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# The Customer Citizenship Behaviors of Food Blog Users

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**Abstract:** Compared with previous studies that have focused on customers' behavioral intentions or the factors that influence purchase behaviors on blogs or discussion boards, in this study, we examine the factors of independent food blogs or discussion boards that influence users' customer citizenship behaviors. Six food blogs were selected based on the flow rate and food diaries. 323 Subjects were chosen from the blog user population and then interviewed to develop the data needed for this study. The results indicate that psychological needs, customer satisfaction, and customer-company identification positively affect customer citizenship behaviors. High satisfaction of customer-orientation is a critical management strategy on food blogs. This study adapts physically existing organizational behavior theory through appropriate inference and modification for virtual community. Unlike past studies that focused on customer purchase intention, this study emphasizes customer value and social media of the virtual community.

## 1. Introduction

With internet technology evolving, blogs have become a global phenomenon. They have had a substantial impact on the hospitality and tourism industry [1], and they are essential as a way to circulate information regarding product quality through the Internet [2,3]. Wang [4] presented that Technorati attempted to understand the ranking of diverse blogging topics, and his results revealed that the category involving food, beverage, and some food-related topics, is ranked third among the top 18 topics on blogging. From Pollster online survey [5] for browsing profiles of blogs in Taiwan showed that food blogs ranked the first position (15.14%), love blogs (between man and woman) (12.72%), and travel blogs (12.54%) were next. Blogs that discuss fine foods in Taiwan are becoming a popular habit of life, and people often make decisions about delicacies because of evaluations based on information obtained from the Internet.

Food blogging is part of a wider growth in forms of writing about food [6]. Food blogging typically represents a complex interweaving of "foodie" or gourmet interest in cooking, blog writing, and photography [7]. People obtain rudimentary concepts and information about relevant shops by reading the shared personal experiences of others. The ideas and information acquired by perusing these blogs are treated as references for making decisions. Blogs can provide general information and stimulate the blog reader's imagination regarding fine foods and restaurants they have not yet encountered, by providing affective descriptions. The creation and use of blogs as information sources satisfies emotional needs and creates a sense of self-fulfillment in users who browse food blogs. These users are then also expected to act as participants and contributors to help others realize their own dreams. Consequently, sharing the experience with others is a part of the experience that users look forward to. All of these topics are based on the satisfaction and realization of dreams and psychological needs.

Previous studies about blogs usually emphasize the influential factors of users' intentions, and they emphasize the concept of benefit exchange [4,8–11]. Food blogs establish a type of two-way communication arena for Internet users. By exercising personal interest and preferences, users share their own enjoyment of fine foods with those who have never had the experience. Compared with business websites, food blogs have little to do with monetary transactions, and most user participation derives from the individual user's willingness and experience. Recent studies on citizenship behaviors exhibited by blog users have emerged; this shows the emergence of customer willingness for autonomous actions [12]. In the blog virtual environment, bloggers play the role of organization as well as customer. Bloggers who experience identification within the blogs may treat other members of the blog community as one of their own and would be more willing to do something beneficial to others but not to themselves [13–15]. If customers' non-service-centered behaviors are recognized, they may create value that transcends other benefits. This is directed by the customers' extra-role behaviors and value-identified dimension.

Because of the flourishing development of social networking, users become accustomed to acquiring the information they need through the Internet. They also share experiences and feelings, and create value for other customers through virtual communities; because of these behaviors, the possibility of unlimited development exists in the future. We adopted customer citizenship behaviors (CCBs) as the dependent variable, and integrated psychological needs, customer satisfaction, customer commitment, and customer company identification to explore the influential factors of CCBs in virtual communities.

This study provides guidance for the development of the Internet. It also offers benefits for the future management of virtual communities and the customer value that they produce.

## 2. Literature Review

### 2.1. Psychological Needs

Needs are defined as requirements for something essential or desirable that is lacking. In other words, needs are the most fundamental factors and the starting point of the process generating behavioral outcomes [16]. When people feel they have satisfied basic needs, they search for ways to satisfy higher-level needs. One of the most widely appreciated theories is self-determination theory, developed by Deci and Ryan [17] in accordance with Maslow's theory. It simultaneously addresses intrinsic and extrinsic factors, which either strengthen or weaken people's motivation. Three psychological needs are included. The first element is "autonomy", which refers to feeling volitional, agentic, and self-governing, such that a person perceives his/her behavior as emanating from within themselves and not controlled by external sources or agenda [18]. The second element is "competence", and the need for competence concerns people's inherent desire to be effective in dealing with the environment [19]. The third element is "relatedness", which pertains to a feeling of connection or belonging with others or the social environment. Thus, the need for relatedness or belongingness reflects the universal propensity to interact with, be connected to, and experience caring for other people [20].

