

EXPLORING DETERMINANTS OF CITIZENSHIP BEHAVIOR ON VIRTUAL COMMUNITIES OF CONSUMPTION: THE PERSPECTIVE OF SOCIAL EXCHANGE THEORY

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ABSTRACT

Citizenship behavior within a virtual community has been recognized as an essential component for a community's sustainable success. However, studies have not fully understood and given only limited attention to the factors that foster members' prosocial behavior. The major objective of this study is the empirical investigation of the critical antecedents of citizenship behavior in virtual communities of consumption from the perspective of social exchange theory. Data were collected using a web-based survey from a well-known Taiwanese virtual community, Fashion Guide. The online survey yielded a total of 327 completed and valid questionnaires. To probe more deeply into whether citizenship behavior of a virtual community of consumption is influenced by product trial, two subsamples from product trial and non product trial members are compared. The study finds that social exchange theory helps foster citizenship behavior of the virtual community. In addition, analysis suggests that the influence strength of antecedents on citizenship behavior varies among Fashion Guide's member types. The product trial members perceive a higher service quality and better social climate than the non product trial members, whereas the non product trial members perceive better information quality than the trial members. Implications for practitioners and researchers are also addressed in this study, and suggestions made for future research..

Keywords: Citizenship Behavior, Virtual Community, Product trial, Member Satisfaction.

1. INTRODUCTION

The Internet revolution has prompted an unprecedented proliferation of virtual communities all over the world, and the exchange of information and knowledge through these communities has dramatically changed our lives. Some virtual communities are consumption oriented; these are partly consumer driven and thus free from the influence of commercial interests [17]. There are no commercial motives behind the advice given and the discussion is concentrated on a specific product or service topic. Therefore, virtual communities of consumption might be perceived as more efficient and credible than mass market communication [25]. Before making a purchase decision, consumers might search several related articles to gather information

from a particular virtual community and treat it as a potential source for acquiring information. With the dramatic growth of online participation, consumers exert greater influence over the products and brands being considered for purchase. Many studies indicate that certain organizations or individuals might have attempted to add their own, strategically biased, information to the total mix of posted reviews to manipulate the information spread through a virtual community [21]. Once a consumer detects the existence of such an anonymous promotion, they harbor doubts about the online recommendations and even refuse to visit the virtual community again. Furthermore, conflicts can arise among members who behave inappropriately.

Gillen [13] claims that self-policing through member cooperation has been recognized as essential for a community's sustainable success. People generally participate in a virtual community as a matter of choice; thus, a high number of participants

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results in the discretionary energy that preserves the virtual community [31]. Discretionary behavior can be regarded as citizenship behavior. Social exchange relationships are developed through interaction between members of the virtual community, and this generates citizenship behavior [18]. The citizenship behavior of a virtual community shows itself in a variety of forms, including: (1) timely assistance for newcomers; (2) guidance to locate information assets of interest; (3) prevention of inappropriate behavior; (4) sharing of information. Virtual communities can satisfy a variety of the needs of their members during the social exchange process to inspire greater voluntarism in the community.

1.1 Research Purpose

Regarding service, Preece [24] asserts that the platform of a virtual community should provide members with dialogue and social interaction support, navigation support, and accessibility. One of the most important reasons why members participate in a virtual community of consumption is to seek advice on purchase decisions. If the content conforms to the requirements of the members, they become more likely to actively participate in a community activity, such as helping newcomers. Despite the fact that citizenship behavior within a virtual community has been recognized as an essential component in a sustainable community's success, studies have still not fully focused on the fostering of this kind of prosocial behavior by members, and it has received only limited attention. In response to several calls for further investigation, the first and major objective of this study is to investigate empirically the critical antecedents of citizenship behavior in virtual communities of consumption from the perspective of social exchange.

