables	Mean	SD	Cronbach's alpha
<b>Gaming Team Identification</b>	<b>3.67</b>	<b>0.39</b>	
GTI1	3.86	0.47	0.91
GTI2	3.48	0.31	
<b>Compliance with Gaming Team Norms</b>	<b>3.80</b>	<b>0.41</b>	
CGT1	3.96	0.47	0.83
CGT2	3.77	0.31	
CGT3	3.68	0.44	
<b>Gaming Team Commitment</b>	<b>3.42</b>	<b>0.38</b>	
GTC1	3.48	0.31	0.91
GTC2	3.35	0.45	
<b>Attitude</b>	<b>3.69</b>	<b>0.40</b>	
ATT1	3.33	0.39	0.95
ATT2	3.75	0.35	
ATT3	3.75	0.43	
ATT4	3.83	0.45	
ATT5	3.77	0.36	
<b>Perceived Behavioural Control</b>	<b>3.66</b>	<b>0.43</b>	
PBC1	3.88	0.34	0.82
PBC2	3.75	0.49	
PBC3	3.36	0.45	
<b>Subjective Norm</b>	<b>3.62</b>	<b>0.39</b>	
SBN1	3.88	0.41	0.96
SBN2	3.62	0.44	
SBN3	3.32	0.41	
SBN4	3.33	0.34	
SBN5	3.94	0.36	
<b>Perceived Worth</b>	<b>3.55</b>	<b>0.43</b>	
PWT1	3.61	0.43	0.93
PWT2	3.87	0.34	
PWT3	3.57	0.46	
PWT4	3.14	0.47	
<b>Gift reciprocity</b>	<b>3.59</b>	<b>0.41</b>	
GTR1	3.84	0.41	0.92
GTR2	3.27	0.47	
GTR3	3.55	0.44	
GTR4	3.68	0.31	
<b>Symbolic Representation</b>	<b>3.42</b>	<b>0.46</b>	
SMR1	3.39	0.42	0.93
SMR2	3.11	0.47	
SMR3	3.26	0.48	
SMR4	3.92	0.46	
<b>Pleasure</b>	<b>3.37</b>	<b>0.42</b>	
PLS1	3.65	0.31	0.93
PLS2	3.18	0.48	
PLS3	3.44	0.44	
PLS4	3.21	0.44	
<b>Relationship Support</b>	<b>3.69</b>	<b>0.42</b>	
RLS1	3.31	0.36	0.94
RLS2	3.88	0.39	
RLS3	3.74	0.48	
RLS4	3.83	0.46	
<b>Convenience</b>	<b>3.46</b>	<b>0.47</b>	
CNV1	3.36	0.48	0.91
CNV2	3.59	0.46	
CNV3	3.67	0.46	
CNV4	3.21	0.49	
<b>Immediacy</b>	<b>3.35</b>	<b>0.40</b>	
IMD1	3.38	0.41	0.94
IMD2	3.46	0.37	
IMD3	3.42	0.41	
IMD4	3.15	0.42	
<b>Perceived Cost</b>	<b>3.70</b>	<b>0.39</b>	
PRC1	3.89	0.34	0.90
PRC2	3.28	0.43	
PRC3	3.93	0.39	
<b>Gaming Gifting Intention</b>	<b>3.47</b>	<b>0.40</b>	
GGI1	3.79	0.34	0.95
GGI2	3.18	0.36	
GGI3	3.53	0.49	
GGI4	3.46	0.38	
GGI5	3.38	0.43	
<b>Gaming Gifting Behaviour</b>	<b>3.51</b>	<b>0.40</b>	
GGB1	3.36	0.31	0.94
GGB2	3.85	0.42	
GGB3	3.33	0.47	

