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Antecedents of Microblogging Users' Purchase Intention Toward Celebrities' Merchandise: Perspectives of Virtual Community and Fan Economy

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ABSTRACT

Over the last few decades, cross-fertilization between marketing and fandom studies in a mediated world has been rare, hindering the knowledge development for marketing practitioners in the Chinese fan economy context. The purpose of this study is to find and establish a conceptual framework that includes Online Interaction (OI), Parasocial Relationships (PSR) and virtual fan communities on *Weibo*, and how these contributory factors embedded in the interplay process of digital fandom practices in terms of enhancing fans' Purchase Intention (PI) and media consumption behaviours toward the celebrities' merchandise. Using an online survey instrument, this research collected 294 completed responses from fans who had online interactions with celebrities and engagement of virtual fan communities on *Weibo*. Key results and findings provided a clear framework of four antecedents based on the conceptual model and indicated that the high intensity of OI led to higher levels of the perception of PSR and the Sense of Virtual Community (SOVC). Increased PSR and the SOVC can be seen as significant positive predictors of the PI (a part of consumer identity construction as a fan) also. This study revealed the underlying mechanism of an emerging marketing genre, also provide useful implications of audiences' digital marketing practices for marketers, celebrities and policymakers.

1. Introduction

In recent years, fandom and participatory culture in China have evolved and well-operated successfully. It started with the phenomenon of online reality TV shows and the user growth of virtual fan communities' supports on social media. With *Idol Producer*, *Produce 101*, and other survival reality talent TV shows rapidly entered audience perceptions and grew in popularity, these new genres of shows take on different narratives

while providing viewers with an "unmediated, voyeuristic, and 'entertaining real'" [1,2], media figures of reality shows and fans communities gradually have created more intimate and two-way connections and have continued to evolve via audiences' active participation in online social media interactions [3,4].

Specifically, fans created a relationship similar to interpersonal, face-to-face "friendships" with contestants from reality TV shows, driven by direct address, personal and private conversational style of the media

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character's "authentic" personalities and problems on social media^[5,6,7]. By such powerful interpersonal intimacy, media viewers even could feel celebrities as if they would be their real friends^[6,7]. This kind of relationship between an audience and a media figure in terms of the developmental process can be defined as a parasocial relationship^[5,6].

Social networking sites (SNSs) have narrowed the distance between the audience and media figures furtherly, have enabled celebrities to be influential endorsers of products, and have been shown to be a source of advice of their followers through these highly intimate, interactive and collaborative communications^[5,6]. For example, *Produce 101* had drawn 90 million mentions and heated discussions on virtual fandom communities in the microblogging platform: *Weibo*, one of China's most prominent integrated SNSs^[7]. And more than 40 well-known brands became involved in naming-rights sponsorships of this program or provided the endorsement marketing for the winning contestants^[8]. In short, fans' consumption behaviours have caused a significant rise in celebrity marketing volume, and "reality TV shows will continue to be a gateway for brands to reach consumers"^[9].

These fandom practices also have made clear the links between Parasocial Relationships (hereafter, PSR) and its economic implications, and this phenomenon is described as fan economy^[10,11]. In general, the fan economy refers to an revenue generating behaviour supported by the emotional and intimate relationship between celebrities and their followers. Kington explicated fan economy is a collective subculture that consists of viewers on the same media platform whose shared same interests serve as the basis of their communal identity, and this participatory culture prevails in wide commerce space^[11]. Ford also explained that the fan engagement in the digital sphere could be incorporated in corporate logics and fit into models for monetization and measurement-in economic terms, stimulating wide-ranging emotional investment based on interpersonal relationships^[12].

Previous fandom studies and relevant researches have explored fan economy in relation to audience commitment to the community. However, most published studies^[10,11,17,19] mainly examined media consumption from the perspective of an individual fan thus it is needed to explore consumer desires from a group or community-based perspective in accordance to the new marketing environment^[13]. Previously, main area of fan economy studies focused on the affective meaning of co-viewing and collective purchasing decisions that occur in fandom communities^[13,14]. In short, it positioned fans as active consumers of cultural products influenced by online

community-based media consumption and practices in unpredictable ways"^[13].

In today's two-way community environment, fans are deemed consumers tightly bonded to celebrities and having an interactive and stable connection via PSR over long periods^[15,16,17]. The role of a fan of PSR can be that of an *aficionado* or supporter via consumption practices, like buying the products endorsed by her/his admired celebrities^[13,17]. PSR is therefore suggested as an effective theoretical framework to specify the link with reality TV celebrities and the fan economy^[6, 18].

The fan economy in China can be further defined as the evolution of local cultural narrative of fandom. Specifically, in the digital environment, this term can be defined as fans' systematic practices of material consumption such as idols' products, and utilising emotional relationships with celebrity and social identification with fandom as the core marketing tools for e-commerce merchandising^[10,18,20]. Also aiming at the online fan community as the target segmentation to increase the corresponding purchasing intention and buying behaviours of the related products or brands of the celebrity^[19]. The growing popularity of digital media propels to gain "emotional capitalism"^[18,22], that means the transformation of conventional business models into a "business or marketing operation aimed at active fan communities that can offer lucrative business opportunities^[21]". As such, emotional economy reflects enormous economic potential as a compilation and commercialization of true feelings, memories, and consumers' (fans') identities^[21,22]. In brief, the fan economy is social network marketing based on affective economies in the virtual community around a particular brand or product of the celebrity^[10,12,18,19].