In addition, with the exception of fundamental online community services, community organizers also try to provide extra services or rewards based on their own community characteristics, to inspire a higher degree of members' prosocial behavior. For example, more and more virtual communities of consumption offer their members the opportunity for limited quantity product trial. However, only members with a certain degree of qualification (e.g., seniority in terms of length of membership of community and number or frequency of article posting) can apply for and receive such an opportunity for product trial. Moreover, these qualified members are asked to give their honest opinions of the product on trial. The role of product trial not only serves as an extra reward for stimulating members to post more usage comments for certain products, but also increases the possibility of a higher degree of members' prosocial behavior, namely community citizenship behavior. We define "product trial members" as those qualified to have the

opportunity of product trial, and "non product trial members" as those who do not qualify for product trial. Thus, the second research purpose of our study is to explore the difference in citizenship behavior between product trial members and non product trial members. We hope our research implications might provide insights for online community administrators and assist them in designing better strategies to engender member satisfaction and citizenship behavior, encouraging the voluntary online contribution of knowledge or of loyalty behavior.

2. THEORETICAL BACKGROUND AND HYPOTHESIS

2.1 Social Exchange Theory

Social exchange theory (SET) predicts that people attempt to reciprocate to those who benefit them [2]. The norm of reciprocity creates a ubiquitous "moral code" that imposes a duty to repay, or at least be grateful for, benefits received from others [14]. In contrast, economic exchanges are short-term, quid pro quo transactions [3], and social exchanges are based on individuals' trust that the other parties in the exchange will fulfill their obligations in the long run [16]. As such, a "general social indebtedness" is shaped, forming the basis of a community that can be kept in balance over time and across people, rather than on an immediate, one-to-one basis [15]. In addition, Rheingold [26] indicates that Internet culture encourages collaboration, cooperation, and sharing. According to this theory, reciprocity can be seen as the norm that defines interaction online [29]. People who participate in virtual communities are motivated to do so for different reasons. In virtual communities, SET can illustrate the relationships between members and other parties; these are seen as exchanges in which a receiver reciprocates a positive personal effect by providing positive outcomes to the other party, such as citizenship behavior. Therefore, social exchange theory was conducted to explain the conditions under which people feel obligated to repay behavior or actions that they receive from others, such as other members or community administrators, in the context of online community. We argued that information quality, service quality, and social climate are three important determinants for members' prosocial behavior, namely, community citizenship behavior. These three antecedents could create member satisfaction, thereby facilitating a higher degree of member community citizenship behavior, according to the perspective of SET. The conceptual model for the study is shown in Figure 1.

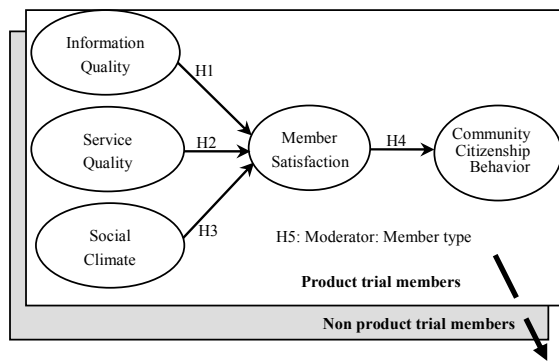


Figure 1: Conceptual model

2.2 Information Quality

A basic reason for people to use the Internet is to gather various kinds of information. From the perspective of MIS literature, the better and more comprehensive the information, the greater is the user satisfaction [23]. In the context of a virtual community, the reviewing of products might be presented in an aggregated form, giving the member a sense of the opinion of the community as a whole. Members are able to obtain immediate and insightful information related to products and services from strangers who have purchased and used the relevant products. Still, the buyer is anonymous in the virtual community, whereas members generally do not easily trust a product review posted on a website [25].

Therefore, a virtual community usually provides its members with a mechanism for rating the quality and trustworthiness of the review they encounter [10]. The content of reviews (review quality) ranges from simple to detailed and from subjective to objective [27]; there is no standard format. A high-quality review is one that is logical and persuasive, and supports its evaluation with reasons based on evidence about a product. In a similar vein, we argue that when a member perceives a higher degree of information quality provided by a virtual community, he/she will be highly satisfied because his/her functional goal is frequently fulfilled as a result of the comprehensiveness and quality presented from the information he/she looked for. As such, it is hypothesized that:

H1: Information quality is positively related to member satisfaction with the community.