**Table 3**  
Discriminant Validity.

	CR	AVE	MSV	MaxR(H)	GTI	CGT	GTC	ATT	PBC	SBN	PWT	GTR	SMR	PLS	RLS	CNV	IMD	GGB	GGI	PRC
GTI	0.90	0.83	0.67	0.91	<b>0.90</b>															
CGT	0.84	0.83	0.69	0.84	0.41	<b>0.90</b>														
GTC	0.90	0.84	0.69	0.91	0.24	0.26	<b>0.89</b>													
ATT	0.95	0.79	0.61	0.95	0.45	0.43	0.15	<b>0.85</b>												
PBC	0.82	0.80	0.66	0.82	0.37	0.26	0.42	0.32	<b>0.87</b>											
SBN	0.96	0.83	0.58	0.96	0.43	0.34	0.27	0.23	0.14	<b>0.92</b>										
PWT	0.93	0.77	0.66	0.94	0.31	0.45	0.21	0.15	0.27	0.47	<b>0.88</b>									
GTR	0.92	0.74	0.43	0.93	0.37	0.26	0.19	0.25	0.34	0.13	0.29	<b>0.87</b>								
SMR	0.95	0.78	0.54	0.94	0.58	0.17	0.22	0.27	0.14	0.11	0.11	0.27	<b>0.87</b>							
PLS	0.93	0.76	0.37	0.93	0.59	0.15	0.27	0.14	0.45	0.32	0.39	0.15	0.18	<b>0.86</b>						
RLS	0.94	0.79	0.54	0.94	0.30	0.27	0.23	0.15	0.35	0.31	0.13	0.32	0.33	0.41	<b>0.89</b>					
CNV	0.91	0.82	0.76	0.91	0.23	0.41	0.43	0.46	0.24	0.29	0.15	0.18	0.36	0.34	0.26	<b>0.90</b>				
IMD	0.94	0.79	0.76	0.94	0.22	0.35	0.24	0.37	0.38	0.29	0.42	0.17	0.44	0.24	0.11	0.39	<b>0.91</b>			
GGB	0.94	0.83	0.34	0.96	0.51	0.46	0.19	0.35	0.26	0.42	0.36	0.46	0.22	0.41	0.42	0.12	0.33	<b>0.92</b>		
GGI	0.95	0.79	0.61	0.95	0.37	0.16	0.34	0.36	0.17	0.31	0.49	0.43	0.39	0.13	0.24	0.14	0.26	0.35	<b>0.87</b>	
PRC	0.89	0.76	0.37	0.92	-0.20	-0.19	-0.24	0.28	-0.30	-0.40	-0.32	-0.30	-0.42	-0.30	-0.40	-0.29	0.17	-0.21	-0.30	<b>0.86</b>

Note: The boldfaced diagonal elements are the square root of the variance shared between the constructs and their measures. Off-diagonal elements are the correlations between constructs. \*\* p < 0.001. GTI = Gaming Team Identification; CGT = Compliance with Gaming Team Norms; GTC = Gaming Team Commitment; ATT = Attitude; PBC = Perceived Behavioural Control; SBN = Subjective Norm; PWT = Perceived Worth; GTR = Gift Reciprocity; SMR = Symbolic Representation; PLS = Pleasure; RLS = Relationship Support; CNV = Convenience; IMD = Immediacy; PRC = Perceived Cost; GGI = Gaming Gifting Intention; GGB = Gaming Gifting Behaviour; CR = composite reliability; AVE = average variance extracted; MSV = Maximum Shared Variance; MaxR(H) = Maximum Reliability.

