Why Do People Play Online Games? The Perspective of Fit

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Abstract—**Mobile device has gained wide popularity among the mainstream users in recent years. For online social networking technologies are being rapidly developed, convenience of mobile devices has changed the user behaviors. The emergence of mobile games has been grown to be one of the dominant influences in the game market. Prior research has explored the players' motivation and the capabilities of mobile game. However, few studies have aimed to integrate these two concepts by fit and to examine their effects upon user behaviors from the game designer's point of view. According to the perspective of Fit and Uses and Gratifications Theory, this study firstly explores the alignment between Capabilities of Mobile Game (CoMG) and players' motivation. Sequentially, the further investigation into the user behaviors includes attachment for communities, participation and retention for mobile games. Using survey data collected from an online questionnaire completed by 427 players of mobile game. Multiple perspectives of strategic alignment, fit as covariation and fit as matching, were employed to empirically validate the research model. The results of the study verify that (1) the alignment between CoMG and player's motivation. (2) The alignment is positively associated with attachment. (3) The attachment is significantly enhanced by alignment between CoMG and players' motivation. (4) The attachment positively affects participation. (5) The attachment has a positive effect upon retention, too. Finally, both theoretical and practical implications as well as suggestions for future research are provided based on the findings in this study.**

Index Terms—**Fit/alignment, uses and gratifications theory, attachment, mobile game.**

I. Introduction

Social Network Games (SNGs) are one of the most popular online services of the modern era [1]. These social network games are usually through Facebook or Twitter to allow players to experience the game mode. It instantly becomes the most convenient and the most entertaining media social. Online games represent a burgeoning market sector with growth potential. The distinctive entertainment-oriented features of such games provide experiential motives for users [2]. The rapid development of online social networking technologies has also brought people closer to their needs [3]. The community of the original community link to the game allows players to expand the original community. With the popularity of mobile devices, the game developers will be extended to the field of mobile game.

In addition to providing leisure and entertainment needs, the real motive of the player is to influence the key to stay in the game [4]. Mobile Social Network Games (M-SNGs) in the virtual world connects players, creating a virtual community. Players in the group establish and develop the social relationship, achievement and escapist needs. These social motivations are the main reason why players continue to play games [5], [6].

As a result, most M-SNGs have some appealing capabilities. First, the original social community platform allow players to establish and to expand their relationship, the player interaction within a game is one of the key factors which they continue to play with a game [7], [8]. Second, players are concerned about the interface provided by the game, whether the players help each other, interaction, and communication [9]. Third, the ubiquity of mobile devices has become an important capability in attracting players, anytime, anywhere with the interaction of other players to allow players to get more satisfaction.

In addition, it is found that the player attaches great importance to the psychological incentive and security mechanism [10]-[13]. The incentive mechanism can take the initiative to give players a clear goal to increase the players' level of activity in the game. The security is to consider the instability of the network connection, unfair, information uncertainty, virtual treasure was stolen or a capital outflow.

Weibull (1985) explains the concept of satisfaction and the satisfaction that people use when they use the media. Such feelings affect the continued use of the media, and the constant power. The uses and gratifications theory is well suited to explore the motivational factors of the user's choice of media, as it covers people's psychological and social needs and how the media satisfies their own needs [14] and subsequent behavior.

The attachment relationships of online community members determine participation and retention, and such relationships are based on the development of common interests and discussion of the same topics [15]. The emotional association and participation of members of the mobile social community have a strong attachment and are keys to their participation and retention [16].

Therefore, the purpose of this study is as follows:

1) To investigate the fit perspectives between player motivation and Capabilities of Mobile Game (CoMG).
2) To investigate the subsequent behavior of the fit perspectives.
3) According to the attachment theory, we discuss the dependency relationship of players to the social game community.

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II. Theoretical Background and Hypotheses Development

A. Theoretical Background

We first introduce the concepts of player motivation and CoMG, and then summarize the research on these concepts. We describe uses and gratifications theory, the concept of fit/alignment and attachment theory which is our main theoretical foundation, before identifying the relationship of alignment and players' subsequent behaviors that were used to develop our research model.