### 2.2. Customer Satisfaction

Satisfaction is the attitude consisting of cognition and affection [21,22], and it is the pleasurable response of customers to products or services that satisfy their needs and wants [23]. Cardozo [24] presented the term "satisfaction" first; he thought that it signified what people felt about the difference between how much they paid and what they acquired in return. Satisfaction has been widely and successfully used in consumer and service literature, with a recent extension into e-service studies [25,26]. Thus, studies have explored "user satisfaction" for information systems and Internet users. Whereas several studies have examined the factors of a specific blog that influence its success, attention to the quality and user satisfaction aspects has been scant [27]. Therefore, user satisfaction, which is more akin to the focus of this study, is the basis of discussion.

Studies on user satisfaction were initially on information systems supported by banks; however, they have since appeared in research concerned with computer science and websites. The criterion, user satisfaction, is used to assess design and to analyze the system [28]. Satisfaction is generally defined as a positive feeling of user fulfillment or realization with respect to the expected benefits of IS usage [29].

### 2.3. Customer Commitment

Gruen, Summers, and Acito [30] defined commitment as a "psychological attachment", meaning an affective disposition reflecting the desire and willingness of two parties to devote considerable effort in maintaining a relationship. Morgan and Hunt [31] described commitment as an ongoing relationship that is maintained through maximum efforts from both partners. Thus, commitment can be regarded as a key to build a successful and friendly "long-term" relationship and develop relational transactions [32].

The concept of organizational commitment has gained popularity in recent studies, and it is most often understood to be an attitudinal orientation or mindset that reflects a person's sense of connection to and involvement in a particular organization [33–35]. In the current business environment of the new economic decade, many enterprises have transformed into customer-oriented organizations. They emphasize developing long-term relationships with customers.

Marketing scholars treat customer commitment as a psychological force, linking consumers to the sales organization [36]. Van Bruggen, Kacker, and Nieuwlaat [37] indicated that customer commitment is the key reason customers feel like maintaining long-term marketing relationships with an organization. Jones, Fox, Taylor, and Fabrigar [38] indicated that customer commitment includes affective, normative, and continuance elements. Affective commitment is defined as the degree to which a customer is psychologically bonded to a service organization based on how favorable the customer's feelings about the organization are. Normative commitment as the degree to which a customer is psychologically bonded to the organization on the basis of his or her sense of obligation to the organization, and continuance commitment is based on the perceived costs associated with terminating the relationship [30].

### 2.4. Customer-Company Identification

The concept of identification, which originated within the areas of social psychology and organizational behavior, satisfies customers' self-defined needs [39], as well as socially identified needs [40]. Patchen [41] indicated that "identity" is the sharing of same goals or experience, having a feeling of union with other members, and belonging to the same organization.

Customer-company identification (CCI) is not the direct mechanical correspondence between a person's personal characteristics and an organization's perceived characteristics, but is derived from a subjective sense of approval between both identities [42]. When a person's trust in an organization becomes self-referential and self-definitional, based on his or her customer's identification with the company, one or several of the critical self-definitional needs will be met [39].

Dutton, Dukerich, and Harquail *et al.* [43] viewed the concept of organizational identification as the sense of connection between a person and an organization. A person's organizational identification is influenced by three principles of self-definition: self-continuance, self-enhancement, and self-discrimination. When people think that they share the same benefits or advantages with an organization or a group, then they feel like members of this organization or group. This feeling enhances a member's sense of belonging to the organization [44]. Akin to the relationship between customers and a company, the psychological substrate indicates that the company expects to build a deep, meaningful, and long-term relationship with customers [39], and intends to encourage them to have a strong feeling of belongingness to certain companies owned by the customer based on social identity theory and organizational theory [45].

### 2.5. Customer Citizenship Behavior

Organ [46] defines OCB as a set of helpful, discretionary, and extra-role behaviors exhibited by employees that are not directly or clearly recognized by the formal reward system and have an overall positive effect on the operation of the organization. Moreover, the behavior cannot be restricted by the regulations the organization formulates or by employment instructions [47].

