“Celebrity Avatar” Feasting on In-Game Items: A Gamers’ Play Arena

Xuhui Wang1, Asad Hassan Butt1, Qilin Zhang1, Nouman Shafique2, and Hassan Ahmad1

Abstract
Gamers like to socially interact with other players and show off their avatar whenever it is conceivable in performance and appearance. This study aimed to develop a new construct—“Celebrity Avatar”—based on the celebrity endorsement model and player-avatar identification theory and add value to the survey using theory of consumption value (TCV) as a mediating role. As we know, celebrity and avatar identification show a positive influence on consumer behavioral decisions, so celebrity avatars altogether as a new construct showed positive results. The self-brand connection (SBC) and fantasy have a positive effect on the celebrity avatar. We found that four components of TCV, that is, enjoyment value, character competency value, visual character value, and monetary value, are applicable for depicting how celebrity avatars can persuade consumers to buy in-game items.

Keywords
celebrity avatar, celebrity endorsement, game items, avatar identifications

Introduction
Innovative technologies are changing the online gaming arena, and consumers are continuously spending money to buy in-game features to perform well in the gameplay. Online video games are generating hefty profits for game developers. Online video games purchase items valued at more than “$15 billion” in 2016 (Bonder, 2016). Game avatars have transformed a lot in the recent decade with new digital graphics, sound, and other aesthetics. Celebrities are personal brands; special physiognomies perform various advertising exercises that may affect consumers (Akturan, 2011; Runyan et al., 2009). Furthermore, celebrities influence consumers to consume different products through endorsement (Holmes & Redmond, 2014; S. W. Wang & Scheinbaum, 2018). This study is about gaming avatar and celebrity as one identity as “Celebrity Avatar.”

The acquisition of game items demonstrates a prodigious insignia for game developers to further introduce new entertaining games or game features that, in turn, make profits for the companies. Like gaming brands invest heavily in the promotion of the game, same way clothing and many other brands invest in sustaining and endorsing their brand identity through association with celebrity brands (Ahmad et al., 2019; S. S. Kim et al., 2013). For example, Nike signed a contract with Cristiano Ronaldo and LeBron James worth “£14.2 Million and $48 Million,” respectively. Many brands adopt the celebrity endorsement strategy, but that does not mean brands will always benefit from it (K. Yang & Forney, 2013; Zhou & Whitla, 2013). Moreover, corporations are still trying to determine the most excellent ways for celebrity endorsement strategies (Bergkvist & Zhou, 2016; Osei-Frimpong et al., 2019).

Monotonized game options are the concerning strategies for the companies to make money (King & Delfabbro, 2019; Macey & Hamari, 2019; H. Wang et al., 2019). The gameplay is designed so that it repeatedly entices the consumer to buy in-game features (Geng & Chen, 2019). The players like to buy attire, level-ups, currencies, and so on for their avatars. Big brands also try to understand celebrity associations, and previous studies relate to celebrity characters (Kelting & Rice, 2013) and celebrity congruence (Choi & Rifon, 2012; Fleck et al., 2012). In this study, it is interesting to understand the avatar’s role and the celebrity altogether as one entity. The study will explore the new construct of celebrity avatar (CA) and its effect on consumer behavioral intention toward the game items, and the use of virtual game items is an essential source for the players in any game genre that enables players to maintain an avatar life (Lin & Sun, 2015; Wu & Hsu, 2018).

1Dongbei University of Finance and Economics, Dalian, China
2Gomal University, Dera Ismail Khan, Pakistan

Corresponding Author:
Asad Hassan Butt, School of Business, Dongbei University of Finance and Economics, Dalian 116025, China.
Email: asadhassanbutt36@hotmail.com

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Research has shown that players are prospective to decora
tate their avatar according to their self-personality and feel
more connected with it (Hamari & Lehdonvirta, 2010; H.
Wang et al., 2019). Recent studies have shown mixed impacts
of celebrity endorsement models on consumer perceptions,
attitudes, and behavior (Knoll & Matthes, 2017; Liu & Liu,
2020; Malik & Guptha, 2014). The gamers observe that the
better the avatar’s personality look, the better they will feel
bonded with it and enhance game performance (Dunn &
Guadagno, 2019; Yi et al., 2017). So, the players are ready to
spend money on their avatar and its in-game features to make
their game live better.