1) Player motivation

Mobile social games can connect players in the virtual world, creating a virtual social community, in addition to individual intrinsic and extrinsic motives; these social motives may be the main reason why the players continue to play the game [2]. For mobile social games, it is important to consider both the individual's needs and the player motivation factors. The present study therefore propose three aspects from previous studies such as achievement, escapist needs, social relationships, and postulates that these motives influence player's engagement with mobile games. We summarizes some of the more important motives and their contexts as identified by previous research [2, 5, 6, 17]. Challenge, competition and progress are categorized into the achievement aspect; social relationships can be viewed as an extension of cooperation and recognition. Therefore, with three aspects the study will summarize the views of previous scholars and discuss the alignment of CoMG.

2) Capabilities of mobile game (CoMG)

Through mobile devices, players can play the game anytime, anywhere, but device changes also enhance the players' intention. In recent years, e-commerce has defined such a change and called such a mechanism ubiquitous [18]. Interactions are often mentioned in game research [19], [20]. Players may interact with computer characters in the game, called human interactions, and may interact with other players in the game; such interactions are called social interactions. Through the mechanism of social interaction, players and players have a strong connection between emotions, so that players in the virtual world to form a community will be called social communication [7], [9]. In addition to function-oriented parts, many studies explore service-oriented mechanisms, in which the mechanism of security and incentive mechanisms will affect the player's behavioral intention [10], [11]. Therefore, this study will explore and measure the five aspects of mobile game capability from five aspects: the ubiquitous nature of mobile devices, human-computer interaction, social connectedness, incentive and security.

· Ubiquitous:

Ubiquity refers to the degree to which mobile wireless technology gives users personalization, uninterrupted connection and communication with other people or networks, including space, time, and mobility [21]. Scharl argues that ubiquity greatly changes the paradigm of traditional marketing [22]. It changes time and space constraints and highlights the importance of personalization. Access to information and sharing is made possible whenever and wherever people need it, because people always carry their mobile phones with them, which mean people can connect and interact with people at anytime and anywhere [23].

· Human-computer Interaction:

Interactions are defined as two or more objects communicating and influencing each other [19]. Interaction in online games can be summed up in two ways. One is the interaction between players and the system, known as human-computer interaction. The other is the interaction between players and players (ie, social interaction, social contact). Human interaction means that people can communicate with machines using natural communication [24], and that such interactions are more personal, emotional, meaningful, pleasant and effective [25]. Interactive mechanisms have proven to be one of the keys to game popularity, as interactive experiences can convey the game play experience [9]. The human-machine interface clearly shows the information to the player and presents the player's convenient characters, elements and background, which has a significant impact on the player's experience, loyalty [9] and satisfaction [26].

· Social Connectedness:

The definition of social connectedness is defined as "users connect the world, resources, human cognition and emotion" [27]. Social connectedness can be seen as a cohesive symbol of the community, a broader concept encompassing shared values and equality of opportunity [28]. Online games need to provide a communication function or area, so that players can gather or exchange. The virtual world can make these same game players a community by interacting with other people through graphics, text, or any symbol [9]. It is important that online games provide an effective social interaction mechanism. Players want to be in the virtual community to meet the interaction with other players needs.

· Incentive:

Game incentives are tailored as 'the activities which online game publishers offer to enhance players' utilities, thereby aligning their goals with that of the developers and motivating players to continue playing the online game [29]. However, existing monetary-based incentive studies mainly encourage user participation [30]. Incentive mechanisms have been developed to enhance collaboration [31]. Enhanced incentive mechanisms and proper incentive contracts can improve the performance and utility [32]-[34]. Loyalty programs, which provide stronger profit incentives for retailers effectively, facilitate customer retention [35], [36]. It is an important factor that the game requires a personal and a group incentive to meet the players. Because online game is an experience-oriented service, the game's incentive function may affect the players' participation.