CCBs emphasize voluntary and discretionary behaviors that are unnecessary for the successful production or delivery of a service, but customers are still willing to help the service organization [12]. Groth [12] identified three dimensions of CCBs: (a) providing feedback to the organization, which means providing solicited information to the organization to help improve its service delivery process; (b) helping other customers, which closely parallels the altruism dimension found in OCBs; and (c) recommendation, which refers to recommendation of the business to friends or family [48].

*2.6. Relationships among Psychological Needs, Customer Commitment, Customer-Company Identification, Customer Satisfaction, and Customer Citizenship Behaviors*

Meyer, Stanley, and Parfyonova [49] used latent profile analysis to identify six profile groups of commitment. They then applied these profiles when exploring factors such as need satisfaction, involvement, and OCBs. They identified that need satisfaction as a basis for the commitment mindsets might also have implications for understanding the development of commitment. Salehi and Gholtash [50] conducted a study on the relationship between job satisfaction, job burnout, organizational commitment, and OCBs in Islamic Azad University. They found that organizational commitment has a direct and positive influence on OCBs. Zeinabadi [51] stated that previous research on OCBs indicated that global job satisfaction and organizational commitment have a positive influence on OCBs. Mohamed and Anisa [52] discussed the effects that employee organizational commitment had on OCBs and the results revealed that normative commitment and continuance commitment have a significant impact on OCBs.

Customer satisfaction is expected to have effects on customer commitment [53–55] and the reason is that highly satisfied customers will have repeated positive reinforcement that will induce customers to have emotional links to make a commitment. Greguras and Diefendorff [56] adopted a self-concordance model as an intermediary variable to explore the relationship among employees' proactive personality, life satisfaction, in-role performance, and OCBs. The results indicated that psychological need satisfaction subsequently predicted employees' life satisfaction, job performance, and OCBs. Gagné and Deci [57] described self-determination theory as a theory of work motivation and showed its relevance to theories of organizational behavior. They claimed that promoting satisfaction of the three basic psychological needs will yield important work outcomes of positive work-related, OCBs, and psychological adjustment and well-being.

To draw a conclusion from Ngunia, Sleegers, and Denessen [58], job satisfaction and organizational commitment are frequently cited as antecedents of OCBs [51]. Groth [12] investigated customer behaviors during Internet service deliveries by extending and applying OCBs to the customer domain. The results showed that customer satisfaction can be used to predict CCBs. Chen, Chen, and Farn *et al.* [59] investigated the critical factors of citizenship behaviors on the consumption state in a virtual community through social exchange theory. The results indicated that member satisfaction would generate significant and positive effects on citizenship behaviors.

Lii and Lee [60] discussed the effect that corporate social responsibility has on CCI, brand attitude, and CCBs. The findings showed that CCI has important effects on brand attitudes and extra-role and in-role behaviors. Zhou and Wang [45] address how customers can develop very strong links rather than satisfaction, and according to the results, CCBs could be predicted through CCI. Choi and Kim [61]

examined the roles of staff's hotel identification, and found that hotel identification affected CCBs as well as customer satisfaction.

Hsu *et al.* [32] explored customer opinions on enterprises analyzing relationship marketing through micro-blogs, and they stated that customer satisfaction has a significantly positive influence on commitment, trust, sense of community, and customers' behavioral intention.

Kim, Lee, Lee, and Kim [62] propose two identification cuing factors to understand how corporate social responsibility relates to employees' identification with their firm. The results show that employee-company identifications are related to commitment in the positive direction. Lee, Lee, and Lum [63] examined the effects of the provision of employee services on employees' organizational commitment and their intentions to quit as well as their underlying reasons. The result shows that employee services enhanced organizational identification, which enhanced organizational commitment and lowered intentions to quit. According to the research results discussed above, and on the bases of relationships among the variables, we make seven hypotheses as follows:

H1: Customer satisfaction has positive effects on customer commitment.
H2: Customer-company identification has positive effects on customer commitment.
H3: Psychological needs have positive effects on customer commitment.
H4: Customer satisfaction has positive effects on customer citizenship behaviors.
H5: Psychological needs have positive effects on customer citizenship behaviors.
H6: Customer-company identification has positive effects on customer citizenship behaviors.
H7: Customer commitment has positive effects on customer citizenship behaviors.