Today, researches of fandom in a mediated world increasingly proliferate in the pages of academic journals and anthologies globally, but in an age of intensifying digitally-driven lives, when the popularity of celebrity endorsement hailing around the world, Chinese fandom practices commingle in widely accessible media, entertainment industries and marketing psychology, bring with them their own celebrity endorsement characteristics^[10,18,19,93]. Driven by social shopping trends and capabilities from Asia, the first main difference is that the Chinese celebrity endorsement driven by digital fandom, in general, has always been an organic and bottom-up social experience^[10,18,21,93]. It connects with fans' personal social networks and interacts with the fan community more^[21,22]. And in second, increasingly Chinese companies and brands are seeking to go beyond "becoming friends" with their endorsers' fans groups for the sole

purpose of convincing them to willingly participate in brand activities and generate purchasing behaviours, which some western scholars describe as the morally reprehensible exploitation of fan labour^[10,18,19,21,22,93,94]. And Instead, Chinese companies and marketers are increasingly embracing the creative powers of their endorsers' fan groups and are seeking interactive ways to nurture and maintain their fan community towards purchase intention and value co-creation^[19,21,22,93]. If companies can match up with celebrities' needs, like provide some supports and endorsements opportunities during the reality TV shows, in a collective way through extensive interaction among community members fans will most likely be motivated by the parasocial relationships with the celebrity and to support and act on behalf of the company^[10,18,19,21,22,93]. Thirdly, Chinese social network *Weibo* employs its three notable features have accelerated celebrity endorsement social shopping in China, allowing users to buy from both brands and individuals, with other fans and microblog users providing opinions on potential purchases^[10,18,19,21,22,93].

Although parasocial relationship, purchase intention, and social media's celebrity endorsement (Facebook, Twitter, etc.) were often discussed in the previous studies, most studies related to these celebrity marketing tend to ignore how interactive participation of fans via parasocial relationship, and virtual communities affect the endorsement marketing. Also, they have not been incorporated in the context of fan economy which combined with the non-scripted, interactive and organic participatory setting of reality TV Shows^[1,2]. Therefore, it is plausible to assume that the driving force, processes, and outcomes of an effective celebrity endorsement in reality TV and fan economy settings may be qualitatively different from the previous studies in other different cultural narratives. In this regards, we note the virtual "like-mindedness tribalism" on social media more comprehensively in relation to antecedents and the process that produce and influence the fan community; and how the Chinese digital fandom based on the virtual community facilitates two-way interaction with celebrities; also, how it promotes purchase intention of fans (identity as consumers). As of June 2019, there were 854 million Internet users in China, nearly threefold the population of the United State, thus, studies of planning for and implementing a business strategy for digital fandom embedded in celebrity endorsement on social media are crucial for capitalizing on the fan economy of brands.

Specifically, this study will explore and specify the relationships between celebrity marketing and the evolved fan economy, to fill the gap in previous studies on Chi-

nese digital fandom where parasocial relationship leads to emotional cultivation of community members. The purposes of this study include to 1) find and develop a conceptual framework includes underlying mechanism and driving factors behind online interaction with fan communities and celebrities on microblogging, what and how these related factors exert the process of fostering the unique fan economy-driven marketing in China. And 2) to understand the relationships among these driving forces; as well as how different factors were amplified by *Weibo* to influence fans' consumption activities toward the merchandise of a celebrity.

We believe this study can contribute to the Chinese entertainment industry and marketing practitioners with theoretical insight into fan communities, providing an additional framework to the existing literature that focus on the Chinese celebrity-following activities of endorsement effectiveness on microblogging platforms, as well as provide an effective endorsement or marketing communications through integrative emotional relationships analysis for marketing practitioners in other countries with different cultural narratives.

2. Literature Review and Hypotheses

2.1 Online Interaction (OI) and the Intensity of OI on *Weibo*

Social media has become ubiquitous in China and over 90 percent of Internet users in China have more than one social media account^[23]. Online Interaction (hereafter, OI) can be built diverse kinds of internet-focused channels, like SNSs and mobile apps. This study focuses on OI as the intensity of following and interactive communication with celebrities, and frequency and the quality of involvement with digital fandom community not only accumulated time spent online on a specific social media platform^[24].

Weibo (referred to as "Chinese Twitter") has reached a total of 486 million monthly active users by the end of June 2019 and gradually transformed from a simple microblogging platform to the biggest integrated SNS in China^[25]. And notable features of *Weibo*, include 1) supporting interactive two-way communication with celebrities; 2) diverse and customized celebrities marketing strategies; 3) "Super Topics" (the specific function of *Weibo* that demonstrates equally shared hot debated subject online that help users to have real-time immersive communication with other like-minded members^[27,29]) and thriving virtual communities^[26].