· Security:

Game security is defined as Internet gaming companies restrict certain data to protect the confidentiality, integrity, system availability, and operation of the application [37] for the players' information security. Perceived Security is defined as "people trust the security mechanisms of online community networks" [38], so we infer that subjective security is dependent on the level of cognitive risk. While security is still a technological solution, it affects user trust

and intentions [39], where security has been widely discussed in e-commerce. For mobile socail games, that it was a matter of concern. From the above research and finishing, we can classify the game into two major items, five different abilities, ubiquitous, human-computer interaction and social connectedness is a game function, and incentive and security are game service capabilities. Through these five indicators to measure the capabilities to provide players with the game, to understand whether to meet the players motives.

3) Uses and gratifications theory

The Uses and Satisfactions Theory was proposed in the 1940s, primarily to survey the relevance of people's motivations, needs, and satisfactions. People think that people's behavioral intentions are goal-oriented. People want to choose media according to their own needs to meet psychological or social needs [14].

Weibull (1985) argues that the media is part of the social structure, that is, through the media can form a society, the media-based link between the two real organizations, and use of media benefits will improve the media itself [40]. Uses and satisfactions theory is based on the needs and motivations of users to explain the use of media to be satisfied with the behavior, and then confirm the user to accept the media reasons and motives. Users will modify their own ideas about the media and change the user's expectations of the media, thereby influencing the choice of media and the intent of continuous use [14], [41], [42]. Therefore, we use the user's viewpoint to explain the use and selection of media. People use the media to meet their needs, and these needs include the social, psychological. These needs also generate people's motivation, and then affect their own cognitive, emotional and subsequent behavior.

4) The concept of fit/alignment

Premkumar *et al*. (2005) developed the view of information processing fit, it posits that for information processing capability to have a positive influence on a user's performance, the information technology employed must exhibit a good fit with the users' needs that it supports [43]. In other words, performance influences will occur when the technology capability meets the users' needs and provides functional characteristics that support the fit of the requirements of the need [44].

The perspectives of fit have been widely used in the research domain of need-capability fit. Venkatraman (1989) proposed a conceptual framework based on the concepts of fit; six different perspectives from which fit can be defined and studied; these are fit as covariation, as matching, as moderation, as mediation, as gestalt, and as profile deviation [45].

· Fit as covariation:

This perspective defines fit "as a pattern of covariation or internal consistency among a set of underlying theoretically related variables" [45]. In the context of player behavior of mobile game, it would mean that it is the appropriate coalignment of capabilities of mobile game and player motivation that will influence attachment. In this perspective, Venkatraman identifies second-order factor analysis as the appropriate analysis technique for testing the propositions. While both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) can be applied to test fit as covariation, the approach of confirmatory factor analysis is better than the approach of exploratory factor analysis for modeling fit as covariation [46].

· Fit as matching:

Fit as matching is a theoretically defined match between two variables without necessarily regarding a criterion variable. Fit as matching refers to Van de Ven and Drazin's(1985) concept of fit as a theory, as a selection approach, as the result of natural choice [47]. Fit is obtained via theory independent of performance. The resulting fit variable is then examined for performance impact. As illustrated in Figure 1, adopting this perspective, one would state that fit in an attachment mobile game context exists when player motivation matches capabilities of mobile game. Venkatraman identifies three analytical schemes for supporting the matching perspective: deviation score analysis, residual analysis, and analysis of variance.

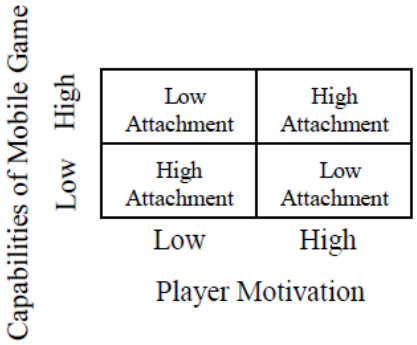

Fig. 1. Fit as matching.