## 3. Methodology

### 3.1. Research Framework

This study explores users' needs and cognition in food blogs, and their citizenship behaviors as they browse these blogs. We discuss the relationship among psychological needs (PNs), customer commitment (CC), customer satisfaction (CS), customer-company identification (CCI), and customer citizenship behaviors (CCBs). After synthesizing the results of numerous studies, we established a basic model as shown in Figure 1.
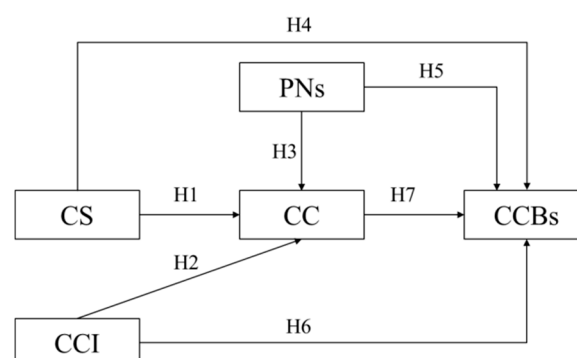


**Figure 1.** Research framework.

## 3.2. Criteria for Selection and Appraisal

The criteria used to select and appraise food blogs in our study are as follows: first, blogs are assessed according to the flow rate. Those blogs in which articles on fine foods comprise more than 60% of articles were chosen as samples (Table 1, calculated from 19 April to 1 May of 2012). Eventually, six food blogs were selected.

**Table 1.** Selecting and appraising contents about food blogs.

| Blogs | Average Flow Rate | Types of Articles | Percentage of Fine Food Articles |
|---|---|---|---|
| Lazy Cat's Nest | 20,305 | Fine food Travel Personal Life Drama | 65.32% |
| Guo Xiao-Bao & Lu Xiao-Shan's Dribs and Drabs of Life | 12,406 | Fine food Travel Cosmetology | 66.41% |
| Duckling Huang's Food Indulgence | 8015 | Food Travel Cosmetology | 74.22% |
| Zi Chuan Qi Yan | 5780 | Fine food Travel Personal life | 75.36% |
| Ellen | 4531 | Fine food Travel | 86.83% |
| Yado/Fine food/Travel | 3611 | Fine food Travel Personal life | 83.02% |

## 3.3. Subjects of Study

The subjects of this research are users who have browsed food blogs. We used convenience sampling methods to select the objects for study. The survey was conducted through questionnaire distribution. Online questionnaires were posted on the fine foods section of the discussion forum. Blog users could fill out the questionnaires, and then data were collected. To increase the questionnaire return rate and to ensure qualification of the blog users, four food blog names that did not conform to the conditions of the research protocol were added to the questions about interviewees' browsing experience. This excluded those who had never actually browsed through food blogs.

## 3.4. Design of Questionnaire

Our questionnaire was divided into six parts: psychological needs, customer satisfaction, customer commitment, customer-company identification, CCBs, and sociodemographic variables. We compiled the components of the psychological needs variables by synthesizing related viewpoints and instruments from Maslow, Frager, and Fadiman [64], Suler [65], Rosengren [66], and Nardi, Schiano, Gumbrecht,

and Swartz [67] (16 questions were included). Regarding the section addressing customer satisfaction, we referred to the variable of satisfaction, as presented by Bhattacherjee [68] and Klenke [69], regarding information systems (four questions were included). In the customer commitment section of the questionnaire, the variable of customer commitment developed by Yi and Gong [70] was adopted (three questions were included). In their study, they focused on the CCBs of sports center users. Regarding the CCI section, the organizational identification variable by Mael and Ashforth [44] was applied. However, to conform to the research content, some terms of the questions were refined (six questions were included). Finally, questions in the section on CCBs were compiled according to Groth's [12] three dimensions (recommendation, help, and feedback) of CCBs (seven questions are included). A five-point Likert scale was used, ranging from 1 (strongly disagree) to 5 (strongly agree). Demographic variables were listed in the questionnaire.

## 4. Results

### 4.1. Return Rate of Questionnaires and Analyses of Sample

Our questionnaire was distributed from 10 September to 24 November in 2012. A total of 491 questionnaires were returned, including 168 that were invalid, thereby yielding 323 valid questionnaires (65.78%). Demographic features of the samples are illustrated as follows. First, the number of female interviewees is greater (57.6%), and most subjects are aged 21 to 30 years (71.2%). The majority of respondents (86.1% $n = 278$) were "single". Regarding the education level, 224 interviewees (69.4%) graduated from college, and 88 (27.2%) conducted further study as graduates. When asked how long it had been since they had visited food blogs for the first time, the most frequent response was "7 to 12 months". Of the respondents, 213 (65.9%) stated they are dependent, or extremely dependent, on food blogs when obtaining all types of food information. Finally, each interviewee had his or her own preferred food blogs, and of the six discussed in the study, "Yado/Fine food/Travel" appealed to most interviewees (29.1%).