2.3 Service Quality

In the Web setting, the platform (user interface) can be regarded as a service and the users as customers [34]. Each platform delivers a specific service. The platform serves as a “window” through which users have their primary interaction with the organization. Therefore, the service quality of a platform critically affects users’ perceptions and attitudes toward the organization and other people [8]. With the exception of transactional functions, the

services offered by virtual communities are similar to those provided by e-commerce websites. Stanoevsak-Slabeva [28] argues that the virtual communities exist at the intersection of complex technical and social systems. In other words, a successful virtual community should provide such services to its members and enable prolific and appropriate communication and social interaction. For example, if members have problems related to the virtual community’s infrastructure, log-in procedures, or membership privileges, the virtual community developer should resolve these problems as soon as possible. Furthermore, online support capabilities must also be effective, for example, answers to frequently asked questions, customized site intelligence, et cetera. If the service cannot satisfy members’ needs, however, this failure would become a major impediment to virtual community activity. Therefore, we argue that service quality, including diverse interaction and service efforts provided by community administrators, would positively influence member satisfaction toward that site. Hence, it is hypothesized that:

H2: Service quality is positively related to member satisfaction with the community.

2.4 Social Climate

Social climate (atmosphere), a psychological construct, refers to the characteristics of a social environment, including institutions, associations, groups, and societies that are consciously perceived by organizational members [30]. Brown and Duguid [4] argue that virtual communities are social worlds, a term that implies social activity among members. Initially, an Internet user might just browse a wealth of information and gradually focus on some sorts of particular discussion issues within a virtual community. If, as time goes by and the consumer becomes more experienced, and then registers as a member, he/she may interact and communicate more frequently with other online users with similar particular discussion issues [7]. Once the community member perceives a comfortable social climate within a specific community, he/she might regard other members as close personal friends, and might feel that they are all part of a community. As a result, perceptions of social climate for virtual communities should provide members with a social value of what is expected of them in their interactions with other members. Thus, the following is hypothesized:

H3: Social climate is positively related to member satisfaction with the community.

2.5 Member Satisfaction and Virtual Community Citizenship Behavior

Member satisfaction is a key determinant in terms of interpretation commitment among volunteers. Individuals who are satisfied are more

likely to commit effectively and normatively to the relationship and exhibit behaviors that will sustain a sound relationship, such as providing help or meeting others' needs [27]. Mathwick [20] claims that satisfied members are more likely to become loyal members of a virtual community. They, usually in positive affect, will engage in behavior that supports their affect and makes them feel good. Williams and Shiaw [32] argued that individual affective conditions may influence the extent to which people show citizenship behavior. Therefore, we suggest that when members are satisfied with the service (service quality), product reviews (information quality) and social atmosphere (social climate) that they have received from a virtual community, they will be more likely to respond with reciprocal behavior. In other words, members' perceived personal benefits, as well as a group's culture of exchange and its impact on individual behavior, are decisive in the success or failure of member citizenship behavior. When exchanges occur successfully, individuals experience positive affect, which in turn, promotes citizenship behavior. Hence, we hypothesized that:

H4: Member satisfaction is positively related to his/her citizenship behavior.

2.6 Moderating Effects of Member Types: Differences between Trial and Non-trial Members

Many virtual communities are both implicitly and explicitly organized around consumption activities [18]. Through these communities, members can explicitly share their enthusiasm, knowledge, or opinions for a specific consumption-related activity. Likewise, virtual communities quite often promote activities such as product or service trials to induce members' willingness to provide their comments or experiences [22]. Since these product trial activities serve as an extra reward or incentive to members, in order to build closer relationships with their members, virtual communities provide opportunities for product trials for "product trial members" who must satisfy certain conditions as mentioned above. After using the trial product, these members acquire direct usage experience from the trial product. In the meantime, they also get more chances to post related articles for sharing and exchanging their experiences or comments with other members, thereby acquiring more opportunities to exhibit a higher degree of community citizenship behavior compared to non product trial members. In contrast, non product trial members - those who do not have the opportunity for product trial - receive no extra reward such as product trial and still exhibit a regular pace for attending communities and posting or replying their interested articles. Thus, we argue that product trial members might use or evaluate their virtual community very differently from non product trial members. Based on these arguments, the following is hypothesized:

H5: The strength of the antecedents of satisfaction and citizenship behavior will differ for product trial and non product trial members.