This conceptual framework is the first of its kind, where a
CA study is being done in a paper. The reasons for CA as a
new construct are that because consumer idolizes celebrities
in many ways in their life (Koernig & Boyd, 2009; Paul &
Bhakar, 2018). More interaction with other players motivates
the players to compete and have more positive social interac
tions (Reer & Krämer, 2019). Reliable avatars are more
likely to be favored for illustration in the game atmosphere
(Nowak & Rauh, 2005), and such avatars may influence con-
sumers toward social, behavioral aspects also. Thus, the
option of playing ones’ favorite celebrity as an avatar will
entice consumers to get involved more in the game and spend
more money in the game.

Celebrities are a prominent factor in affecting consumers’
behavior (Gilal et al., 2020; S. W. Wang et al., 2017). Gamers
with unique skills and personalities in gameplay can custom-
ize their avatar according to their identity (Black, 2017).
Thus, an avatar can influence players to spend more money
and customize according to their will (Yee, 2006). Previously,
it has been shown which types of celebrity endorsements are
most active (S. Wang et al., 2018; Y. Wang et al., 2013), and
thus, in study, one can understand the importance of CA and
its effect on gamers.

Game developers implement the strategy, so that the play-
ers can play the free base game but have to purchase ancil-
ary game content in the form of virtual items, level-ups, and
so on. This kind of buying in games is termed as “loot boxes”
(Drummond et al., 2019; W. Li et al., 2019), that enables
players to invest in the game items to move at a fast pace in
the game (King & Delfabbro, 2019).

The global gaming phenomenon has transformed the
players’ thoughts into buying in-game features to have a far
better avatar, and its items and youngsters are more involved
in spending money (Lin & Sun, 2011; van Ryn et al., 2018).
With the option of CA in the game; it can create a relation-
ship with famous brands (Zakari et al., 2019). It has been
reported that approximately 34% of young Australians aged
between 8 and 17 years spent money for in-game features in
a period of 1 year or so (King & Potenza, 2019). All game
genres, that is, massively multiplayer online role-playing
game (MMORPG), massively multiplayer online (MMO),
role-playing game (RPG), and augmented reality (AR), have
millions of active worldwide players.

At the moment, MMORPG games have more than 100
million active players across the world (Cottrell et al., 2019;
Kollar, 2016). Such games help players to interact in the vir-
tual world with other players (Wu & Hsu, 2018). The con-
structs of this study are explained in Table 1.

The objective of this article is to study the effect of CAs
on consumers’ purchase intention, in addition to exploring
the theory of consumption value (TCV) mediation. We
already know through literature that celebrities and avatar
influence consumers. It is hoped that it will extend the
knowledge and value to the CAs’ theories. A total of 250
respondents’ data were used and analyzed with structural
equation modeling on SmartPLS software.

Literature and Conceptual Framework

Self-Brand Connection (SBC) and Self-Congruity
Theory

SBC and self-congruity theory are discussed in the view of
CA. Consumers associate their identities with brands, and
this term is known as SBCs (Escalas, 2004). Consumers con-
sider a brand is essential and believe their possessions to be
their extended selves (Batra et al., 2012; Dwivedi et al.,
2015). Thus, consumers show behavioral intention in the
form of purchase or repeat purchase with loyalty, relating to
the brand story (Ren et al., 2012; Suki, 2014). More a con-
sumer has a positive experience with a brand online and
offline, more chances are consumers’ purchase intention and
connection with it (Vivek et al., 2014). We consider the SBC
as one of the antecedents of a CA.

The concept of CA can make gamers more connected
with the brand. The previous study has shown how consum-
ers relate to different brands and how they perceive them-
selves by associating with them (Escalas & Bettman, 2003;
S. V. Jin & Ryu, 2020). Consumers who have a high associa-
tion with a brand can also associate with a CA concept. We
can assume that SBC will have a positive effect on CAs. Like
SBC, the self-congruity theory explains how a consumer per-
ceives the importance of a brand’s symbolic value and one-
self (Kang et al., 2009). This aspect is also an essential factor
in gaming, where gamers tend to have a psychological rela-
tionship with the game and the game brand. Thus, gaming
avatars and celebrity brands together as one identity can cre-
ate a mental connection between the avatar and the gamer.
We proposed the following hypothesis:

Hypothesis 1 (H1): SBC has a positive effect on CA.