**Table 4**  
Confirmatory Factor Analysis Results for Refined Measurement Items.

Factor and item description	Model and item indices	
	SL	SMC
<b>Gaming Team Identification</b> (Source: adapted from Moon et al., 2013)		
I feel emotionally attached to my clan members in Clash of Clans.	0.92	0.84
My clan members in Clash of Clans have a great deal of personal meaning for me.	0.90	0.81
<b>Compliance with Gaming Team Norms</b> (Source: adapted from Teng & Chen, 2014)		
I often change my behaviour to comply with the norms of my clan in Clash of Clans.	0.78	0.61
I have my behaviour consistent with the norms of my clan in Clash of Clans.	0.78	0.60
I would sacrifice some in-game benefits to comply with the norms of my clan in Clash of Clans.	0.82	0.68
<b>Gaming Team Commitment</b> (Source: adapted from Teng, 2018)		
I direct my efforts for the success of my clan in Clash of Clans.	0.93	0.87
I actively contribute to my clan in Clash of Clans.	0.90	0.81
<b>Attitude</b> (Source: adapted from Bagozzi et al., 2003)		
Donating items to clan members in Clash of Clans is a good idea.	0.86	0.74
Donating items to clan members in Clash of Clans is a wise idea.	0.92	0.85
I like the idea of donating items to clan members in Clash of Clans.	0.93	0.86
Donating items to clan members in Clash of Clans is a pleasant idea.	0.90	0.80
Donating items to clan members in Clash of Clans is appealing.	0.83	0.69
<b>Perceived Behavioural Control</b> (Source: adapted from Bagozzi et al., 2003)		
If I wanted to, I could easily donate items to clan members in Clash of Clans.	0.74	0.54
It would not be difficult for me to donate items to clan members in Clash of Clans.	0.78	0.56
There are no barriers to prevent me from donating items to clan members in Clash of Clans.	0.81	0.66
<b>Subjective Norm</b> (Source: adapted from Bagozzi et al., 2003)		
Most people who are important in my life would understand my decision to donate items to clan members in Clash of Clans.	0.89	0.80
Most people who are important in my life would agree with my decision to donate items to clan members in Clash of Clans.	0.91	0.82
Most people who are important in my life would approve of me donating items to clan members in Clash of Clans.	0.93	0.86
Most people who are important in my life would support me in to donate items to clan members in Clash of Clans.	0.94	0.88
Most people who are important in my life would encourage me to donate items to clan members in Clash of Clans.	0.89	0.79
<b>Perceived Worth</b> (Source: adapted from Kim et al., 2011)		
Considering the issues involved in donating items to clan members in Clash of Clans, the gifts are of good value.	0.91	0.83
Considering the in-game resources I pay for donating items to clan members in Clash of Clans, the gifting delivers me good value.	0.90	0.80
Considering all the costs and benefits involved donating items to clan members in Clash of Clans, the gifts are worthwhile.	0.89	0.80
Overall, there are more benefits than costs in donating items to clan members in Clash of Clans.	0.82	0.67
<b>Gift reciprocity</b> (Source: adapted from Kankanhalli et al., 2005)		
I believe that I will receive some kind of return, if I donate items to clan members in Clash of Clans.	0.87	0.76
If I donate items to clan members in Clash of Clans, I will get something in return.	0.93	0.86
When I donate items to clan members in Clash of Clans, I expect to get something back in the future.	0.81	0.66
I believe my gifts to clan members in Clash of Clans will be reciprocated in some way.	0.82	0.67
<b>Symbolic Representation</b> (Source: adapted from Holbrook et al., 1984)		
Donating items to clan members in Clash of Clans conveys a message or meaning to the recipient.	0.90	0.64
Donating items to clan members in Clash of Clans expresses my emotions toward the recipient.	0.89	0.79
Donating items to clan members in Clash of Clans signifies my relationship with the recipient.	0.92	0.84
Donating items to clan members in Clash of Clans expresses my perception of the recipient.	0.92	0.85
<b>Pleasure</b> (Source: adapted from Holbrook et al., 1984)		
How do you feel about donating items to clan members in Clash of Clans?	0.86	0.75
How do you feel about donating items to clan members in Clash of Clans?	0.89	0.80
How do you feel about donating items to clan members in Clash of Clans?	0.89	0.80