3. RESEARCH METHODOLOGY

3.1 Subject and Procedure

Data was collected using a web-based survey from a well-known Taiwanese virtual community, Fashion Guide (<http://www.fashionguide.com.tw/>). Founded in 1997, Fashion Guide claims to be Taiwan's most complete cosmetic reviewer and fashion community. It offers a wide variety of information on cosmetology for Chinese-speaking people. At the time of the study, the community had more than 220,000 members. This virtual community generates 1,000,000 page views and receives more than 60,000 unique visitors each day. It is important to note that the community's content is entirely user-generated. More specifically, on average there are seven reviews posted every minute. Eighty percent of members have a high expenditure capability and the age range is 20 to 35 years old. The administrators take care of the infrastructure, but the members provide all the content.

We gained the cooperation of Fashion Guide, and a banner with a hyperlink for our questionnaire was placed at the top of its homepage during the period of the study. When entering the website with their account ID and password, members were asked to click the banner in order to participate in our survey. A new window then popped up which contained the aim of the study, and related questions. To increase the response rate for our survey, a gift of cosmetic set was awarded upon completion.

The online survey yielded a total of 395 completed questionnaires. Since 68 responses were invalid and therefore discarded, the remaining 327 responses, from 305 females and 22 males, were retained and put into data analysis. Moreover, our samples contain 125 responses from product trial members and 202 responses from non product trial members. Specific demographic information is shown in Table 1.

3.2 Measurement Development

All of the item scales were adapted from the relevant literature wherever possible and were modified to fit the virtual community context. Both information quality scale and service quality scale were adapted from Delone and Mclean [6]. Additionally, the social climate scale was based on Wilkinson [30], and the member satisfaction items were based on Flavia, Guinaliu, and Gurrea [9]. Finally, the community citizenship behavior items were modified from Yu and Chu [33]. The preliminary instrument was pilot tested and reviewed for clarity by faculty and doctoral students. All items

were rated on seven-point, Likert-type scales anchored at “strongly disagree” (1), “strongly agree” (7), and “neither agree nor disagree” (3).

Table 1: Sample characteristics (N1+N2=327)

	Product trial member (N ₁ =125)	Non product trial member (N ₂ =202)
Age		
≤ 24	18 (14.4%)	92 (45.5%)
25-30	78 (62.4%)	166 (82.2%)
31-35	25 (20%)	54 (26.7%)
≥ 36	4 (3.2%)	15 (7.4%)
Salary		
<NT\$15,000	32 (25.6%)	79 (39%)
NT\$15,001- NT\$20,000	14 (11.2%)	13 (23%)
NT\$20,001- NT\$25,000	22(17.6%)	23 (27%)
NT\$25,001- NT\$30,000	26 (20.8%)	39 (9%)
NT\$30,001- NT\$35,000	13 (10.4%)	19 (2%)
NT\$35,001- NT\$40,000	10 (8%)	9 (4.5%)
>NT\$40,001	8 (6.4%)	20 (9.9%)
Member experience (years)		
0-1	5 (23.7%)	123 (60.9%)
2-3	70 (54.2%)	61 (30.2%)
4-5	19 (17.6%)	10 (4.9%)
6-7	23(2.9%)	5 (2.5%)
>8	8 (1.7%)	3 (1.5%)

3.3 Analysis Methods

In order to empirically assess the above conceptual model, we chose partial least squares (PLS) regression analysis as the primary statistical technique, specifically Visual PLS version 1.04 [12]. First, PLS is widely accepted as a method for testing theories in the early stage, whereas LISREL is usually used for theory confirmation. Similar to the case in previous studies (e.g., [35,19]), our study is still at an early stage and the proposed model has not been tested in the context of a virtual community. Second, PLS is appropriate when the model comprises both formative and reflective constructs [5]. Our model and data meet these conditions. For example, the construct of social climate is treated as a formative latent variable. Finally, PLS makes minimal demands in terms of variable distribution. A few variables within our research model were not exactly normally distributed, which might cause the problems that provided factor-based covariance approaches, such as LISREL and AMOS [6]. For these reasons, PLS was deemed appropriate in this study.