Fantasy

Fantasy is an illustration of an individual’s mind where they
can be anyone or do anything or the creation of dreams that
escape an individual from reality (Arlow, 2018). There are so
many fantasy novels and comic books, and many fantasy
movies are available. It is a world where the possibilities are endless, such as being a superhero, an astronaut, a president, a celebrity, or playing different life roles and fulfilling one’s fantasies in the gaming world (C.-H. Jin, 2014). In a fantasy world, one can escape from the real world’s worries (Kahn et al., 2015). Fantasy is considered an antecedent of a CA.

The reason is that it is a make-believe world in this “digital world” of gaming (Rodrigues et al., 2010). Thus, games can be considered an incentive for imagination and creativity (Giammarco et al., 2015). CA can positively affect the gamers because of fantasy, and perhaps consumers may be more connected to their avatar and the brand altogether. Online video games are a source of escape for people who want to be far from reality. More gamers are immersed in the gaming world with their avatars, more likely to have a high intention to play and buy in-game features (Huizinga, 1993). Thus, the following hypothesis is projected:

**Hypothesis 2 (H2):** Fantasy has a positive effect on CA.

**CA and Player-Avatar Identification (PAI) Theory**

The term “identification” was first used as a reference by Freud (Brill & Freud, 1938). The term kept growing and had different names from different researchers. The connotation of it is that where an individual fully immerses himself in the virtual world and believes that whatever happening to the character is happening to himself (Klimmt et al., 2009). In this research, the term avatar has an added application with a celebrity brand. Thus, it is changed from a regular avatar identification to CA identification. This is a new variable where it will be studied to understand the consumers' cognitive thoughts about having a CA in online video games. Furthermore, CA can affect the consumption value theory, which has four significant dimensions that are enjoyment value, character competency value, visual authority value, and monetary value.

Furthermore, player identification theory has been attached to this variable. Online video games and traditional media are different mediums altogether, as online video games with avatars deliver high levels of interactivity, selectivity, and personalization (Fokides, 2021). The dimensions of PAI theory are positive attitudes, importance to the character, absorption during the play, and feelings (D. D. Li et al., 2013).

Here, celebrity characteristics and avatar identification are integrated to check their effects on consumer intentions to buy virtual game items. Here, we need to understand what a brand is and how it benefits the consumers and the company. A brand can be a name, a logo, a design, a sound, a term, a word, or it can be a combination of all these (Ambler & Styles, 1997). In the same way, a celebrity also has characteristics. Celebrity characteristics with the avatar can be used as a CA in this research work.

Companies use brand features and celebrity physiognomies to use it further as celebrity endorsement in the promotion of the brand. Here, in this study, we use celebrity characteristics and avatar identification to understand consumer behavioral intention. Consumers may be influenced by a celebrity’s lifestyle and would like to impersonate them. In previous research work, it has been proven that celebrity endorsement increases a brand’s sales (McCormick, 2016; W. Yang, 2018). Celebrity endorsement can have a positive effect on the consumer toward intention to buy the brand (S. S. Kim et al., 2018), and it also enhances the image of the brand (Ibidunni et al., 2018).

Purchase intention of the brand increases with celebrity endorsement (McCormick, 2016; Ravi & Saxena, 2015). Furthermore, it is used widely by companies as a strategic tool to enhance the perception of the brand positively (Bozic, 2017; Zhao et al., 2018). Celebrity and avatar together as CA may influence consumer behavioral intention to buy virtual game items. The studies have shown that virtual items help the consumer get more linked and emotionally involved with the avatar (Xie et al., 2012). Using virtual items to customize the avatar creates a pleasurable experience for the players (Teng, 2010).

We already know that gamers are decorating and enjoying the consumption of virtual item on their avatars. Therefore,
celebrity and avatar as CA may influence the consumer to buy virtual game items. Using the right celebrity option in the gaming as avatars may increase purchase intention; thus, the right celebrity fit with the brand is the best strategy (Albert et al., 2017; Pradhan et al., 2016). There are four characteristics of a celebrity, namely, attractiveness, likeability, expertise, and trustworthiness (S. V. Jin & Ryu, 2020; Osei-Frimpong et al., 2019). Understanding the celebrity characteristics and how it transfers these characteristics to a brand (Fleck et al., 2012; Hung et al., 2011), it may affect the consumer intention also when used as CA.