5) Attachment theory

Attachment Theory originated from the feelings of children and their primary caregivers (usually parents) [48]-[50]. The nature of the attachment depends on the dependent object, so the interaction between the caregiver and the dependent determines the quality of the attachment relationship. From the social psychology viewpoint, there are two types of dependencies in a community. First, the sense of community identity, as people feel the purpose of the community and its nature is similar to their own, resulting in the attachment relationship. Such as My Starbucks Idea, a unique online community platform where members share their ideas within their platform to improve and enhance the company's products and services, but the relationship of the members of the platform to each other More distant. On the other hand, dependency is derived from interpersonal relations. Such as girlfriendcircles.com, a social community platform where helps women find nearby friends.

Recognition and concern for the relationship between others, and in the social relations in the production of identity, attractiveness and similarity, this process is called attachment relationship. Triandis (1995) and Wagner (1995) confirm that members of the community are happy to share their personal resources and are concerned with the membership and welfare of the social community [51], [52]. The members of the social community generate connections among CoMG. Ubiquitous interaction and the human-machine interaction increase the quality of dependency relationship, then by the incentive and

security have a common purpose and mutual trust. The cohesion generated by the interactive mechanism within the mobile game is a topic worthy of discussion. Therefore, this study is expected to be able to understand the attachment of the player community.

B. Development of Hypotheses

Based on the conceptual background outlined above, we propose the research model presented in Fig. 2. The main purpose of this study is to explore the alignment between player motivation and CoMG and whether the alignment will affect the players' subsequent behavior.

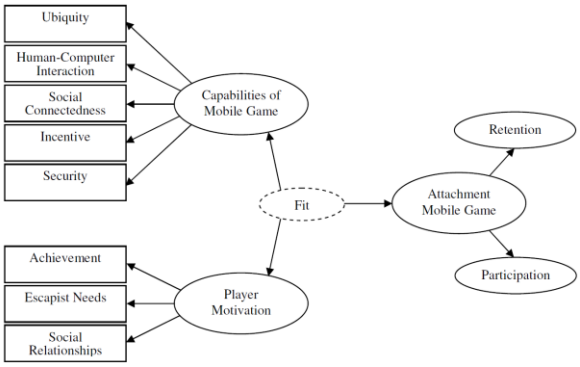

Fig. 2. Research model.

For a mobile technology to be used the functional capabilities must meet players' needs; in the context of social media, players' needs include individual social relationship, information acquisition and sharing, reputation building, and commercial contact. Additionally, both mobile functional capabilities and the player motivation can influence the need-capability fit, which in turn determines players' performance and utilization. The alignment between the mobile capabilities and player motivation is the degree to which the technology's functional capabilities meet the players' needs.

From the viewpoint of covariation, the influence of a single variable or aspect is limited, so a significant effect is achieved by the degree of coherence between a set of related variables. Slater & Usoh that the game provides the function (ability) is to promote the game players continue to play one of the reasons [53]. In addition, social relations have always been one of the most important issues that players have been paying attention to in their previous discussion of player motivation. In the virtual world, Griffiths et al. (2004) confirmed the importance of game-constructed social communication systems [7]. In addition, players who care about the game give players a sense of accomplishment. Players are fascinated by the game because the game gives players escapist needs.

This study suggests that there are some fit perspectives between player motivation and CoMG, and this relationship is a real impact on player attachment and reasons of the subsequent behavior, so this study makes the following assumptions:

H1:The alignment relationship between the capabilities of mobile game and the player motivations has a positive influence on attachment in the mobile game

From the matching point of view, emphasizing the degree of adaptation between the two related variables (player motivation and capabilities of mobile game), the greater degree of alignment, and the greater the effect on the dependent variable (attachment). Therefore, this study will be carried out fitness test between player motivation and mobile game capabilities, and test the relationship between the high attachment group and the low attachment group of matching relationship, and this study makes the following assumptions:

H2a:There is a higher internal consistency between the capabilities of mobile game and the player motivations in high attachment mobile game group.

H2b:There is a lower internal consistency between the capabilities of mobile game and the player motivations in low attachment mobile game group.