3.3.1 Measurement Model

The measurement model was estimated using the full data set. To validate our measurement model, two types of validity were assessed: convergent validity and discriminant validity. Convergent validity was assessed using composite reliability and average variance extracted (AVE) [11,5]. As shown in Table 2, our composite reliability values range from 0.880 to 0.913, exceeding the recommended cutoff value of 0.7 [35]. AVE ranges from 0.602 to 0.779, exceeding the threshold of 0.5 that was suggested by

Fornell and Larcker [11]. Thus, the two conditions for convergent validity were met.

Table 2: Results of confirmatory factor analysis

Measures	Items	Composite Reliability	Average Variance Extracted
Service Quality (SQ)	3	0.91	0.78
Information Quality (IQ)	4	0.88	0.65
Social Climate (SC)	4	0.91	0.71
Member Satisfaction (MS)	3	0.89	0.73
Community Citizenship Behavior (CCB)	6	0.90	0.60

Table 3: Correlation between constructs

	Mean	SD	SQ	IQ	SC	US	CCB
SQ	5.9	0.96	0.88				
IQ	5.9	0.98	0.70	0.80			
SC	6.2	0.91	0.64	0.71	0.84		
US	5.8	1.08	0.70	0.62	0.65	0.85	
CCB	6.0	1.11	0.50	0.45	0.56	0.67	0.78

*The shaded numbers in the diagonal row are square roots of the average variance extracted.

To assess the discriminant validity, the square root of the AVE for each construct should be greater than the correlations between constructs, that is, the off-diagonal elements in Table 3 [11]. We can see that the highest correlation between any pair of constructs was 0.71 (between information quality and social climate). This was lower than the lowest square root of AVE (0.78 for community citizenship behavior). Hence, all constructs met the criterion of discriminant validity, demonstrating sufficient psychometric properties for all of our measures.

4. DATA ANALYSIS AND RESULTS

4.1 Analysis of the Full Sample

We tested the conceptual model by using a bootstrapping analysis in the PLS method. The bootstrapping analysis was done with 100 re-samples, and path coefficients were re-estimated using each of these re-samples. The results of the full sample are shown in parentheses in Figure 2. As predicted, for member satisfaction, two of three determinants—service quality ($\beta = 0.44, p<0.01$) and social climate ($\beta= 0.28, p<0.01$)—have significant paths leading to the dependent construct, thereby supporting Hypothesis 2 (H2) and Hypothesis 3 (H3). That is, both service quality and social climate positively and significantly influence member satisfaction toward virtual community. However, information quality has no significant effect on member satisfaction, and Hypothesis 1 (H1) is thus not supported. Furthermore, our analysis showed that member satisfaction has a significant and positive effect on community citizenship behavior toward virtual community ($\beta= 0.65, p<0.01$), thereby supporting Hypothesis 4 (H4).

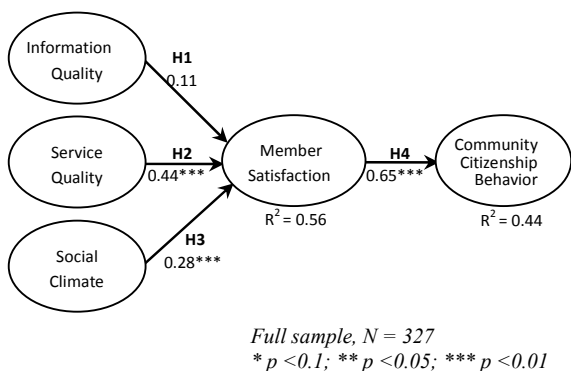


Figure 2: A conceptual model (full sample result)