It is imperative to comprehend that intent to play the game is the driving force behind gamers, and this driving force can also be game features that keep them motivated to keep playing the game (Wei & Lu, 2014). Companies’ strategy has changed from pay-to-play to play-to-pay (Fleury et al., 2014). Furthermore, a new policy called freemium has been introduced (a mix of free and premium). The strategy is about to play free, but to use some added features, a consumer needs to pay for it to enjoy the privileges, and thus, intention to play may affect the plan to pay (Fleury et al., 2014; Park & Lee, 2011b).

Figure 1 shows the schematic plan of this research study. Many players wish to decorate their avatars. The player’s motivation to purchase virtual game items is categorized into two types: (a) functional or contributory props and (b) ornamental or expressive accessories. The functional prop can help a player in making its avatar more powerful or superior. In contrast, the decorative prop can help make the avatar’s appearance more likable and attractive. Players are inclined to devote money to boost the avatar value that may help them perform (Park & Lee, 2011b). We know that every consumer has his or her way of thinking, and therefore, intention to purchase virtual items may differ from player to player (Hsu & Lin, 2015). So, the induction of CAs may increase consumers’ purchase intention who hardly or never buy virtual game items. Thus, we recommend two hypotheses:

**Hypothesis 3a (H3a):** CA has a positive effect on consumption value.

**Hypothesis 3b (H3b):** CA has a positive effect on game items purchase intention (GIPI).

**TCV**

According to the theory, the dimensions of TCV are condition value, epistemic, functional value, social value, and emotional value. Later, the approach was modified for gaming purposes by Li to contain four dimensions (Park & Lee, 2011a, 2011b). The four dimensions are enjoyment value, character competency value, visual authority value, and monetary value. Another research also showed similar components with the TCV: visual appeal value, social value, playful value, and financial value. But this study was in the context of the espousal of ringtones by mobile phone users (Turel et al., 2010). This study will take CA as the independent variable with antecedents of SBC and fantasy and TCV as a mediator between the CA and GIPI. TCV advocates that consumers ascribe different values to different products, and ultimately influence purchase intention (Ramkissoon et al., 2009).

The enjoyment value states that gamers will acquire the virtual game items to have more entertainment with their
avatar and the game itself. The character competency value indicates that the players will buy game items to upsurge their avatar’s supremacy in the game. The visual authority value states that the gamers will obtain the virtual game items to embellish their avatars to increase their social positioning amid other players and social groups. The last dimension is the monetary value, where gamers will purchase in-game items as they believe it is not expensive to buy. Compared with the TCV, the enjoyment value is like emotional value, character competency value is associated with functional value, visual authority value is associated with social value, and the monetary value is the new addition in theory related to gaming. Furthermore, the study has shown that TCV empowers deeper elucidations because it inspects fundamental motives in the consumer behavioral intention decision process (Lee et al., 2002). It is understandable from the study that the TCV may affect the consumer decision-making process. We suggest the following hypotheses.

**Hypothesis 4a (H4a):** Consumption value has a positive effect on GIPI.

**Hypothesis 4b (H4b):** Consumption value mediates between CA and GIPI.

**Method**

**Construct Measures and Selection**

The questionnaire items were adapted from previous research studies with a 7-point Likert-type scale. The data were collected from those who currently played MMORPG, RPG, and MMO genre games.

**Data Collection and Sample**

The data were collected with a convenience sample technique on WeChat and QQ social media apps. The questionnaire had a 43-item scale, including 12 demographic questions. There were a total of 277 respondents, and data were collected in October 2019. In total, 250 respondents were included after the responses were carefully screened, demonstrating a 90% response rate.

**Demographic Profile of the Respondents**

The details of the respondents’ profile are provided in Table 2.

**Data Analysis**

The data were analyzed using SmartPLS 3 software (Ringle & Sarstedt, 2016). This software was castoff to assess and construe the partial least squares structural equation modeling (PLS-SEM) model. It has been established that it is a powerful investigative instrument in various areas (Rosipal & Krämer, 2005) and has been extensively used to evaluate relationships between observed and latent variables in the information technology field (Gefen & Straub, 2005).