Users' OI includes remarking of celebrity micrologger's posts; forwarding posts of celebrities to user's

page, sending private messages directly to a celebrity; instantly following or unfollowing a celebrity at any time^[27, 28]. Particularly, the quality and frequency of commenting and continuing interaction with a celebrity can be indicators of celebrities' marketing power. If fans are interested in or attracted by the marketing messages on a celebrity's social media feed, they are likely to forward the post, which could snowball in user's community network, and subsequently boost the viral power and marketing impact of a celebrity^[29].

Also, we note active engagement on virtual fan community as another vital indicator of the intensity of OI. Enthusiastic engagement with the fan community is promoted by diverse and convenient interface and features *Weibo* uniquely provides. To illustrate, "Super Topic" function helps people to gather and share all celebrity-related information in a collective and timely manner. A fan community grows into an integrated fandom camp developing group norms of agreed and obligated behaviours as users engage in online communities intensively and frequently to support their favourite media figures. And thus, the collective behaviours and norms aiming at supporting the same media celebrity eventually lead to sense of belongings and mutual trust based on community membership^[30,31].

2.2 Parasocial Relationships (PSR)

The concept of Parasocial Relationship (hereafter, PSR) was first introduced as Parasocial Interaction (PSI) by Horton and Wohl^[8]. PSI refers to an audience's emotional attachment to and feeling of intimacy with a media figure on the screen. In general, the terms PSI and PSR can be used interchangeably to characterize an emotional connection between media figures and audiences^[32]. Cole and Leets distinguished PSI as a momentary behaviour from PSR that emphasizes continuum of an audience's social encounters with celebrity on screen^[32]. In this sense, this study employed the term PSR, focusing on the sustained interaction and deep emotional engagement between users and the celebrity rather than instant attempts^[6]. The previous study found that repeated viewing and accumulated knowledge about the celebrity will increase PSR, in this context, audiences will rely on one's own subjective interpretation in order to achieve a full understanding of celebrities' behaviours and to identify the relationship with celebrity and thereby they pursue pleasant feeling from the PSR^[34,35]. Hence, such influential and emotional bonds will even lead the audience to seek essential and useful information from celebrity or media characters^[33]. Ballantine and Martin also argue that a robust PSR can have a significant impact on

followers' cognition, attitudes, and behaviours towards the celebrity or idol.^[36]

Past scholarship has examined how intensity of OI influence the forming and maintaining PSR, which were substantially supported by communication and media scholarship^[37]. To illustrate, Labreque found that online interactivity is an antecedent of forming PSR^[38]. Further, Chung and Cho proved that SNS use had a positive effect on the perception of PSRs' subordinate factors^[3]; Yuksel and Labreque also argued that the perceived PSR also could be enhanced by frequency and quality of interaction with celebrity via social media^[39]. The above view also gained much support in the context of Chinese contemporary media landscape. Gong and Li's research on online activities about celebrities on *Weibo* indicates that the intensity of OI could facilitate the perception of PSR^[28]. Ding and Qiu also stated that the strength of interactive online activities with virtual community members on the *Weibo* have positive impact on perception of PSR^[24]. In summary, the previous literature demonstrated that in the most circumstances, the more frequently people have interaction with celebrities, the more it forms and increases the perceived PSR. Thus, the following hypothesis is predicted:

H1: Intensity of Online Interaction (OI) has a positive association with the perception of Parasocial Relationships (PSR).

2.3 The Sense of Virtual Community (SOVC)

A virtual community refers to an online social network which provides the access for users to have an interactive connection via digitally mediated communication beyond the limitations of corporeal presences in a shared physical space and the dimension of time^[40,41].

The SOVC can be defined as members' emotional connection with others in terms of membership, identification, belonging, obligation, agreement and exchange of support through OI⁴⁰. The features of SOVC contain three "basic disciplines" of community dynamics: anticipated reciprocal membership; mutual influence (including expression norms and practices norms); intimacy and trust^[42]. Hence, SOVC can be seen as a fundamental bond and norm enforcement metric of a virtual community^[40,41,43].

Furthermore, some participatory culture studies noticed that for many virtual fan communities, SOVC will enhance emotional investment in a collective way through extensive interaction among community members^[43]. Booth also focused on individual fan's emotional contribution as well as collective contribution to the community as a critical aspect in the formulation of the

active SOVC^[17]. For example, members are prone to build emotional attachments with idols and celebrities they are following on *Weibo* via participating in votes to increase celebrity's popularity rankings on various social charts^[30]. Specifically, members take several steps as a daily routine to raise social rankings of their star such as online votes for a celebrity or idol on various social charts, or checking-in on the fan page of *Weibo*^[30].

Since virtual fan groups are extremely close-knit communities where members have direct and intensive real-time communication with each other^[41,44], members can settle in virtual territory, subsequently thus SOVC endures.^[45] As such, intensity and frequency of social media use have been found to increase SOVC in previous studies as well^[46,47]. Thus, we formulate the following hypothesis:

H2: Intensity of Online Interaction (OI) has a positive association with Sense of Virtual Community (SOVC).