**Table 4 (continued)**

Factor and item description	Model and item indices	
	SL	SMC
How do you feel about donating items to clan members in Clash of Clans?	0.84	0.70
<b>Relationship Support</b> (Source: adapted from Bowlby, 1969)		
Donating items to clan members in Clash of Clans helps me make friends.	0.88	0.77
Donating items to clan members in Clash of Clans enhances my relationship with the recipient.	0.89	0.80
Donating items to clan members in Clash of Clans enables me to form a better personal bond with the recipient.	0.91	0.82
Donating items to clan members in Clash of Clans brings me in a closer relationship with the recipient.	0.87	0.76
<b>Convenience</b> (Source: adapted from Torkezadeh & Dhillon, 2002)		
Donating items to clan members in Clash of Clans do not take much time.	0.86	0.75
Donating items to clan members in Clash of Clans involves little effort.	0.83	0.68
Donating items to clan members in Clash of Clans is easy for me.	0.87	0.76
Donating items to clan members in Clash of Clans reduces personal hassle.	0.82	0.68
<b>Immediacy</b> (Source: adapted from Kim & Gupta, 2009)		
Donating items to clan members in Clash of Clans is very fast.	0.90	0.81
Donating items to clan members in Clash of Clans without any delay.	0.92	0.84
Clash of Clans processes the gifts items to clan members very quickly.	0.90	0.79
The recipients of my gift sent via Clash of Clans know about them instantaneously.	0.85	0.72
<b>Perceived Cost</b> (Source: adapted from Kim & Gupta, 2009)		
The cost (i.e., resources) that I incur in donating items to clan members in Clash of Clans is too high.	0.85	0.73
The cost (i.e., resources) that I incur in donating items to clan members in Clash of Clans is unreasonable.	0.86	0.73
Overall, I am displeased with the cost (i.e., resources) that I incur in donating items to clan members in Clash of Clans.	0.84	0.70
<b>Gaming Gifting Intention</b> (Source: adapted from Venkatesh et al., 2012)		
I intend to donate items to clan members in Clash of Clans.	0.88	0.78
I predict that I would donate items to clan members in Clash of Clans.	0.92	0.84
I plan to donate items to clan members in Clash of Clans.	0.91	0.82
I will always try to donate items to clan members in Clash of Clans.	0.87	0.76
I will recommend to others to donate items to clan members in Clash of Clans.	0.85	0.73
<b>Gaming Gifting Behaviour</b> (Source: adapted from Venkatesh et al., 2012)		
How often do you donate troops in Clash of Clans?	0.91	0.83
How often do you donate spells in Clash of Clans?	0.97	0.93
How often do you donate Siege Machine in Clash of Clans?	0.86	0.74

Note: SL = Standardized Loadings, SMC = Squared Multiple Correlations.

( $\beta = 0.85, P < 0.001$ ). The summary of results is shown in Fig. 2 below.

## 6. Discussion

The observed variance in the model shows the following results: gaming team commitment ( $R^2 = 0.44$ ), perceived worth ( $R^2 = 0.64$ ), gaming gifting intention ( $R^2 = 0.59$ ), and gaming gifting behaviour ( $R^2 = 0.31$ ). According to Chin, Peterson, and Brown (2008), an  $R^2$  value of 0.67 signifies a substantial predictive power, 0.33 signifies moderate predictive power, and 0.19 signifies weak predictive power. Hence, the resulting predictive power of the model is appropriate.

The standard TBP model (comprising attitude, subjective norms, and perceived behavioural control only) gave an observed variance score of 0.44. However, by adding gaming team commitment and perceived worth, the model's predictive power increased to 0.59. This increase shows that the resulting model is a far better predictor of gaming gifting intention and, ultimately, online gaming gifting behaviour.

The results of this study are compared with the existing literature. First, this study finds that gaming team identification and compliance to gaming team norms act as antecedents to gaming team commitment. This confirms the applicability of the social identity theory in the context of gaming. The result shows that gamers are attempting to make a positive impression on the gaming team with which they are associated.