Wasko & Faraj (2000) found that people participated in these communities because they wanted to engage in discussions and exchange ideas in the community [54]. Attachment relationship suggests that when a group of people participate in a community of common interests or reasons, because members of the same group share a common goal, they increase their effort and time for the community, the following hypotheses are proposed in this study:

H3a: Attachment has positively effects upon retention for the player in the mobile game.

H3b: Attachment positively affects participation for the player in the mobile game.

III. Methods

A. Variable Operational Definition and Questionnaire Design

Instruments for most of constructs were adapted from prior relevant studies. Slight wording modifications were applied at the research context, and all measures used five-point Likert scale. The player motivation was measured using three aspects including achievement (ACH), escapist needs (ESN) and social relationships (SRS). The attachment (AMG) and subsequent behaviors is based on a questionnaire developed by Ren et al. (2012)[16]. The subsequent behaviors were measured using two aspects including retention (RET) and participation (PAR). The questionnaire developed by Chiu et al. (2013) and adapted according to the current situation of mobile games [55]. The research used a five point Likert-scale from 1, strongly disagree to 5, and strongly agree, having a total of 36 questions. In the Personal Data section, the demographic information of the subjects is given in nine questions. 35 players with experience in mobile gaming were invited to conduct an online Pilot-test to test how the questionnaire system was used and to adjust the questionnaire and the research structure for their responses.

B. Sample and Data Collection

This research is based on players who have been or are currently playing mobile games. Through the Google Drive form, online questionnaires were created in the cloud space, sent questionnaires through various website forums and community platforms, invited the players who used and used mobile games to participate in the survey, through the social platform (Facebook, Google Plus), Mobile gaming discussion area (Bahamut, PTT) and other relevant discussion area to

issue network questionnaire. A random sample was collected for each valid sample and a total of 427 valid samples were finally recovered. Among the valid questionnaires, 310 were male, accounting for 72.6%, 117 were female, accounting for 27.4%. The main age distribution was from 19 to 25, Accounting for 54.8%, followed by 26 to 35 years old, accounting for 23.0%; education to bachelor, accounting for 51.8% for the majority, followed by master, accounting for 20.8% of the respondents, the daily use of mobile game users 69.3%, the use of qualifications to two years, the most, accounting for 28.8%.

IV. Analysis and Results

The instrument was validated via SPSS Statistics 19 and partial least squares (PLS) using SmartPLS 2.0. Data analysis was conducted through two stages. At the first stage, the reliability and validity of constructs were assessed to ensure the appropriateness of the measurement model using structural equation modeling, PLS in particular. At the second stage, the hypotheses were tested using deviation score analysis and second order confirmatory factor analysis.

The study presents the correlation matrix in Table I. As shown in Table II, Alpha and CR values for all the constructs were greater than 0.7 and AVE values for all the constructs were greater than 0.5, satisfying the suggested criteria. So the model of this study has a considerable degree of explanatory power.

In the model structure in Figure 3, the results show that the path coefficient are at a significant level of $p < 0.001$. And the path coefficient of the alignment between player motivation and CoMG is 0.632; R^2 is greater than 40%, which means that when CoMG can fit the player's motive. The player will have a higher attachment behavior and the research verify hypotheses H1a and H1b.

TABLE I: Correlations Matrix

	UBT	HCI	SCN	INC	SEC	ACH	ESN	SRS	AMG	RET	PAR
UBT	**.809**										
HCI	.299	**.819**									
SCN	.251	.399	**.822**								
INC	.217	.361	.421	**.835**							
SEC	.269	.311	.309	.249	**.927**						
ACH	.127	.237	.238	.305	.159	**.862**					
ESN	.295	.270	.170	.252	.131	.192	**.765**				
SRS	.199	.329	.613	.424	.346	.368	.198	**.794**			
AMG	.205	.397	.492	.389	.242	.352	.293	.610	**.799**		
RET	.254	.372	.458	.396	.241	.299	.389	.546	.714	**.744**	
PAR	.188	.277	.406	.388	.253	.190	.357	.470	.606	.756	**.820**

While the dependence coefficients of the dependence relationship for the retention and participation were 0.722 and 0.613, respectively. This result is the same as that of Ren et al. (2012), and hypotheses H3a and H3b are also validated.