SOVC and PSR

It also should be noted that perception of a higher SOVC is presumed to facilitate community attachment and indirectly affect the perceived mutual relationships among followers and celebrities on social media because virtual community enables an alternative access to a media figure^[48,49]. Ballantine and Martin also emphasize the correlation between perception of PSR in the digital environment and perceptions of the SOVC in the context of fannish culture^[36]. With continually participating in online community a fan's desires to have a personal and emotional relationship with their idol will be amplified^[30,49,51]. "Fan culture" tends to solidify into affective bonds with unmet celebrity based on PSR and emphasize "obliged" practices through the SOVC^[30,49,50,51]. The following hypothesis is, thus, put forward:

H3: The strength of Sense of Virtual Community (SOVC) will positively affect the perception of Parasocial Relationships (PSR).

2.4 Purchasing Intention (PI): Consumer Identity Construction as a Fan

Purchase Intention (hereafter, PI) refers to a part of consumer identity construction as a fan considering celebrity marketing targeted at followers who wish to support their favourite celebrity or purchase the same product with celebrities or idols. PI can be defined as a measure of the strength that consumer tends to buy a certain product or service in certain condition^[52,53]. Some factors such as a choice of channel preference, information collection, previous experience and expected benefit or costs from the external environment will have a significant impact on the complex information filtering and

decision-making process of a consumer^[51,52,53,54,55]. And PI can be a crucial measure to foresee actual buying behaviours^[52,53,54]. It also can be seen as a parameter which can be used to reveal characteristics potential consumers beyond active consumers as measuring intention does not have to involve the actual consumption practices^[55]. Previous literature also revealed some significant factors behind purchasing intention by examining how consumer identity is constructed via seller-buyer interaction^[55,57,60,63].

2.4.1 The PSR and PI

Numerous empirical researches have attested that the perception of PSR with celebrity will have the tangible effect on PI because PSR will result in attitude change of the consumer toward the specific endorsed product or brand^[56]. For example, Yuksel and Labreque found that PSR could influence the consumers cognitively and affectively^[39]. Also, the relationship between PSR and increased PI is found to be mediated by other factors such as social media interaction; to be specific, Chung and Cho suggested that PSR between SNS users and media figures could increase the effectiveness of a celebrity as a brand ambassador and thus help consumers to purchase the brand^[3].

In the same vein, some researches in the context of Chinese virtual community argue that PSR can promote follower's endorsing a brand that corresponds to celebrity marketing^[3,24,28,86]. Therefore, it is evident that the high-level of follower-celebrity PSR would result in the high possibility of acceptance of a celebrity's social media marketing from a follower which in turn, increases purchase intention^[24, 28].

Taking that perspective, the study will test the following hypothesis:

H4: The perception of Parasocial Relationships (PSR) has a positive impact on Purchase Intention (PI).

2.4.2 The SOVC and PI

The SOVC enables each member to establish trustworthiness, group norms and social identification^[36]. And group norms and social identity are the two significant factors in consistent virtual community participation and practices^[42, 57].

Chung stated that online communities often require and promote self-identification process through representative digital symbol such as an avatar. Visually pleasing images or graphic symbols are often useful to stimulate the consumption intention and buying behaviours^[58]. When online users' information can be collected easily

by group norms, community messages, and through trace of behaviours, a virtual community can be solidified by royal and regular fans and users.^[21,31,40,59] Moreover, users are inclined to buy or have recommendations of products mainly to share the same fannish identity^[30,40,60]. The communities with highly shared social identity and group norms are more likely to be influenced by celebrity^[59,61]. If a celebrity-endorsed product meets the need of fan community that shares the same value and norms, community members whose identities are developed as both a fan and consumer may hold unique psychological social identity associated with the product, which potentially raises PI^[41,58,62].

The SOVC in a Chinese fan community narrative can be seen in the affectional bonds that carry on member-generated content that involves themes of higher trustworthiness, relatedness, and communication interactivity^[30,63]. More and more internal rules and customs to regulate fan practices were established by virtual fan communities on *Weibo*, which sometimes imposes and dictates specific forms and meanings of fan participation. More importantly, SOVC can obligate repetitive buying behaviours by way of excuse to support idols' career or to boost celebrity image^[30,64]. And sometimes, interactive discussions happening within virtual communities can even persuade fans to become the "excessive consumers"^[18,41].

Thus, this study suggests the following hypothesis:

H5: The strength of Sense of Virtual Community (SOVC) has a positive impact on Purchase Intention (PI).