**Analysis and Measurement Model**

**Content Validity**

In this test, we check the data’s factor loadings (Hair et al., 2011). The breakpoint level for confirming validity is 0.60 (Hair et al., 1998), and all items had factor loading above 0.60. The details can be seen in Table 3.

**Convergent Validity**

To check this test’s reliability, we use Cronbach’s alpha, composite reliability (CR), and average variance extracted (AVE). Table 3 shows Cronbach’s alpha value of above .8, which is above the threshold of .70. The CR values range as above .9 and above the threshold point of .70 as directed by Hair et al. (2011). Likewise, AVE is above 0.5 and is above the cutoff point of 0.50 as directed by Hair et al. (2011).

**Discriminant Validity**

This test clarifies how a concept’s variables are different from other constructs in the same conceptual framework (Fornell & Larcker, 1981). It is resultant by matching the square root of the AVE value with the correlation values of the same construct (Fornell & Larcker, 1981). Table 4 shows the discriminant validity of the research framework.

**Structural Model**

Bootstrapping with a random sample of 5,000 was routed to compute the results for hypothesis testing. The computed results supported all the outcomes as shown in Table 5 and details are in Figure 2. First, the relationship of H1: F with CA was accepted at β = .260***, t = 2.995, p < .01. The relationship of H2: SBC with CA was to be significant at β = .499***, t = 5.899, p < .01. Similarly, relationships, such as H3a: CA with CV and H3b: CA with GIPI, are having a strong significance at β = .825***, t = 28.740, p < .01 and β = .626***, t = 10.473, p < .01, respectively. The relationship of H4a: CV with GIPI is accepted at β = .580***, t = 5.859, p < .001. Likewise, the relationship of H4b: CA and GIPI with mediating effect of CV is accepted at β = .479***, t = 5.793, p < .01.

**Discussion and Implications**

**Results and Theoretical Implications**

In this study, the TCV works well as a mediator for CA and GIPI. So, the scales for SBC (Dwivedi et al., 2015; Escalas,
Table 2. Respondents’ Profile (250).

| Characteristics                          | Distribution | Frequency | %   |
|------------------------------------------|--------------|-----------|-----|
| Gender                                   |              |           |     |
| Male                                     | 151          | 60.4      |     |
| Female                                   | 99           | 39.6      |     |
| Age                                      |              |           |     |
| 15–20                                    | 18           | 7.2       |     |
| 21–25                                    | 207          | 82.8      |     |
| 26–30                                    | 21           | 8.4       |     |
| 31–35                                    | 4            | 1.6       |     |
| Education                                |              |           |     |
| Undergraduate degree                     | 225          | 90        |     |
| Master’s degree                          | 23           | 9.2       |     |
| PhD degree                               | 2            | 0.8       |     |
| Occupation                               |              |           |     |
| Student                                  | 203          | 81.2      |     |
| Job                                      | 43           | 17.2      |     |
| Business                                 | 4            | 1.6       |     |
| Which game genre you prefer to play?     |              |           |     |
| Massively multiplayer online (MMO)       | 71           | 28.4      |     |
| Massively multiplayer online role-playing game (MMORPG) | 79 | 31.6 |     |
| Role-playing game (RPG)                  | 33           | 13.2      |     |
| Augmented reality                        | 16           | 6.4       |     |
| All                                      | 51           | 20.4      |     |
| Playing days per week (days)             |              |           |     |
| 1–2                                      | 66           | 26.4      |     |
| 2–3                                      | 21           | 8.4       |     |
| 4–6                                      | 37           | 14.8      |     |
| Everyday                                 | 126          | 50.4      |     |
| Amount of time per day (hr)              |              |           |     |
| 1–2                                      | 59           | 23.6      |     |
| 3–4                                      | 65           | 26        |     |
| >5                                       | 126          | 50.4      |     |
| Playing place                            |              |           |     |
| Dorm                                     | 152          | 60.8      |     |
| PC Café                                  | 55           | 22        |     |
| House                                    | 4            | 1.6       |     |
| Others                                   | 2            | 0.8       |     |
| All                                      | 37           | 14.8      |     |
| Your preference of country for your celebrity avatar? | | | |
| China                                    | 73           | 29.2      |     |
| Unites States                            | 43           | 17.2      |     |
| South Korea                              | 41           | 16.4      |     |
| Japan                                    | 22           | 8.8       |     |
| All                                      | 71           | 28.4      |     |
| Your preference of your celebrity avatar occupation? | | | |
| Actor                                    | 61           | 24.4      |     |
| Sports                                   | 43           | 17.2      |     |
| Singer                                   | 76           | 30.4      |     |
| Businessman                              | 1            | 0.4       |     |
| Animated characters                      | 7            | 2.8       |     |
| All                                      | 62           | 24.8      |     |
| Game items you are willing to purchase?  |              |           |     |
| Weaponry                                 | 39           | 15.6      |     |
| Level-up items                           | 33           | 13.2      |     |
| Decorative accessories (attire)          | 65           | 26        |     |
| Game currency                            | 23           | 9.2       |     |
| All                                      | 90           | 36        |     |
| Money (RMB) you are willing to spend on game items per month? | | | |
| 50–100                                   | 95           | 38        |     |
| 101–200                                  | 80           | 32        |     |
| 201–300                                  | 40           | 16        |     |
| 301–400                                  | 21           | 8.4       |     |
| 401–500                                  | 9            | 3.6       |     |
| >500                                     | 5            | 2         |     |
Wang et al. (2004; Harrigan et al., 2018), fantasy (Sherry et al., 2006), CA (B. J. Li & Lwin, 2016), TCV (Park & Lee, 2011b), and GIPI (Park & Lee, 2011b) are appropriate tools to assess this framework regarding online video gamers. The framework showed positive results which is an indication that they are in line with theory.