In this study, the player attachment as performance, and the alignment between player motivation and CoMG will affect the degrees of the attachment.

The empirical research steps of the matching model are as follows:

1) First, the samples (n = 427) were divided into two groups with high dependency and low dependency.
2) The differences in fitness between the two groups of players' motivation and CoMG were then compared.

TABLE II: Factor Loadings, Reliability and Validity

Construct	Items	Factor Loadings	CR	AVE	α
Ubiquity	UBT1	.846	.904	.654	.876
	UBT2	.812			
	UBT3	.721			
	UBT4	.833			
	UBT5	.826			
Human-Computer Interaction	HCI1	.823	.802	.670	.690
	HCI2	.814			
Social Connectedness	SCN1	.858	.862	.676	.842
	SCN2	.873			
	SCN3	.756			
Incentive	INC1	.820	.873	.697	.840
	INC2	.863			
	INC3	.832			
Security	SEC1	.874	.860	.860	.900
	SEC2	.900			
	SEC3	.886			
Achievement	ACH1	.850	.896	.743	.832
	ACH2	.882			
	ACH3	.853			
Escapist Needs	ESN1	.773	.809	.586	.733
	ESN2	.814			
	ESN3	.705			
Social Relationships	SRS1	.665	.871	.631	.765
	SRS2	.797			
	SRS3	.893			
	SRS4	.806			
Attachment Mobile Game	AMG1	.732	.841	.639	.865
	AMG2	.824			
	AMG3	.837			
Retention	RET1	.665	.786	.553	.876
	RET2	.734			
	RET3	.823			
Participation	PAR1	.808	.860	.672	.930
	PAR2	.840			
	PAR3	.811			

Through the above method, the matching relationship between and player's motivation and the CoMG is verified.

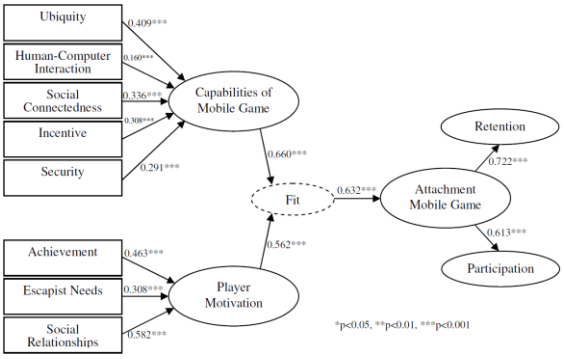

Fig. 3. The model structure.

In this study, samples with the degree of dependency median (Me = 3) were divided into high attachment group (n = 319) and low attachment group (n = 108) in Table III.

Between two groups, The correlation coefficient of the high attachment group was $r_{high} = 0.498$ ($p < 0.01$). The

correlation coefficient for the low-adherence group was r_{low} = 0.363 ($p < 0.01$). The alignment between player motivation and CoMG has a good level, it is clear that the high attachment group than the low attachment group higher.

TABLE III: COVARIATION RELATIONSHIP

Construct	High Attachment (n=234)[a] Player Motivation	Low Attachment (n=108)[a] Player Motivation
CoMG	0.498**	0.363**

[a] High and Low Attachment Group is based on the player's degree of attachment on the median (Me = 3) distinction
*p<0.05, **p<0.01, ***p<0.001

From the microscopic point of view in Table IV, the study to explore the adaptation relationship between all various aspects, namely the degree of matching between three item player motivation and five item CoMG.