3. Methodology

3.1 Procedure

For analysing the interrelationships between microblog users' intensity of OI, their perceptions of PSR with the celebrity, and the SOVC of fans and their purchase intention, this paper designed and conducted an online survey embracing scales to measure these four constructs and some other simple demographic variables. This survey research was hosted on WJX (<https://www.wjx.cn>), one of the biggest and leading research and experience website in China, currently, WJX has finished 27,003 online human-intelligence survey projects^[65]. We chose this platform to collect data through random sampling that has representative power of the total population of fans on the virtual fan community of *Weibo*. An invitation message with a link to the online questionnaire was posted in affiliated discussion forums of WJX.com, the Facebook/Twitter/WeChat groups of Chinese Students and Scholars Association (CSSA) of The University of

Melbourne, and the top 100 "Super topics" of celebrities on *Weibo* for two weeks, since we also consider its professionalism they provide that ensure the reliability and validity in determining the quality of survey information, more so than a homogenous sample of university students^[67]. Participants were informed that the data captured in the survey was going to be used for academic purposes. Screening questions are used to ensure that all the respondents are active users of the "Super topics" function on *Weibo*. For example, we set up the question like "Who is your favourite celebrity that you followed and joined his/her Super topic on *Weibo*"? We deleted the respondent if their answer is none^{[24][67]}. To qualify, the respondents had to be adult fans (at least 18 years age or older) and identify and participate in a virtual community of his or her favourite celebrity of *Weibo* (on the "Super Topics" top 100 list)^[26]. Moreover, to ensure that the respondents are experienced virtual community users, and to avoid uncontrollable variables of the "new user" bias, only those who had engaged in and have been the active member of virtual celebrity communities for at least six months on *Weibo* were recruited (we also have examined their interactive activities with other users of virtual fandom communities through checking their IDs on *Weibo*)^[24]. The survey instrument took about 10–15 minutes for participants to complete. And after finished this online survey, respondents were to be paid 5 yuan as a token of gratitude.

3.2 Participants & Sample

A total of 340 respondents received the invitation to the survey over the two weeks. At the end of data collection, it turns out 297 out of 340 completed the survey, resulting in a completion rate of 86.5%. The gender of respondents consists of 171 male (58.2%) and 123 female respondents (41.8%).

And according to the social media users' profile in China^[66], respondents were asked to indicate their ages within one of six categories. The age of the sample somewhat with the trend of lower-aged, most of the participants are Centennials (birth year from the mid-1990s to mid-2000s) and Millennials (the early 1980s as starting birth years to mid-1990s). Population with 140 respondents (47.6%) in the 18 to 25 years old range; 82 of them (27.9%) between 26 to 30; 68 of them (23.1%) between 31 to 50; and 23 are belonged to (1.4%) 50 and over. And over half of them had at least the high school degree or went to college. Ninety-eight of them are less than bachelor's degree 33.4 %, and even 37 of them (12.6%) had advanced graduate or Ph. D. degree. The two main income categories are \$400-\$800 (33%) and

\$800-\$1200 (31%), following by less than \$400 (22.8%). The disposable income they also get not vary a lot from a different category, and overall are higher than the average monthly wage in China.

In terms of the average *Weibo* usage frequency and time, 48.8 percent of them stated they would have multiple OI within a day (above five times); and 36.7% of them chose to have *Weibo* usage activities only twice or three times every week. For the use time, almost 80 percent of respondents had averaged at least 30 minutes and maximum to 3 hours usage time on *Weibo* every day.

3.3 Measurements

In this study, the self-report instrument included four main category scales with 27 questions to measure the critical interval variables. Some items of the survey were adapted from pre-validated studies to improve the construct validity of the research. Responses to this instrument were all recorded on five-point Likert scales (1 = “strongly disagree”; 5= “strongly agree”) [67]. Those scales include:

The intensity of online interaction scale was adopted from the scale of Facebook uses intensity developed by Ellison et al. [68], with some items created by the author based on the description of the OI on fan communities of *Weibo*, with a total four items [30].

The parasocial relationships scale was adopted from the previous research of local television news viewing that developed by Rubin and Perse [69], and Rubin and Perse’s shortened version ten items about audiences’ involvement activities with media persona [6]. Besides, some items were adjusted and modified based on the description of the usage of celebrity-following activities on *Weibo* as well [24]. A total of eight items were conducted to assess the different sub-constructs of the PSR, such as friendship (e.g., “*My favourite celebrity’s microblogs make me feel comfortable, as if I am with a friend*”), identification (e.g., “*If I saw a story about my favourite celebrity in different media channels/platforms, I would watch it*”) etc. [6,24,69].

The scale of the sense of virtual community consisted of a total 11 items that adopted from previous study by Blanchard and Burnett, G., Buerkle. [31,42], and scales of a comparative study of the virtual community [70]. Also, Koh, Kim, & Kim’s three valid dimensions such as membership (e.g., “*Members of this community can be counted on to help and support each other*”), influence (e.g., “*I would like to follow and support the decisions and behaviours that most members agreed in the community*”), and immersion were adopted. (e.g., “*I contribute a lot of time and effort to this fan community*”) [71].

The purchase intention scale includes four items that were adopted and adjusted from Koo and Ju’s emotions and online purchase intention scales [72].

Additional questions were asked about participants’ basic demographics and average time spent on *Weibo* and frequency of usage. All the details of measurement items are listed in Appendix A.