H1 stated that SBC positively affects CA as previous studies show that avatar identification and SBC are positively associated (Harrigan et al., 2018). Thus, it indicates that gamers are closely linked with CAs. It is understandable from the results that players are influenced by CA as mentioned in previous studies that celebrities influence the Table 3. Content Validity and Convergent Validity.

| Constructs                  | Indicators | Factor loading | Cronbach’s alpha | Composite reliability | Average variance extracted (AVE) |
|-----------------------------|------------|----------------|------------------|-----------------------|---------------------------------|
| Fantasy                     | F1 0.922   |                | .836             | .900                  | 0.705                           |
|                             | F2 0.938   |                |                  |                       |                                 |
|                             | F3 0.934   |                |                  |                       |                                 |
|                             | F4 0.464   |                |                  |                       |                                 |
| Self-brand connection       | SBC1 0.705 |                | .898             | .919                  | 0.619                           |
|                             | SBC2 0.825 |                |                  |                       |                                 |
|                             | SBC3 0.825 |                |                  |                       |                                 |
|                             | SBC4 0.795 |                |                  |                       |                                 |
|                             | SBC5 0.760 |                |                  |                       |                                 |
|                             | SBC6 0.779 |                |                  |                       |                                 |
|                             | SBC7 0.813 |                |                  |                       |                                 |
| Celebrity avatar            | CA1 0.897  |                | .887             | .923                  | 0.750                           |
|                             | CA2 0.900  |                |                  |                       |                                 |
|                             | CA3 0.902  |                |                  |                       |                                 |
|                             | CA4 0.757  |                |                  |                       |                                 |
| Enjoyment value             | EV1 0.721  |                | .941             | .948                  | 0.587                           |
|                             | EV2 0.736  |                |                  |                       |                                 |
|                             | EV3 0.826  |                |                  |                       |                                 |
| Character competency value  | CCV1 0.721 |                |                  |                       |                                 |
|                             | CCV2 0.736 |                |                  |                       |                                 |
|                             | CCV3 0.826 |                |                  |                       |                                 |
| Visual authority value      | VAV1 0.846 |                |                  |                       |                                 |
|                             | VAV2 0.826 |                |                  |                       |                                 |
|                             | VAV3 0.763 |                |                  |                       |                                 |
|                             | VAV4 0.799 |                |                  |                       |                                 |
| Monetary value              | MV1 0.898  |                |                  |                       |                                 |
|                             | MV2 0.888  |                |                  |                       |                                 |
|                             | MV3 0.903  |                |                  |                       |                                 |
| Game items purchase intention| GIPI1 0.898 |                | .877             | .924                  | 0.803                           |
|                             | GIPI2 0.888 |                |                  |                       |                                 |
|                             | GIPI3 0.903 |                |                  |                       |                                 |

Table 4. Discriminant Validity.