### 4.2. Descriptive Statistical Analyses of Variables

We demonstrated the mean value and standard deviation of the research variables in our descriptive statistical analyses of latent variables, and we simultaneously implemented reliability analyses for the variables of a single dimension. The results are shown in Table 2 in the psychological needs section. Questions that had mean values greater than 4 include NA4 (M = 4.27), NA3 (M = 4.07), and NA7 (M = 4.02). However, two question items, NC6 (M = 2.82) and NC5 (M = 2.84), tend toward "less disagreement".

In the customer satisfaction section, the mean value of every question item is over 3, and is close to 4 (Table 3). Among them, S3 (M = 3.89) is the highest, and S2 (M = 3.63) is lower. The integral Cronbach's α of customer satisfaction is 0.793, and all the values of item-to-total correlation are over 0.5.

**Table 2.** Descriptive statistical analyses of psychological needs.

| | Question Items | Mean Value | Standard Deviation |
|---|---|---|---|
| (NA1) | I like to use food blogs to look for and experience all parts of fine food. | 3.74 | 0.935 |
| (NA2) | When I suffer from lots of pressure, browsing food blogs can make me calm. | 3.84 | 1.005 |
| (NA3) | By browsing the articles announced on the blogs, I can get a lot of different experiences of fine food. | 4.07 | 0.777 |
| (NA4) | I would search for essential food information through seeking others' articles on the food blogs. | 4.27 | 0.798 |
| (NA5) | I would exchange what I have learned with others through food blogs. | 3.31 | 1.094 |
| (NA6) | Using food blogs can make me get all kinds of food information in time. | 3.96 | 0.793 |
| (NA7) | I would use information from the food blogs which I browse most frequently as references. | 4.02 | 0.817 |
| (NB1) | I would often review impressive articles previously announced on the blogs I browse most frequently. | 3.61 | 0.979 |
| (NB2) | I find my knowledge of food has improved by reviewing articles announced on the blogs I browse most frequently. | 3.49 | 0.893 |
| (NB3) | I can feel satisfied with my sense of fulfillment of those articles or comments for fine food through food blogs. | 3.53 | 0.933 |
| (NC1) | I often keep in touch with my friends through food blogs. | 3.00 | 1.083 |
| (NC2) | I would share experience or mood about fine food with my friends through food blogs. | 3.31 | 1.023 |
| (NC3) | Most of my friends often browse food blogs. | 3.29 | 0.934 |
| (NC4) | I find the friends with the same interest with me through food blogs. | 3.08 | 1.094 |
| (NC5) | I would leave some messages in response to those articles of fine food from strangers or other members. | 2.84 | 1.154 |
| (NC6) | I like to make new friends through food blogs. | 2.82 | 1.049 |

**Table 3.** Descriptive statistical analyses and reliability examination of customer satisfaction.

| | Question Items | Mean Value | Standard Deviation | Item-to-Total Correlation | Cronbach' α |
|---|---|---|---|---|---|
| (S1) | I think the function of classification & searching system for articles and information provided by food blogs can satisfy me after using them. | 3.72 | 0.697 | 0.815 | 0.793 |
| (S2) | I think the communicative function provided by food blogs can satisfy me after using the food blog which I browse most frequently. | 3.63 | 0.747 | 0.708 | |
| (S3) | I think the function of information provided by food blogs can satisfy me after using the food blog which I browse most frequently. | 3.89 | 0.773 | 0.777 | |
| (S4) | Generally speaking, I feel satisfied with food blogs after using the food blog which I browse most frequently. | 3.84 | 0.734 | 0.847 | |

In the customer commitment section, the mean value of every question item is close to 3 (Table 4); among them, C1 (M = 3.35) is the highest, whereas C2 (M = 3.02) is the lowest. The integral Cronbach's α of customer commitment is 0.833, and all the values of item-to-total correlation are over 0.7.

For CCI, the mean value of every question item is close to 3 (Table 5); among them, I2 (M = 3.37) is the highest, and I6 (2.99), I1 (2.89), and I3 (2.79) are considerably lower. The integral Cronbach's α of CCI is 0.908, and all the values of item-to-total correlation are over 0.8.