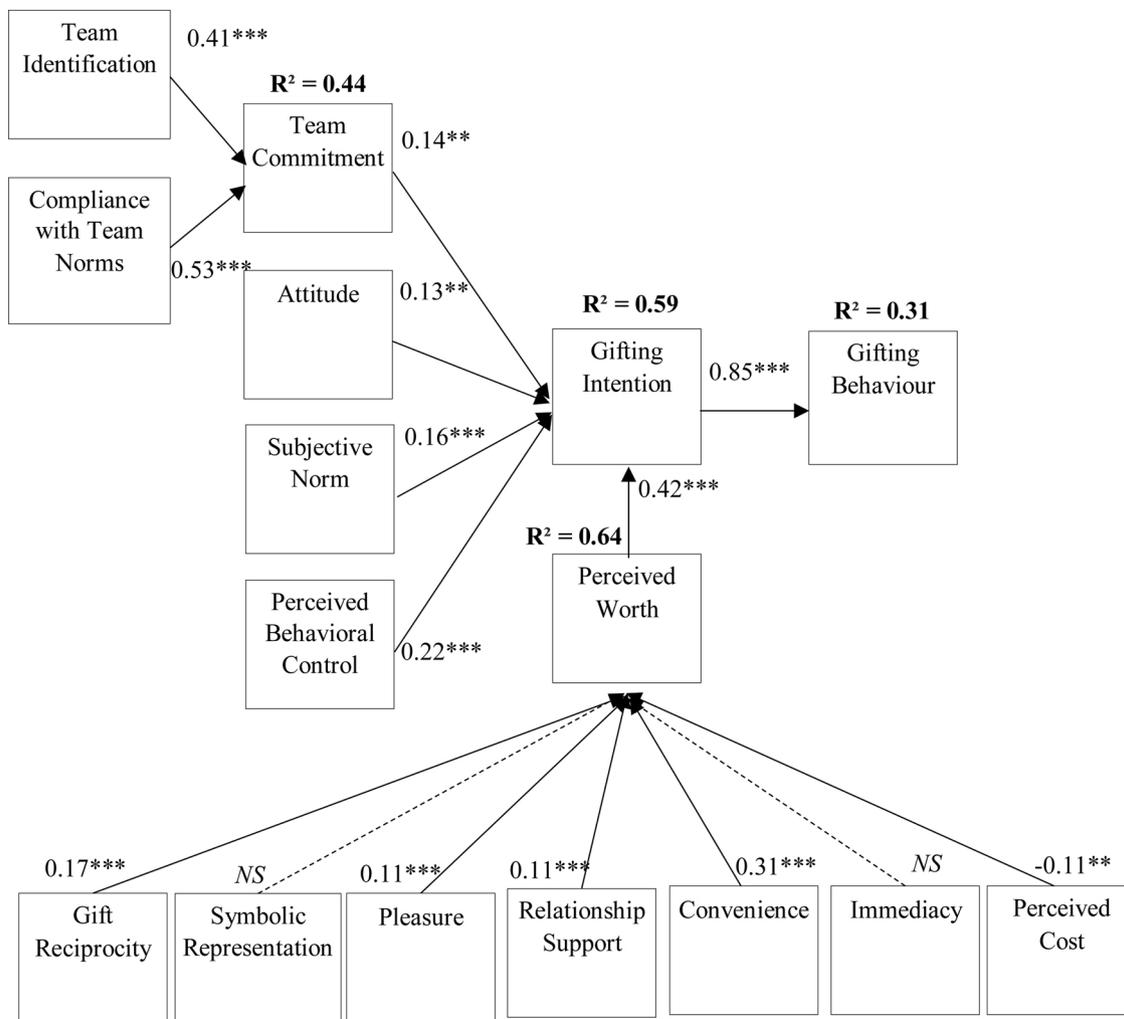


Fig. 2. Results.

The study by Liao et al. (2020) suggests that this is done to improve their team’s overall performance. Hence, to improve their team’s overall performance, online gamers ensure that they identify well with the team and comply with the norms of the team. For example, this can be providing new players in the game that are part of the groups with in-game resources. This study has also highlighted that online gamers comply with team norms to increase their social status in the team. Similar results were found by Liao et al. (2020), showing a positive relationship between compliance with team norm and team commitment. Team commitment has been found to have a positive impact on the perceived worth of gifting giving. This means that gamers who have high team spirit and are dedicated and loyal towards their online gaming team have a higher intention to give gifts in online games. This result is consistent with the findings of other studies. In the context of online gaming, commitment leads to the desire to contribute to the team (Teng, 2018) and enhance team performance (Haines, 2014). Therefore, gamers with high levels of commitment towards their team would feel that gifting items would lead other members of their online team to perform better and thus improve overall team performance.