Given the fact that the four constructs were measured at the single same time and reported by the same respondent an additional threat to our study could have been a common method variance (CMV) [91] [92]. To prevent and minimise CMV, in the questionnaire we placed the dependent variables after the independent ones [91]. And the study also relied on the following statistical procedures: (1) to analyse the correlation matrix between the different constructs, and the results show that none of the values of the correlations between constructs surpasses the suggested threshold (i.e., $r=.90$) [91,92]. (2) To evaluate if CMV influences results, this study adopted Harman’s single factor as post approach to evaluate CMV in which all the 27 items from four constructs were entered into the Exploratory Factor Analysis (EFA). A problem of common method bias can be identified if either a single factor emerges from the EFA or general factor accounts for the majority of the covariance among the 27 items [91,92]. Thus, EFA was performed, four factors accounting for 66.95 per cent of the variance, and the first factor accounted for 21.34 per cent of the variance. The results indicated that the model passed the Harman One Factor Test as there is no single factor occupied the majority of that variance [91,92]. In summary, all the different applied procedures to test for CMV suggested that is not a threat to the result of the study.

3.4 Results

This study examined the measurement model, the structure of the conceptual model, and each hypothesized path using structural equation modeling (SEM), since SEM allows to examine and confirm the relationships between observed and latent (unobserved) variables [73]. In so doing, this research used AMOS 24, which performs a path-analytic modeling with latent (unobserved) variables [74]. Figure 1 shows the whole conceptual model and the results of SEM analysis process.

The suggested conceptual model has four latent variables: OI, SOVC, PSR and PI. And understanding the relationship and role between these various latent variables is the key to the initial model and is also a crucial step in finalizing the structural model [76]. The AMOS 24.0 was used to perform the following initial SEM model to lay the groundwork for further empirical verification. We

also established and examined a measurement model to examine the relationship between each latent variable and its observed variable (items in the survey instrument)^[76,77]. And we combined the conceptual model with several research hypotheses and related precautions in the initial model construction.

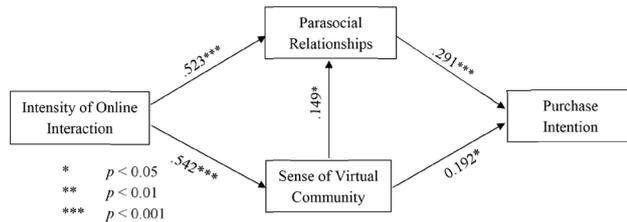


Figure 1. The Results of SEM Analysis

First, the convergent validity was tested by Confirmatory Factor Analysis (CFA). The results are presented in Table 1. It can be seen that Cronbach’s alphas were all greater than 0.7, indicating that each variable has good (> 0.79) or excellent (> 0.89) convergent validity^[78,79]. Besides, the value of AVE was greater than 0.5, and the AVE square root number of each factor was larger than the normalized correlation coefficient outside the diagonal line, revealed all variables have a good discriminant validity as well^[80].

Table 1. Evaluation of the Measurement Model

	Cronbach’s Alpha	AVE	√AVE	OI	PSR	SOVC	PI
OI	0.912	0.719	0.848	1			
PSR	0.922	0.59	0.768	.560**	1		
SOVC	0.934	0.61	0.781	.496**	.449**	1	
PI	0.829	0.551	0.742	.414**	.453**	.407**	1

Note: ** P < 0.01

Second, we tested the approximate goodness-fit-indices of this model, the Chi-square statistics for the conceptual model ($\chi^2(665) = 901.562, p < .001; df = 488;$ CMIN/DF ($\chi^2/ df) = 1.847$, the ratio of minimum discrepancy divided by its degrees of freedom closes to 1 and not exceed 3^[81]. But according to Bollen and Long, since the chi-square statistic (χ^2) is sensitive to sample size it is necessary to look at other model fit indices that also support goodness of fit (e.g., CFL, TLI, RMSEA)^[82]. All alternative indices were in line with the acceptable research standard as well: TLI, IFI, and CFI were all above 0.9; AGFI = 0.842, GFI = 0.819, all greater than 0.8; and RMR = .061, less than 0.08; The RMSEA = .054, less than .08.^[76,77,83,84] Thus, these indices revealed an

acceptable fit for the research model.

The final step was to examine each hypothesized path’s significance^[76]. As Table 2 and Figure 1 showed, all the paths in the research model were significant at either .001 or .05 level. Specifically, the intensity of OI had a significant positive effect on the perception of PSR ($\beta = 0.523, p < 0.05$), thus, the H1 was supported; the intensity of OI had a positive association with the perception of SOVC ($\beta = 0.542, p < 0.05$), hence, the H2 was supported; the perception of SOVC had a positive impact on the perceived PSR ($\beta = 0.149, p < 0.05$), thus, the data supported H3; the perception of PSR has a positive impact on PI ($\beta = 0.291, p < 0.05$), thus, the H4 was supported; Finally the perception of SOVC has a positive association with PI ($\beta = 0.192, p < 0.05$), hence, the results support H5.