Finally, for the section regarding CCBs, the mean value of every question item is close to 3.5 (Table 6), and among them, BA3 (M = 3.98) is the highest, whereas BC2 (M = 3.42) is the lowest.

**Table 4.** Descriptive statistical analyses and reliability examination of customer commitment.

| | Question Items | Mean Value | Standard Deviation | Item-to-Total Correlation | Cronbach' α |
|---|---|---|---|---|---|
| (C1) | I have affective attachment to the food blog which I browse most frequently. | 3.35 | 0.938 | 0.835 | 0.833 |
| (C2) | I like my member friends on the food blog which I browse most frequently. | 3.02 | 1.035 | 0.872 | |
| (C3) | I recognize my sense of identification on the food blog which I browse most frequently. | 3.22 | 1.053 | 0.891 | |

**Table 5.** Descriptive statistical analyses and reliability examination of customer-company identification.

| | Question Items | Mean Value | Standard Deviation | Item-to-Total Correlation | Cronbach' α |
|---|---|---|---|---|---|
| (I1) | I'll feel sullied when someone criticizes the food blog which I browse most frequently. | 2.89 | 1.147 | 0.812 | 0.908 |
| (I2) | How others treat the food blog which I browse most frequently interests me a lot. | 3.37 | 1.001 | 0.734 | |
| (I3) | I'll use such terms as "our food blog…" instead of "theirs…" when I talk about the food blog which I browse most frequently. | 2.79 | 1.170 | 0.859 | |
| (I4) | The achievements which the food blog I browse most frequently gets are just like mine. | 3.06 | 1.165 | 0.862 | |
| (I5) | I'll feel that someone praises me when he/she compliments the food blog which I browse most frequently. | 3.06 | 1.123 | 0.863 | |
| (I6) | I'll feel tense when some medium criticizes the food blog which I browse most frequently. | 2.99 | 1.095 | 0.829 | |

**Table 6.** Descriptive statistical analyses of CCBs.

| | Question Items | Mean Value | Standard Deviation |
|---|---|---|---|
| (BA1) | I'm willing to recommend to my family or friends the food blog which I browse most frequently. | 3.90 | 0.785 |
| (BA2) | I'm willing to recommend the food blog which I browse most frequently to those who visit the same place with me for fine food. | 3.92 | 0.822 |
| (BA3) | I'm willing to recommend the food blog which I browse most frequently to those who are interested in fine food. | 3.98 | 0.777 |
| (BB1) | I'm willing to help the other users on the food blog which I browse most frequently to find the information they need. | 3.78 | 0.800 |
| (BB2) | I'm willing to help the other users handle the food blog which I browse most frequently when they have trouble using it. | 3.58 | 0.880 |
| (BC1) | I'm willing to fill out the questionnaires when the food blog which I browse most frequently holds users' survey. | 3.88 | 0.815 |
| (BC2) | I'm willing to give constructive suggestions to the food blog which I browse most frequently. | 3.42 | 0.967 |

### 4.3. Confirmatory Factor Analyses and Reliability Examination of Variables

#### 4.3.1. Psychological Needs

By confirmatory factor analysis, three dimensions of psychological needs, function (NA), ego (NB), and relationship (NC), are validated and results of the integral fitted indices are acceptable ($\chi^2 = 157.90$, df = 82, $\chi^2$/df = 1.93, GFI = 0.94, AGFI = 0.91, NFI = 0.95, PGFI = 0.74, RMSEA = 0.054, RMR = 0.074). Among 16 observed variables from the three dimensions, the values of factor loading are from 0.48 to 0.92. According to the examples from related literature, variables are expected to be omitted if their values of factor loading are no more than 0.5. Therefore, NA5, from the dimension of function (NA), was deleted. The internal structural fitness of the models was then examined by construct reliability (CR) and average variance extracted (AVE). The findings indicate that the value of CR is over 0.6, and that of AVE is more than 0.5; therefore, the internal structural fitness of the three factors possesses good convergent validity (Table 7). In addition, we adopted Pearson's correlation coefficient to calculate the relationship among the three dimensions of psychological needs. The values are 0.166 to 0.513, indicating good discriminant validity.