To investigate whether the strength of the antecedents of satisfaction and citizenship behavior will differ between product trial and non product trial members, we then ran a structural equation model on each of these two group subsamples. Figure 3 shows estimated paths for both subsamples, with the product trial member subsample reported in parentheses. As shown in Figure 3, the exogenous variables explain considerable proportions of the variance—61% and 47% for member satisfaction and 45% and 34% for virtual community citizenship behavior. In the non product trial member subsample, information quality ($\beta = 0.2, p < 0.1$), service quality ($\beta = 0.45, p < 0.01$), and social climate ($\beta = 0.22, p < 0.05$) were all positive and statistically significant. Thus, all hypotheses (H1-H3) regarding member satisfaction are supported. In addition, the model indicates a strong link between member satisfaction and virtual community citizenship behavior ($\beta = 0.66, p < 0.01$), so Hypothesis 4 was again supported. In the product trial member subsample, only service quality ($\beta = 0.48, p < 0.01$) and service climate ($\beta = 0.29, p < 0.05$) are found to be significant. Finally, member satisfaction has a positive influence on community citizenship behavior on both groups (product trial vs. non product trial members) ($\beta = 0.68$ for non product trial group and $\beta = 0.58$ for product trial group).

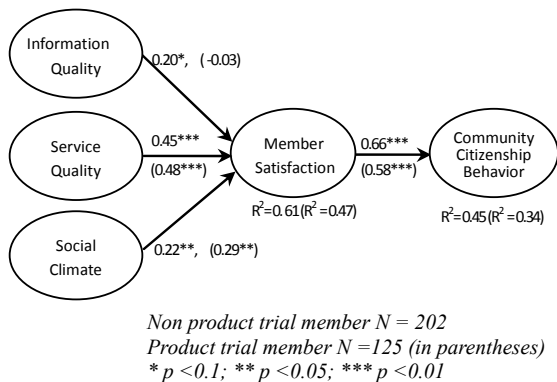


Figure 3: Virtual community member satisfaction and citizenship behavior - result of product trial vs. non product trial members

4.2 Moderating Effects of Member Types: Product Trial versus Non Product Trial Members

Finally, in order to test whether differences exist between product trial and non product trial members, we used a t-test by statistically comparing each path coefficient in the product trial subsample with the corresponding path coefficient in the non product trial subsample. The results show statistical differences between the two subsamples ($p < 0.05$). This result provides support for the moderating effect of member type as proposed in Hypothesis 5. Moreover, we further compare the standardized path (the magnitude and significance) of product trial subsample with non product trial subsample. First, from information quality to member satisfaction, the product trial subsample had a much lower magnitude than that of non product trial group (-0.03 versus 0.20). Second, for the paths from service quality and social climate to member satisfaction, we found that the product trial subsample had a much higher magnitude than the non product trial subsample (0.48 versus 0.45 and 0.29 versus 0.22, respectively). Finally, from the path of member satisfaction to community citizenship behavior, the product trial subsample had a much lower magnitude than the non product trial one (0.58 versus 0.66).

5. DISCUSSION AND MANAGERIAL IMPLICATIONS

5.1 Discussion

Community citizenship behavior is critical for the management of online community. Overall, the research findings strongly support the claim that social exchange relationships help in citizenship behavior formation. As expected, our results suggest that service quality (H2) and social climate (H3) yield significant and positive member satisfaction, which in turn result in citizenship behavior toward the virtual community (H4). As argued by Stanoevsak-Slabeva [28], virtual communities exist at the intersection of complex technical and social systems, and this study demonstrates that virtual communities serve as an effective platform with appropriate functions or services for members to interact with each other. According to SET, better service quality provided by virtual community could benefit members in several ways such as interacting with other people, searching related discussion articles or information, or seeking timely help. Thus, it could generate higher member satisfaction toward the community, thereby supporting our Hypothesis H2. In addition, our result is consistent with previous studies of social climate, suggesting that the perception of higher social climate is positively related to member satisfaction toward the virtual community. Frequent social activity or interaction among members within the virtual

community could gradually cultivate shared experiences and closer relationship among members. When members develop a strong social climate within such a community, they might find that visiting a virtual community has become an indispensable part of their lives, and such a feeling might subsequently be reflected in their higher satisfaction and citizenship behavior [4,7], thereby supporting Hypothesis H3.