Attitude has been found to have a positive influence on the perceived worth of gifting giving. This implies that online gamers that have a positive attitude towards gift-giving have increased gifting intention. This finding is consistent with other studies in different contexts that have confirmed the attitude and behavioural intention relationship (Hsu & Lu, 2004; Kim et al., 2019; Lee, 2009). Subjective norms have been found to influence the perceived worth of gifting giving positively. This

result shows the presence of social pressure from other gamers to engage in gift-giving behaviour. The impact of the subjective norms on behavioural intention has been consistently confirmed by other online gaming studies (Chang, Liu, & Chen, 2014; Gong et al., 2019; Wang et al., 2017). Hence, no complying with social pressure can result in gamers being removed from online gaming groups. Perceived behavioural control was also found to influence the perceived worth of gifting giving significantly. This result suggests that gamers who perceived a degree of control over being able to engage in gifting behaviour have a higher intention of gifting in online games. This result is consistent with other studies in online gaming by Hau and Kang (2016); Lee and Tsai (2010), and Wang et al. (2017) that have shown that perceived behavioural control influences behavioural intention.

Looking at the antecedents of perceived worth of gifting in online games, results from this study have shown that gifting repository positively influences perceived worth of gifting. Individuals expect to receive gifts in the future for giving a gift (Giesler, 2006). Therefore, online gamers believe that giving a gift will lead to returns or future gifts from the receiver. Game developers include unique items in online games that can only be obtained as a gift from another gamer. There is also a fear of sanctions for not complying with the reciprocity norm (Ajzen, 1991). Similar results have been found by Kim et al. (2018) in the context of gifting on social networking sites.

Symbolic representation was not found to impact the perceived worth of gifting giving. This result implies that online gift-giving does not communicate and express symbolic messages to the receiver. This

result is not consistent with other studies in the gifting literature that suggest that gifts can be used to convey special meaning (Giesler, 2006; Skågeby, 2010) or emotion (Sherry, 1983; Ward & Broniarczyk, 2011) to the receiver. This difference in the findings could be because gifting in online gaming is different from conventional gifting. This result means that gift in online gaming is given to improve other gamers' performance in one's team rather than for symbolic representation. Gift givers are motivated by self-interest as improvement in their team's performance would be more successful for them as well.

Pleasure has been found to influence the perceived worth of gifting giving positively. This result suggests that giving gifts in online games lead to feelings of happiness for the gamer. This result is consistent with Zeithaml (1988) and Kim et al. (2018). Relationship support was another antecedent of perceived worth confirmed by this study. This implies that gifting in online games is done to establish, enhance, and maintain relationships with other online gamers. This result is also consistent with Zeithaml (1988) and Kim et al. (2018).

Convenience positively influences the perceived worth of gift-giving. This suggests that gamers save effort and time to choose, acquire, and give other gifts in online games. This increases the perceived worth of gifting in online games. This study's finding is consistent with the results obtained by Kim et al. (2018) that found a positive relationship between the convenience of gift-giving and perceived net worth in gifting on social networks.

The positive impact of immediacy on perceived worth was not found significant by this study. This result is not consistent with Zeithaml (1988) and Kim et al. (2018). This could be because immediacy is not an issue of concern for gamers in online gift-giving. The benefit of online gift-giving applies when giving online gifts in a traditional setting where there is no need to wait for the gift delivery. Gifting in online gaming is more focused on the outcome of the gift than the delivery.

The perceived cost has been found to impact the perceived worth of gifts in online gaming negatively. This result implies that gamers are concerned about transaction costs (i.e., in-game resources or cash) used to acquire items for gifting to other online gamers. Cost is a fundamental issue that affects an individual's decision making. This result is consistent with other studies (Gupta & Kim, 2010; Liu et al., 2015).

Perceived worth is found to impact online gamers gifting intention positively. This result means that online gamers that perceived gifting in online games as worth it will intend to engage in the behaviour. This result is consistent with Kim et al. (2018) in the context of social network gifts. Finally, online gamers gifting intention is found to influence gamers gifting behaviour positively. This result implies that gamers who intend to engage in gifting behaviour in online games will engage in the behaviour. This result is consistent with other studies that support the intention and behaviour relationship (Baabdullah et al., 2019; Gupta, Dogra, & George, 2018; Sharma, Singh, Sharma et al., 2020).