#### 4.3.2. Customer Citizenship Behaviors

The three dimensions of CCBs, that is, BA, BB, and BC were implemented for confirmatory factor analysis, and results of the integral fitted indices are acceptable ($\chi^2 = 28.27$, df = 11, $\chi^2$/df = 2.57, GFI = 0.98, AGFI = 0.94, NFI = 0.98, PNFI = 0.51, RMSEA = 0.070, RMR = 0.026). The internal structural fitness of the models was then examined by CR and AVE. The findings indicate that the value of CR is over 0.6, and that of AVE is more than 0.5; therefore, the internal structural fitness of the variable CCBs possesses good convergent validity (Table 8). In addition, we adopted Pearson's correlation coefficient

to calculate the relationship among the three dimensions of the CCBs, and the values are 0.412 to 0.594, indicating good discriminant validity.

**Table 7.** Parameters estimation of measuring models for psychological needs.

| Dimensions | Observed Variables | Factor Loading | CR | AVE |
|---|---|---|---|---|
| (NA) | NA1 | 0.52 | 0.87 | 0.52 |
| | NA2 | 0.50 | | |
| | NA3 | 0.59 | | |
| | NA4 | 0.53 | | |
| | NA6 | 0.55 | | |
| | NA7 | 0.55 | | |
| (NB) | NB1 | 0.64 | 0.76 | 0.51 |
| | NB2 | 0.66 | | |
| | NB3 | 0.70 | | |
| (NC) | NC1 | 0.83 | 0.87 | 0.53 |
| | NC2 | 0.66 | | |
| | NC3 | 0.51 | | |
| | NC4 | 0.92 | | |
| | NC5 | 0.83 | | |
| | NC6 | 0.80 | | |

Note: The values of factor loading of the question items which don't reach 0.5 are excluded.

**Table 8.** Parameters estimation of measuring models for CCBs.

| Dimensions | Observed Variables | Factor Loading | CR | AVE |
|---|---|---|---|---|
| (BA) | BA1 | 0.61 | 0.83 | 0.62 |
| | BA2 | 0.65 | | |
| | BA3 | 0.62 | | |
| (BB) | BB1 | 0.57 | 0.75 | 0.61 |
| | BB2 | 0.73 | | |
| (BC) | BC1 | 0.59 | 0.70 | 0.54 |
| | BC2 | 0.71 | | |

4.3.3. Models Verification Analyses

After implementing the analyses of the integral structure for psychological needs, customer satisfaction, customer commitment, CCI, and CCBs by SEM, the results show that the values of factor loading of all the observed variables are from 0.55 to 0.90, and that *t* values are all over 3. The results indicate that, among the fitted indices of the model, although the AGFI (<0.9) and RMSEA (>0.05) do not reach the ideal level, the AGFI is more than 0.8, and the RMSEA is less than 0.08, which is still in the acceptable range. All the other indices are ideal; thus, the fitness of the integral structural models is acceptable (Table 9). By Table 9, we found that psychological needs, customer satisfaction, and CCI positively affect CCBs. However, customer commitment does not have a significant influence on CCBs. (Hypothesis 7 is not supported). A causal relationship exists among psychological needs, customer commitment, customer satisfaction, and CCI.

**Table 9.** The results of empirical analyses for model.

| Hypotheses | Coefficient (*t* value) | Fitted-Index |
|---|---|---|
| H1: CS→CC | 0.13 (2.20) | $\chi^2 = 310.28$ ($p = 0.000$) |
| H2: CCI→CC | 0.49 (3.51) | $\chi^2/df = 2.35$ |
| H3: PNs→CC | 0.63 (2.76) | GFI = 0.91 |
| H4: CS→CCBs | 0.30 (4.28) | AGFI = 0.87 |
| H5: PNs→CCBs | 0.60 (2.12) | CFI = 0.98 |
| H6: CCI→CCBs | 0.34 (2.33) | PGFI = 0.63 |
| | | NFI = 0.96 |
| | | NNFI = 0.97 |
| H7: CC→CCBs | −0.22 (−1.25) * | IFI = 0.98 |
| | | RMR = 0.047 |
| | | RMSEA =0.065 |
| | | CCB ($R^2$) = 0.68 |

* means coefficient of the path isn't significant (given α = 0.05).

## 5. Discussion

The main conclusions of this study are as follows: first, food blog users' satisfaction has a direct, positive influence on CCBs, and that conforms to the results of previous studies [12,59]. In addition, when users feel satisfied with a service or information provided by food blogs, they are willing to engage in related CCBs because of happiness. Second, food blog users' psychological needs show a direct, positive influence on CCBs, conforming to the results of past research [56,57,71]. This means that when a service and information provided by food blogs can meet users' psychological needs, they are willing to engage in related CCBs. Third, food blog users' CCI produces a direct, positive influence on CCBs, and that conforms to the results of previous studies [45,60,61,72]. Thus, when food blog users treat themselves as a part of the blog, they are willing to share the blog with others as a type of citizenship behavior.