In contrast, our findings from analysis of the full sample result suggest that information quality has no significant effect on member satisfaction (Figure 2). In search of a possible explanation for hypotheses H1 and H5, we perform subgroup analysis and investigate whether the moderating effect exists between product trial and non product trial member groups. Our subgroup analysis result supports Hypothesis H5, suggesting that the strength of the antecedents of satisfaction and citizenship behavior significantly differ for product trial and non product trial members.

As indicated in Figure 3, product trial members perceive higher service quality and better social climate than the non product trial members, whereas the non product trial members perceive better information quality than the trial members. According to the demographic information in Table 1, product trial members usually have been members of the community longer than the non product trial members. Consistent with the findings of Bagozzi and Dholakia [1], our result might provide a possible explanation for the fact that, when members are new to a virtual community, they tend to view the virtual community activity passively from the sidelines. That is, information searching is the primary objective at the new member stage. Therefore, it is crucial for new members to obtain high quality of information in the virtual community of consumption, and this serves as an effective mechanism for these members, creating their satisfaction toward the community.

In contrast, among those members who participate long enough, some (such as product trial members) are more familiar with a specific virtual community. For these members, who are forming meaningful interpersonal relationships within the community and identifying with the community, a high quality of information is necessary, but no longer enough by itself; other factors such as service quality or social climate become more influential than information quality in creating member satisfaction toward the community.

Another interesting finding of this research is that the product trial subsample has a lower magnitude than the non product trial subsample in explaining the relationship between member satisfaction and community citizenship behavior (0.58 vs. 0.66), despite the fact that these figures are statistically and significantly different between the

two subsamples. The possible reason for such a contradictory result could be as follows. Product trial serves as a very attractive reward or incentive for stimulating members to win them (e.g., non product trial members) or keep them (e.g., product trial members). Product trial members might issue more articles, share more product trial experiences, and gain more interaction from other members to keep the qualification of product trial. As such, they could gradually form higher satisfaction toward the community, and thus generate a higher degree of community citizenship behavior. In contrast, in order to acquire the qualification for product trial, non product trial members might demonstrate much higher motivation to perform the interactive activities described above than product trial group. Consequently, the magnitude in explaining the relationship between non product trial member satisfaction and community citizenship behavior might be much higher than that of a trial member. Another possible reason is that the trial product provided by Fashion Guide is exactly the same as the product sold through retail channels, with original bottle size and volume. Using the original size of the trial product makes it even more attractive for members, especially for the non product trial ones. As such, compared to the group of product trial members, non product trial members might demonstrate higher magnitude in explaining the relationship between satisfaction and subsequent citizenship behavior toward communities to qualify for product trial.

5.2 Implications

To enhance member satisfaction and encourage members to exhibit more proactive citizenship behavior, community managers need to provide the right context in which a community can thrive. From the perspective of SET, community administrators or managers can facilitate greater participation by providing a virtual community-specific way to communicate with other members. Such a strategy will enable members to advocate the virtual community, and this might guide the manager to locate members providing above-average response [18]. Our findings suggest that information quality serves as a basic and necessary component for attracting new members to participate in the very early stages. However, it is not sufficient for the long term. Better service quality and the formation of a better social climate within the community could cultivate higher member satisfaction toward the site, and thus create higher community citizenship behavior for other members. Moreover, our study highlights the importance of product trial, and thus, we recommend that product trial should serve as an effective and attractive way to stimulate not only non product trial members but also product trial members

to continually issue articles and interact with other members, thereby generating members' long-standing behavioral outcomes toward virtual communities.

6. CONCLUSION

The results of this study demonstrate that social exchange theory can be applied to explicate citizenship behavior formation in a virtual community of consumption. Community citizenship behavioral concerns shape the motivation of members to engage in safeguarding the image of a community, to demonstrate the strength of community, to resolve conflicts, and to create a harmonious community. Thus, community organization should attempt to link in significant ways to people's desire to receive feedback from a virtual community.