TABLE VI: MATCHING RELATIONSHIP BETWEEN ALL INDEPENDENT VARIABLE

MOV CoMG	High Attachment Group (n =319)[a]			Low Attachment Group (n =108)[a]		
	ACH	ESN	SRS	ACH	ESN	SRS
UBT	0.119 *	0.296 **	0.101	-0.022	0.235 *	0.043
HCI	0.220 **	0.250 **	0.195 **	0.043	0.115	0.226 *
SCN	0.154 **	0.142 *	0.503 **	0.061	-0.059	0.482 **
INC	0.238 **	0.253 **	0.326 **	0.225 *	0.091	0.279 **
SEC	0.108	0.104	0.328 **	0.092	0.047	0.136

[a] High and Low Attachment Mobile Game Group is based on the player's degree of dependence on the median distinction
*p < 0.05,**p < 0.01,***p < 0.001

Found that the high attachment group and the low attachment group which there is a high degree of alignment. The combination of social connectedness and social relationships has high performance in both groups. This result confirms what we propose hypotheses H2a and H2b.

V. CONCLUSION AND LIMITATIONS

Because the mobile game is a relatively new dominant influence in the game market, there is a lack of understanding of how to fit between CoMG and player motivation and of what to examine their effects on players' subsequent behaviors. This study examined the player behaviors including attachment for communities, participation and retention for mobile games by conceptualizing a new construct, double perspectives of strategic alignment (fit as covariation and fit as matching), as a key drive of such behaviors.

Our findings show that mobile players' behaviors to play mobile games are determined by the fit between CoMG and player motivation. This study thus provides an explanation of online attachment and double perspectives of strategic alignment in the mobile games. This is especially relevant because social media, where people play mobile games, is predicted to be the uses and gratifications of social interaction.

As people establish CoMG, the best extent to fit player motivation in a preferred way will become more important to them. Strategic alignments are considered as key tools for players in mobile games. This study is useful in showing how player motivation for mobile games can be satisfied and by doing so allow new alignment items for players to be developed.

A. Theoretical Implications

Previous research on games has focused on extrinsic value, such as usefulness, ease of use, or the unilateral of immersion and enjoyment. It is an important factor for players to participate in the game, which Scholar Koo (2009) further explores player motivations, such as escapist needs and social connectedness [2].

In this study, there is a certain alignment between external and internal value. This relationship will promote players to continue to participate in the game. We present an extensible architecture that includes the ubiquity of CoMG. Different Incentive in CoMG can produce significant alignment with the different extent of player motivation. Therefore, it is suggested that game designers can devise different incentive methods to improve the attachment of player motivations.

B. Practical Implications

The results of this study can give game designers and developers some inspiration. Let us understand the needs of mobile players that the past PC player is not the same. Emphasizing the rapid operation of the process and easy-to-understand interface design is the best choice for players. In the functional design, the CoMG must enhance the incentive and interaction mechanisms to enhance the link among the players and to fit player motivation.

In 2015, mobile game market amounted to approximately $200 billion. Players reusing the mobile game are one of the important issues. Players contact and interact with other players through the game. A good game mechanism can fit the player motivation. Players will be able to improve the extent of participation and to increase the attachment for the mobile game.

C. Limitations and Suggestions

Despite the significant findings of this study, their interpretation is subject to certain limitations. First, the largest proportion in the sample is for tertiary students. In addition to students, office workers and commuters are also most customers for the game, who spend even more than the students. It's important to understand the difference of players' motivations and needs for the different ethnic groups by occupation or by gender. Second, the majority of the samples were 'Tower of Saviors' and 'Line Game Series.' But the differences of types and processes between two games are significant. The motivation and the needs of these players are quite different for different types of games, and the game design fit the different players' motivations is also a worthy topic. A third limitation lies in our exclusion of other CoMG ,

such as perceived playfulness, usefulness, enjoyment. And motivations also do not mention curiosity, cognitive absorption, competition, challenges and other issues.

In the future, we can explore the relationship between other variables and explain the reason why players stay in the game through the extensibility framework of this research.

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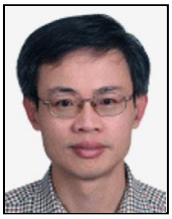

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