In summary, trends in the behavior of food blog users include the following: (a) Foods are diverse and available in wide varieties; when new stores or products emerge, people cannot taste all the foods and visit every store. However, through exchanges or interactions via the sharing platform of a blog, people can enhance their culinary knowledge and experiences. Furthermore, users tend to recommend or share food blogs with others if their psychological demands are satisfied by browsing food blogs; (b) When users are satisfied with the information provided by the food blogs they browse, or if the blog interface operations fulfill their demands, users' level of satisfaction for the blog is enhanced. This phenomenon stimulates feelings of happiness or joy in users, which prompts them to demonstrate relevant citizenship behavior when sharing blogs with others; (c) Because people identify with blogs, they consider themselves part of the group and exert considerable efforts to maintain a positive image of the food blogs they browse. Consequently, users exhibit citizenship behavior and anticipate that the blogs they identify with expand and excel; (d) The results of this study show that customer commitment does not directly influence customer citizenship behavior. This finding prompted the researchers to contemplate whether users perceive that their investment is not required. This study asserts that usage motivation may clarify and explain this type of behavior.

## 6. Managerial Implication

The managerial implication which the authors showed according to research results was some kind of managerial strategy that could be discussed again: Whether a virtual community should be engaged in creating or enhancing its members' commitment or not. Because of the availability of virtual communities and elimination of the limits of time and space, barriers to enter the communities (or switch cost) have been fewer and fewer. Then, are customers' commitment not emphasized anymore? As a result, the impacts of customer's satisfaction, psychological needs, and customer-company identification are important if the administrators of food blogs may consider creating customer citizenship behaviors. It is worth nothing that psychological needs have a direct influence on CCBs. Chi [73] explored the influence of user motivation to engage in online social networking on responses to social media marketing. It addressed two aspects of user motivation: need for online social capital and psychological well-being. Bloggers should closely reexamine blog users' responses and shares and select proactive customers that comply with the purpose and core values of the blog to ensure that these selected users understand their needs in order to move from customer relationship management (CRM) to community relationship management (CoRM). In other words, these users should be seen as a community that provides displays of autonomy and opportunities for interaction which creates community social networking and, thus, CCBs. This produces a recruitment cycle which helps the blog's sustainable development and operation.

## 7. Further Research

Previous studies on blogs have focused on purchasing intentions; therefore, this study attempts to stimulate a discussion of research on CCB. Krishmnamurthy [74] classified blogs into four types, in accordance with two dimensions, personal *versus* topical, and individual *versus* the community. Each type represented a unique user motivation. Follow-up studies may focus on the types of blogs, and compare the differences between factors affecting CCBs for different types of travel blogs, especially the role of customer commitment. The subjects examined in this study included bloggers and browsers; therefore, the difference in CCBs between these two user types is worthy of further examination. Finally, past studies indicated that technology use and loneliness are correlated [75,76] and that loneliness is the result of the lack of a certain social relationship. Whether using blogs to interact with others can eliminate or reduce loneliness and promote participation in order to relieve loneliness is an important topic for investigation. In addition, this study can help future studies establish performance assessments and assessment indicators for the CCBs of proactive customers on different social online media.

## 8. Conclusions

This study makes a contribution by constructing C2C blog or forum users (including bloggers and web browsers) to generate behavior patterns of customer citizenship behavior. This study attempts to adapt physically existing organizational behavior theory through appropriate inference and modification for virtual community. Unlike past studies that focused on customer purchase intention, this study emphasizes customer value and social media of the virtual community.

**Author Contributions**

In this article, research was done by Nai-Chia Chen under the guidance of Kaung-Hwa Chen. Kaung-Hwa Chen provided the theme direction, and Nai-Chia Chen then collected and analyzed the data. All results or changes had to go through the guidance of Kaung-Hwa Chen and Feng-Hsiang Chang. The article was written by Kaung-Hwa Chen, Kuo-Jung Hsieh, Feng-Hsiang Chang, and Nai-Chia Chen. All authors have read and approved the final manuscript.

**Conflicts of Interest**

The authors declare no conflict of interest.

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