Although this study provides useful insights, there are several limitations worth addressing. Future research should be conducted keeping in mind the limitations of this study. First, the results must be viewed in accordance with the fact that the sample was limited to Fashion Guide. Furthermore, the majority of its members are female, resulting in the survey subjects being 305 females and 22 males, bringing into question the generalizability of our findings. Future studies could improve the generalizability of our findings by examining our research model with more types of consumption-oriented virtual communities (e.g., 3C, investment, and sports), thereby balancing the influence of gender and context concerns. Second, in addition to the investigation of the impact of product trial, community managers would benefit from knowing how particular types of trial products will be judged by members. Such further studies could help community managers or even marketing managers more effectively measure the favorability of the outcomes of the different effects of product trial incentives. By continuing to draw on the theory and findings of related studies as we proposed, we believe the resulting increased richness of models and interpretations would significantly advance our understanding of the important phenomenon of virtual community and social interactions.

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APPENDIX A: Questionnaire Items

Constructs	Standardized Loadings
Information Quality (Delone and Mclean [34]) 1. The information provided by Fashion Guide is accurate. 2. The information provided by Fashion Guide is easy to understand. 3. Fashion Guide provides me with a complete set of information. 4. Fashion Guide provides me with all the information I need.	0.72 0.81 0.84 0.84
Service Quality (Delone and Mclean [34]) 1. Fashion Guide operates reliably. 2. Fashion Guide can respond timely to my questions. 3. Fashion Guide provides me with all the personalized information. 4. Fashion Guide is attentive to member request.	dropped 0.87 0.89 0.88
Social Climate (Wilkinson [1]) 1. The members in Fashion Guide are encouraged to present their opinions. 2. Fashion Guide is a friendly space. 3. Fashion Guide is a very well organized place. 4. Most members in Fashion Guide have the same interests. 5. The members encouraged to start their own activities in Fashion Guide.	0.69 dropped 0.87 0.88 0.91
Member Satisfaction (Flavia, Guinali' u and Gurrea [10]) 1. I think that I made the correct decision to join Fashion Guide. 2. The experience that I have had with Fashion Guide has been satisfactory. 3. Overall, I am satisfied with Fashion Guide.	0.86 0.83 0.87
Community Citizenship Behavior (Yu and Chu [21]) 1. I make every effort to safeguard the image of Fashion Guide, and actively participate in any activity organized by it. 2. I make every effort to demonstrate the strength of Fashion Guide. 3. I put forward good suggestions voluntarily to the members of Fashion Guide. 4. I participate in the activities of Fashion Guide with a positive attitude. 5. I help members to resolve conflicts and misunderstandings to maintain a harmonious community. 6. I am able to maintain good relations with members in Fashion Guide.	0.83 0.84 0.74 0.80 0.79 0.81

探討消費性虛擬社群之公民行為－社會交換理論的觀點

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摘要

虛擬社群中的公民行為被視為是維持社群成功的主要因素之一。為了能夠激勵社群中成員的自願主義，如何塑造虛擬社群成員中公民行為的意識便成為社群管理者最重要的任務。因此，本研究主要目的在透過社會交換理論的觀點，以實證性的研究方式，探討影響消費性虛擬社群公民行為的因素。研究樣本是以網路問卷方式進行搜集，樣本來源則是透過台灣最大的女性美容保養品的產品評論的社群網站—Fashion Guide 取得，共獲得327份有效問卷。此外，為了更深入瞭解消費性虛擬社群公民行為的前置因素，是否會受到該社群所提供試用品的影響。本研究再根據會員是否具有產品試用資格，將樣本分為「具產品試用資格會員」及「非產品試用資格會員」兩群進行比較。研究結果發現，社會交換理論的確有助於研究者更清楚地瞭解社群公民行為的呈現，其中服務品質與社會氛圍會經由成員滿意度而影響其公民行為的展現。在產品試用與非試用的比較上，具產品試用資格會員感受到較好的服務品質以及社會氛圍；而非產品試用成員則感受到較高的資訊品質。

關鍵詞：公民行為、虛擬社群、產品試用、成員滿意度

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