Table 2. Path Coefficient and Results of Hypothesis

Path	Standardized estimates	Unstandardized estimates	S.E.	C.R.	p	Result
SOVC <--- OI	0.542	0.49	0.059	8.328	***	Supported
PSR <--- SOVC	0.149	0.135	0.056	2.39	0.017	Supported
PI <--- PSR	0.291	0.26	0.061	4.29	***	Supported
PI <--- SOVC	0.192	0.155	0.057	2.723	0.006	Supported

Note: *** p < 0.001

To conclude, the collected data support the conceptual model the study suggested, which indicates that higher intensity of OI has a positive effect on the perception of PSR and OVC. Therefore, PSR and SOVC are found to be two significant predictive factors of PI. It also revealed that PSR and SOVC may have contributed to the increase of PI. Discussion and implications of the results are presented below.

4. Discussion

Over the last few decades, cross-fertilization between marketing and fandom studies in a mediated world has been rare and hindering the understanding of practitioners on the entertainment industry and marketing area. In the past, purchasing a product influenced by celebrity’s endorsement toward a brand was considered a cognitive process based on the strength of the perceived credibility of celebrity^[3,56,86]. Or it could be perceived as the conception of celebrities’ self-disclosure^[3,27,28]. However, this research shows the relational social networks of

group's participatory engagement could possibly induce positive marketing effects by two-way communication online beyond top-down celebrity-dominant marketing mechanism.

Specifically, another value of this study to the marketing practitioners lies in extending the knowledge about the fan economy and building related academic framework including: (1) explores what impacts the newly arising fan economy has, particularly on celebrity effect on followers' purchase intentions and specify the links between an emerging celebrity marketing genre based on evolved Chinese fannish behaviours driven by the OI and PSR; and (2) allows industry practitioners and celebrities to connect with fans and virtual fan communities and to analyse integrative emotional relationships in digital era; thus (3) build a theoretical framework through which fans, practitioners, other researchers, even policy-makers can reflexively examine particular marketing and consumption practices.

Overall, the key results in this study provided a clear framework of four antecedents of Chinese fans' purchasing intentions toward the merchandise of a celebrity. Firstly, the high-level intensity of OI led to fans' increased perception of PSR and SOVC, it illustrated the increasingly important role of social media, more specifically, the *Weibo* can be seen as a significantly integrated vehicle of Chinese digital fandom in the context of the fan economy.

Secondly, the strengthening of SOVC has a positive association with the perceived PSR of fans, it revealed that the engagement of virtual community helped to break the wall between the fans and celebrities, and resulted in motivating fans to have OI with their favourite celebrity in a more emotional, understandable, interactive and identifiable way.

It is also demonstrated that the emerging pattern of media experience such as interactive communication with the celebrity and members of virtual community on *Weibo*, has a substantial economic impact to increase purchasing intention toward the celebrity-related products or endorsements. Most importantly, fan economy in China pursues deeper emotional PSR with celebrities and likemindedness among members of virtual community to lead to consumption behaviours, which is also encouraged by the interactive digital fandom practices.

Besides, this study indicated that virtual of fans communities on *Weibo* can enhance the perception of PSR, which extends the knowledge about the digital media users' psychological bonding process. Notably, this research found the synergy effect of PSR and the SOVC in increasing the marketing power of celebrity to fans as

consumers who tend to take solid emotional bond with celebrity into consideration when purchasing an item.

In addition, the mechanism and conceptual framework enriched our understanding of how celebrity marketing works especially in China-net context. To note, community members will observe and repeat communal practices attached to one's alter ego or online self which is isolated from real-life identity. Also, they have a desire to develop the group norms and stimulate mutual commitment (such as collective purchasing the products related to the celebrity).

By confirming silent economic effect of virtual fan communities related to the celebrity marketing power, this study can encourage future research opportunities across various disciplines. Future research can delve into community-centered relationships that enhanced previous findings from fandom studies. Also theoretical framework might have to explore the link between emotional identification with group membership and fans' media consumption, which akin to, Kyu and Oh's on online congruence seeking behaviour via online platforms [85].

On a practical and managerial level, this article has significant implications not only for the marketing practitioners but also for celebrities themselves. First, the use of the celebrity endorsers on SNSs will be employed by marketing practitioners as an emerging marketing genre and transitional business model using social media in China. Also, sheer number of virtual fan groups and their media consumption behaviours critically increase marketing value of community, as members carry massive purchasing power in response to marketing campaigns and promotions. Thus, the marketing professionals and celebrities need to foresee the superior viral marketing power through emotional connections with fans. To note, practitioners should keep in mind that fan economy is forcing an urgent rethink of marketing strategy as traditional and typical marketing communications tend to play a subtle role in this process. If marketing intention is too explicit as to overshadow fans' genuine and authentic engagement with the campaign message, promotion might backfire as fans might be discouraged or feel being mobilized. Therefore, practitioners are suggested to infuse authenticity into interactive marketing communications thereby draw attention through gaining organic traffics to community sites.

Meanwhile, this study can enlighten industry policymakers as to apply regulate various type of viral or celebrity marketing practices. Related industry policy-makers should take note of ethical issues that might arise from celebrity-influence on marketing as the nature

of fan economy often incites blind and indiscreet following and impulse buying. Therefore, practitioners should well understand the tenets of virtual community and its possible repercussions to protect consumers from misleading and “over-exploitation” by marketers^[86].