| Variables                  | Celebrity avatar | Consumption value | Fantasy | Game items purchase intention | Self-brand connection |
|----------------------------|------------------|-------------------|---------|-------------------------------|-----------------------|
| CA                         | 0.866            | 0.766             |         |                               |                       |
| CV                         | 0.825            | 0.698             | 0.839   |                               |                       |
| F                          | 0.577            | 0.631             | 0.896   |                               | 0.787                 |
| GIPI                       | 0.626            | 0.636             | 0.707   |                               |                       |
| SBC                        | 0.664            | 0.690             |         |                               |                       |

Note. CA = celebrity avatar; CV = competency value; F = fantasy; GIPI = game items purchase intention; SBC = self-brand connection.

2004; Harrigan et al., 2018), fantasy (Sherry et al., 2006), CA (B. J. Li & Lwin, 2016), TCV (Park & Lee, 2011b), and GIPI (Park & Lee, 2011b) are appropriate tools to assess this framework regarding online video gamers. The framework showed positive results which is an indication that they are in line with theory.
consumers (Albert et al., 2017; Bergkvist & Zhou, 2016; Dwivedi et al., 2015), and in the form of CA, it gives a more positive connection to themselves.

H2 stated that fantasy has a positive effect on CA and was approved (C.-H. Jin, 2014; Shelton, 2010). The reason for its acceptance is that gamers feel that they can do anything when they are in a fantasy world. Thus, gaming provides them with that platform where they can be what they dream.

H3a states that CA has a positive effect on consumption value. This hypothesis is approved. We know celebrity endorsement influences consumers with their charismatic personality (Knoll & Matthes, 2017; W. Yang, 2018; Zakari et al., 2019). And the PAI and the gamer are immersed in the gaming experience (Hooi & Cho, 2013; Peña & Kim, 2014; Waddell et al., 2015); thus, CA as seen from the structural model analysis effects TCV (Liao et al., 2019; Park & Lee, 2011a). It affects enjoyment value, character competency value, visual authority value, and monetary value positively.

H3b states that CA has a positive effect on GIPI. This hypothesis is also approved. As discussed before, celebrity do influence the consumers (Bergkvist & Zhou, 2016; Osei-Frimpong et al., 2019), and avatars are customized in accordance with one’s personality while playing (Y. Kim & Sundar, 2012; Midha & Nandedkar, 2012; Nowak & Rauh, 2005; H. Wang et al., 2019). Thus, CAs may influence consumers more from standard avatars in buying in-game items to increase avatar performance.

H4a states that consumption value has a positive effect on purchase items. This hypothesis was also accepted. The structural model testing shows that gamers tend to believe

| Hypothesis | Path coefficients | SD  | T statistics | p value | Decision |
|------------|------------------|-----|--------------|---------|----------|
| H1         | F → CA           | 0.260 | 0.087 | 2.995     | .003     | Accepted |
| H2         | SBC → CA        | 0.499 | 0.085 | 5.899     | .000     | Accepted |
| H3a        | CA → CV         | 0.825 | 0.029 | 28.740    | .000     | Accepted |
| H3b        | CA → GIPI       | 0.626 | 0.060 | 10.473    | .000     | Accepted |
| H4a        | CV → GIPI       | 0.580 | 0.099 | 5.859     | .000     | Accepted |
| H4b        | CA → CV → GIPI  | 0.479 | 0.083 | 5.793     | .000     | Accepted |

Note. F = fantasy; CA = celebrity avatar; SBC = self-brand connection; CV = competency value; GIPI = game items purchase intention.
that they will get more out of the avatar (Park & Lee, 2011b; X. Wang et al., 2020) and will buy more virtual game items to make the avatar look and perform better (Park & Lee, 2011a). Gamers will purchase game items when they feel that their avatar enjoyment value is high, the avatar is highly competitive in the gameplay, the avatar’s appearance is per their reflection, and the monetary value attached to the avatar is reasonable.

H4b stating that consumption value mediates between CA and GIPI is also approved. Thus, TCV is mediating well with the new construct CA and GIPI (Fleury et al., 2014). In the previous study, TCV was used to directly affect the intention to play (Coursaris et al., 2016; Hamari et al., 2017). In this article, we have taken TCV as a mediator (Park & Lee, 2011b). The results were entirely up to the constructs in the framework. We see that the mediation effect is more than the direct impact of CA on GIPI.