### 6.1. Theoretical contribution

This study makes the following theoretical contributions. First, the study is novel as it is the first to explore gamers' gifting behaviour. This investigation was needed due to online gaming gifting forming a major part of revenue for online games, specifically those that are free to install. Prior studies on online gifting behaviour remain scarce and fragmented (Kim et al., 2018). This study answers the calls of future studies by providing empirical evidence of factors influencing gamers' gifting behaviour (Chakrabarti & Berthon, 2012; Kim et al., 2018; Skågeby, 2010).

Second, online gifting studies have typically used broad definitions of gifts and have primarily been qualitative or conceptual (Kim et al., 2018). This study addresses this issue by defining gifting behaviour in online games. In doing so, it distinguishes gifting in online games from other forms of gifting (offline, online, and social media gifting behaviour). As such, the findings derived from this study provide novel and comprehensive insights into the factors affecting online gamers gifting

behaviour.

Third, this study's model is constructed by combining the Social Identity Theory, Social Exchange Theory, and the Theory of Planned Behaviour (TPB) to accomplish this study's objective. Combining theories with different perspectives offers a more comprehensive and holistic understanding of a phenomenon (Li, 2012; Sharma, Singh, Sharma et al., 2020). In doing so, this study tests the factors influencing the perceived worth of gifting on social networking site proposed by Kim et al. (2018) in the context of gifting behaviour in online games. Also, this study extends the work by Liao et al. (2020) that proposed team identification and compliance to gaming team norms as factors influencing commitment to the gaming team. This is accomplished by modelling team commitment as one of the factors affecting gamers' online game gifting behaviour.

Fourth, this study provides one of the first pieces of empirical evidence of gamer behaviour from a developing country perspective. Primarily, studies relating to gamer behaviour have been conducted in developed countries (Sharma et al., 2021). Some of these countries include China (Wang, Fan, & Bae, 2019; Wu & Chen, 2013), Taiwan (Liao et al., 2020), and Singapore (Chen & Ong, 2018; Chen & Wu, 2015; Wu & Chen, 2013). The differences in infrastructure, economic, cultural, and legal environment can affect individuals' decision-making (Sharma, Singh, Sharma et al., 2020). Literature on theory building has also highlighted the importance of testing models and theories in different country context to increase its generalizability (Venkatesh et al., 2012). As such, the findings of this study contribute in this regard.

### 6.2. Implications for practice

This study has provided valuable contributions for practitioners such as game developers and related others to increase revenue generation by improving gifting behaviour in online games. Game developers have included features in games where players can gift items to other gamers within their online gaming group. Gifting behaviour in online games have the potential to generate significant revenue for game developers from games that are often free to install (Hamari, 2015). The quality and attractiveness of gaming platforms is also essential in ensuring gamer loyalty (Singh et al., 2021; Slack, Singh, & Sharma, 2020). This is because gamers often purchase virtual in-game items using real-worth money to gift to other team members within the game. As such, this study findings generate valuable insights into gamers gifting behaviour and strategies formulation to enhance online gaming gifting behaviour.

First, this study's results have confirmed the importance of team identification and compliance with online gaming team norms in building commitment towards online gaming teams. This commitment impacts the behaviour of gamers in online games. The findings highlight the importance for game developers to develop team norms by fostering good gaming etiquette. Friendly behaviour, such as allowing gamers to converse with each other before and after gaming helps develop team commitment (Liao et al., 2020). Team identification for gamers can also be strengthened by allowing gamers to explore each other's strengths and weaknesses in a gaming group and how each member contributes to the team's overall success (Liao et al., 2020). By adopting these strategies, gamers' team commitment can be enhanced which is a crucial antecedent to increasing online game gifting intentions.