Last but not least, appropriate media education should be offered to protect the adolescents or younger generation who are still developing their skills for informed decision making.

5. Limitations and Future Research

Several certain limitations of this research are worth noting. Firstly, the survey instrument adopted voluntary response samples of *Weibo* users who identified themselves as fans of particular celebrities and participated in relevant virtual fan communities. Additionally, the intervention of voluntary responses tends to oversample online users who have extreme opinions and specific attitudes toward this topic, and thus may not be the best representative group of the research population.

In terms of the research methodology, this study took quantitative approach therefore, future research can complement this study’s key argument with qualitative research methods, such as focus groups and in-depth interviews that can provide a more thorough understanding and different angle about fan economy. Hence, future studies can benefit from a longitudinal approach which could determine and track these variables and assess if they are formed a consistent and stable status of potential purchase pattern toward the merchandise of a celebrity^[89].

Additional studies could also consider investigating different social media platforms concerning this study. While this study mainly looks at *Weibo* as a social media platform for fan community future studies might be able to examine other SNSs as a powerhouse of virtual communities. Also, it would be valuable to explore the dynamic interplay between online and offline in the context of fan economy. While fan studies tend to focus on digital platforms and emerging media channels, offline areas are still integral to fan studies. Future studies can uncover how members react and defy the norms and duties subtly and conventionally imposed within fandom^[32], while exploring diverse perspectives towards fandom culture across disciplines and media types^[12].

6. Conclusion

Ceaselessly changing digital landscape extended the areas of interactive marketing. Fan economy has gained prominence over the past decade, mainly owing to grow-

ing virtual fan community in social media and extensive fandom culture. Two-way communication and interactivity online massively increase the power of fan economy using celebrity marketing, yet it poses potential risk of viral marketing as well. Therefore, both practitioners and researchers should pay more attention to track the progress, success, and engagement of fans with virtual community on social media.

Supplementary Data/ Information

Appendix A: Online Survey Instrument

(1) The real online survey will contain the plain language statement, consent form and the statement of protecting their privacy and confidentiality. Also, the details of security and storage of the data collection.

(2) All materials will be translated Chinese for the convenience of the most participants. And respondents also can choose the language option (English or Chinese) of above information by themselves.

If you are interested in the outcomes of this study, you can leave your e-mail address, the student researcher will send the invitation e-mail link of key findings of this project. Or any participant who would like to learn of the results of the study can contact aoyiy@student.unimelb.edu.au & kyujin.shim@unimelb.edu.au for copies of any reports.

Thank you for agreeing to participate in this survey. For planning purposes, participation should take approximately 10 to 15 minutes of your time. By continuing, you are indicating that you are over the age of 18, and have more than three months experiences of online interaction (OI) with the celebrity as well as the engagement of at least one virtual community related to your favourite celebrity on “Super Topics” list on *Weibo*, also, you wish to participate in this study.

PART A 1. Background Information/Demographics

1.1 Who is your favourite celebrity that you followed and joined his/her Super topic on *Weibo*? (Please list at least one celebrity_____)

1.2 What is your gender?

- Female
- Male
- Other (specify_____)

1.3 Which category below includes your age?

- 18-20
- 21-25
- 26-30
- 31-40

Sense of Virtual Community ^[4]	I feel proud of as a member of this virtual fan community	1	2	3	4	5
	I contribute a lot of time and effort to this fan community	1	2	3	4	5
	It is very important to me to fit in and truly become a part of this community.	1	2	3	4	5
	I care about what other community members think of my actions.	1	2	3	4	5
	I feel obligated to observe the values, norms and commitments of this community.	1	2	3	4	5
	I would like to follow and support the decisions and behaviours that most members agreed in the community.	1	2	3	4	5
	I have positive influence over the discussion of my favourite celebrities.	1	2	3	4	5
	I think my efforts can enhance the development of the community.	1	2	3	4	5
	The information in community will have impact on me.	1	2	3	4	5
	Members of this community can be counted on to help and support each other.	1	2	3	4	5
I am full of hope for the future development of the community.	1	2	3	4	5	

PART A 2. Background Information/Demographics

1.6 How often, on average, do you spend on *Weibo* to have OI (includes check his/her websites; retweet or comment of their posts) with your favourite celebrities each day?

- Multiple times a day
- Twice or three times every week
- Three or five times every month
- Other (specify _____)

1.7 How often, on average, do you spend on the virtual fan communities of *Weibo* to have OI with other members each day?

- 30 minutes-1 hour
- 1-3 hours
- 3-4 hours
- 4-6 hours
- More than 6 hours

Appendix B: Consent Form

The School of Culture and Communication/Media and Communications Department/ Faculty of Arts

Project: Antecedents of Microblogging Users’ Purchase Intention Toward the Merchandise of Celebrities: The Perspectives of Virtual Community and Fan Economy
Responsible Researcher: Shim, Dr Kyujin
Additional Researchers: Aoyi Yang



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