Finally, this study suggests that CA a new construct increases consumer intention to pay for in-game items with the mediating effect of TCV. These insights provide details to game developers to develop games where they can give CA options, and thus, it may influence consumers to play more and pay more to enhance the ability of the gamer’s avatar in performance and appearance both. More customizations are available for the players in the form of CA; more likely are the chances for them to buy more in-game items. Thus, the new construct CA has value and can earn money for game developers if implemented.

Implications for Game Developers

CA in MMORPG game genre. This study shows that CAs can influence consumers in buying in-game items through the mediating effect of TCV. CA itself is a new construct. Previously, avatar has been used by different names as PAI (D. D. Li et al., 2013) and so on but not as a CA. This new construct can add value to the game if game developers choose this option in their gameplay. Game developers spend millions of dollars on developing games, and thus, using celebrity as an avatar can help both the company and the celebrity itself.

CA in AR games. There are different types of game genres available to the consumers to enjoy, such as MMORPG, MMO, and RPG. There is one more term as AR. AR games provide learning, socializing, brain development, and healthy activity for the gamers (Alha et al., 2019; Koivisto et al., 2019). The CA concept can also be highlighted in AR-based reality games.

Research Limitations

The study showed good results with all the hypotheses accepted, but it has limitations. The number of respondents was only 250. This number can be increased to have better feedback. The research was only limited to one urban city of China. More urban cities can be added to understand the Chinese market of gaming. The study can be taken to other countries to understand CA’s effect on consumers’ willingness to pay for game items. The game genre included in this study was MMORPG, MMO, and RPG. Other game genres, like AR, can also be investigated in the future.

The study was based on a cross-sectional study. It can further be explored with longitudinal and experimental designs as it may provide a better analysis for this new construct. At last, only mediation was used to investigate the proposed framework. Moderating variables such as immersive experience and entertainment can further understand the original construct of CA.

Conclusion

This study showed positive results toward the new construct “celebrity avatar” toward GIPI with the mediating effect of TCV. The proposed framework analysis was based on PAI, self-congruity theory, and TCV. It showed that the induction of CA variable could affect consumers’ willingness to buy more in-game items. Thus, for future reference, this new construct CA can be further explored according to theories to understand the consumers’ willingness to pay for in-game items. The outcomes are of immense importance to both academics and game developers.

Appendix

Questionnaire

Fantasy

I will play electronic games because they let me do things I cannot do in real life.
Electronic games will allow me to pretend I am someone/somewhere else.
I like to do something that I could not normally do in real life through an electronic game.
I will enjoy the excitement of assuming an alter ego in an electronic game.

Self-Brand Connection

This celebrity avatar will reflect who I am.
I will identify with this celebrity avatar.
I will feel a personal connection to this celebrity avatar.
I will use this celebrity avatar to communicate who I am to other people.
I think this celebrity avatar will help me become the type of person I want to be.
I will consider this celebrity avatar to be “me” (It reflects who I consider myself to be or the way that I want to present myself to other(s)).
This celebrity avatar will suit me well.
Celebrity Avatar

I will be very interested in what others think about my online game celebrity avatar. My online game celebrity avatar’s success will be my success. When someone will praise my online game celebrity avatar, it will feel like a personal compliment. If a story in the media criticized my favorite celebrity(s), I would feel embarrassed.

Enjoyment Value

I will enjoy the game more. I will find the game more exciting. I will feel happier.

Character Competency Value

I will increase my game level quickly. I will get more game points than before. I will increase my powers.

Visual Authority Value

I will adorn my celebrity avatar characters to be more fashionable or stylish. I will make my celebrity avatar characters look better. Others will more notice me. I will make a better impression on others.

Monetary Value

Game items will worth more than what they cost. A game item will be a good product given the price. The prices of game items will be reasonable.

Game Items Purchase Intention

I will recommend to my family and parents and my friends to purchase items of online game with celebrity avatars option. There is a big probability that I will waste money in buying items of online games with celebrity avatars option. I intend to buy online game items in the future with celebrity avatars option.

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ORCID iDs

Asad Hassan Butt https://orcid.org/0000-0003-4718-4508
Nouman Shafique https://orcid.org/0000-0003-3542-675X
Hassan Ahmad https://orcid.org/0000-0003-3925-3956

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