Attitude has also been confirmed to be a factor influencing gifting intentions. Thus, there is a need to build a positive attitude towards gifting in online games for gamers. To accomplish this, game developers need to offer a range of diverse items that can be gifted to other gamers. Another strategy can be adding exclusive in-game items that a gamer cannot acquire by themselves but can only be obtained as gifts from another gamer. Subjective norm is another important factor confirmed by this study as an antecedent to online game gifting intention. Game developers can include statistics for players such as "number of items gifted" and "number of gifts received" that can be viewed by other gamers. Allowing other gamers to see the exchange of gifts between

players would be an effective way influencing gifting behaviour in online games. Perceived behavioural control is also confirmed to influence online game gifting intention. This finding highlights the importance of game developers to ensure that gifting behaviour is easy to perform in online games. As such, the gifting interface needs to be continuously improved and suggestions from gamers incorporated to ensure gifting actions can be performed easily in online games.

This study has shown that gift reciprocity, pleasure, relationship support, convenience, and perceived costs influence gamers' perceived worth of gifting in online games. Therefore, game developers need to provide additional benefits to gamers engaging in gifting behaviour. This can be in the form of points or experiences that can help the gamer level up in the game or unlock rewards/accomplishments. These benefits will not only increase gifting behaviour but enhance the hedonic value of gifting in online games. Game developers can also incorporate things such as "friendship level" between two gamers. Such a system can reward gamers engaging in gifting in online games to increase their "friendship level" in the game, which could unlock perks and incentives for gamers. The perceived cost has been an essential consideration that gamers consider when deciding to engage in gifting behaviour. Therefore, one way of increasing the perceived worth is to reduce the price of items when they are purchased for gifting rather than for gamer's own use in games. This would provide more incentive for gamers to engage in gifting behaviour. Game developers must understand the factors considered by gamers in decision-making when it comes to gifting in online games to be successful in influence it. Gifting is an effective way of getting gamers to spend real money in online games and generate revenue for game developers especially with 'free to install' games.

### 6.3. Research limitations and future directions

This study has certain limitations that need to be highlighted as they would provide a rich foundation for future studies. First, data collection was done using a list extracted from a group on Facebook. Hence, future studies can utilize other data collection methods. Second, despite the predictive power being high for the model, there is still room for improvement. Other factors can be included that better understanding factors that are affecting gifting intention on social networking sites. Third, future studies can be conducted with other mobile gaming that permits gifting behaviour, such as Free Fire or games on other platforms such as PlayStation or Xbox (Ghosh, Sreejesh, & Dwivedi, 2021). It would be interesting to look at the differences in gamer behaviour across various platforms and countries.

## 7. Conclusion

Online gaming has become a billion-dollar industry. A new revenue model has been created in such games with the introduction of gifting. Results from this study have shown that there are various factors influencing gamers gifting behaviour in online games. Gaming team identification and compliance with gaming team norms positively influence gaming team commitment. Gifting reciprocity, pleasure, relationship support, and convenience positively influence the perceived worth of gift-giving while perceived cost negatively influences it. Gaming team commitment, attitude, subjective norms, perceived behavioural control, and perceived worth positively influence gifting intention. Gifting behaviour was found to be an immediate consequence of gifting intention in online games. This study has contributed by amalgamating the TPB, social identity theory, and social exchange theory to comprehensively understand online gaming behaviour. It is the first study to examine factors influencing gamers gifting behaviour in online games empirically. Such a study explores factors influencing gamers' online gaming gifting behaviour and how these factors differ from conventional and online gift studies. Practically, this study offers unique insights to game developers to better understand the social elements of online gaming and gamers' gifting behaviour to increase

games' success.

## Authorship contributions

**Conception and design of study:** Shavneet Sharma and Gurmeet Singh.

**Acquisition of data:** Rashmini Sharma, Gurmeet Singh and Shavneet Sharma.

**Analysis and/or interpretation of data:** Shavneet Sharma and Gurmeet Singh.

**Drafting the manuscript:** Rashmini Sharma, Gurmeet Singh and Shavneet Sharma.

**Revising the manuscript critically for important intellectual content:** Shavneet Sharma and Gurmeet Singh.

**Approval of the version of the manuscript to be published:** Shavneet Sharma, Gurmeet Singh and Rashmini Sharma.

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