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## Exploring antecedents of customer citizenship behaviors in services

### 服务中顾客公民行为的形成因素之探讨

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#### ABSTRACT

Social exchange theory explains how a party in social interaction provides the other party with reciprocal rewards. Applying this concept to the customer context, this study empirically investigates determinants of customer citizenship behaviors (CCBs) in services. For the generalizability of the study across various service providers, the data were collected based on Bowen's (1990) classifications of services. With a total of 665 usable customer responses, structural equation modeling was adapted to test the theoretical research model. This study reveals that customers' perceived support and justice from the service provider positively influence affective commitment toward the organization, resulting in CCBs. The results show that customers' perception of organizational support has the partial mediation effect between customers' perception of organizational justice and their affective commitment. Furthermore, customers' affective commitment partially mediates the relationship between customers' perceived organizational justice and CCBs, but fully mediates the effect of customers' perceived organizational support on CCBs.

#### 摘要

社会交换理论解释了在社交互动中，互动的一方如何提供反馈奖赏予另一方。本研究应用此概念到顾客的情境中并实验性的探讨在服务中，影响顾客公民行为的因素。为了使本研究的成果可概化到不同的服务提供者，本研究依照Bowen (1990) 的三种服务类别来搜集数据。以搜集到可使用的665份顾客回复，本研究运用了结构方程模式来测试理论性的研究模型。本研究显示出顾客从服务提供者所感受到的支持帮助与公正正向的影响了顾客对该组织的情感承诺，并产生顾客公民行为。研究结果同时显示顾客从组织所感受到的支持帮助局部的中介了顾客所感受的组织公正对于他们对该组织情感承诺的影响。此外，顾客的情感承诺局部的中介了顾客感受到的组织公正与顾客公民行为的关系，但完全的中介了顾客感受到的组织支持帮助对于他们公民行为的影响。

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## Introduction

A service dominant logic, which focuses on exchange processes and relationships among exchange parties, argues that value is an outcome through collaboration among all entities in an exchange network (Vargo & Lusch, 2004). Considering this notion, researchers and practitioners have paid attention to the issues related to customer citizenship behaviors (CCBs), defined as 'customers' voluntary and discretionary behaviors that are not required for the successful production and delivery of the service but that, in the aggregate, help the service organization overall (Groth, 2005, p. 11). According to Dong, Evans, and Zou (2008), CCBs result in positive outcomes, such as value co-creation, favorable relationship with customers, and effective performance of marketing strategies. In the marketplace, customers may often help employees or other customers, provide ideas to improve the service performance and/or quality, and/or recommend the service provider to other customers. These customers' voluntary behaviors enable service providers to enhance their business performance and competitiveness.

Given the theoretical and practical emphasis on the importance of CCBs, many researchers have focused on issues related to CCBs, but empirical research is lacking in the investigation of the antecedents of CCBs in the service industry (Choi, Lotz, & Kim, 2014; Tung, Chen, & Schuckert, 2017). More specifically, intangibility, which is distinct from products, and inseparability, which refers to co-occurrence of production and consumption, of service allow customers to have more opportunities to actively present their opinions and knowledge to the service provider in order to improve the service quality (see Dong et al., 2008). Often, customers, as they may perform some of the roles of employees, may serve as substitutes for employees (e.g. creating a salad at a salad bar). When customers perform beneficial actions for their service provider, similar to those of the service provider's employees, they are sometimes considered partial employees or co-producers who influence the organization's productivity (Chiu, Kwag, & Bae, 2015). According to Vargo and Lusch (2004), customers, as partial employees, co-create the production as well as consumption of services, and suggest feedback on the organization's performance by directly being involved in the encounter with the organization. Moreover, customers can provide voluntary or discretionary behaviors that benefit the organization, such as assisting the sales force or other customers and/or providing constructive ideas for performance enhancement (Groth, 2005; Yi & Gong, 2013).

What factors lead customers to perform CCBs? Past research shows that customers' positive perceptions of their relationships with organizations lead to them to voluntarily assist those organizations (Bettencourt, 1997; Bove, Pervan, Beatty, & Shiu, 2009; Yi & Gong, 2008). Therefore, this study focuses on social exchange theory, which predicts reciprocal behaviors elicited from a person's affective states, such as affective commitment based on perceptions of organizational efforts (Bateman & Organ, 1983), as its framework for understanding factors that elicit CCBs. This interdisciplinary approach is also a crucial contribution to consumer behavior literature in that social exchange theory in organizational literature is applied to explain customer behavior in the services industry.

To date, existing research had mainly focused on CCB intention [i.e. as an outcome of perceived justice (Yi & Gong, 2008) and perception of service workers (Bove et al., 2009)]. As one of the significant contributions, however, this study measures *actual* CCBs, i.e. CCBs that customers, in reality, have performed. Measuring actual CCBs is capable of confirming

the extent to which customers perform voluntary or discretionary behaviors in the marketplace. Additionally, up to now, researchers have put continuing effort into identifying scale items to measure actual CCBs (Garma & Bove, 2011; Groth, 2005). Due to a lack of validity confirmation through many repeated studies, a call exists for replication and application to validate the existing scale items of CCBs (Garma & Bove, 2011; Yi & Gong, 2013). In line with this research trend, the current study confirms suitability and applicability of the existing scale items related to actual CCBs.

In addition to its significance to academicians, the current study is expected to offer implications for practitioners in the services industry. Of course, service providers cannot compel customers to participate in voluntary activities even though they would prosper from their help or suggestions. Through this study, marketers in the service industry will be informed of important factors that stimulate customers' voluntary participation.

## Conceptual background

### *Social exchange theory*

Social exchange theory explains human behavior and relationships to determine the complexity of social structure. For example, organizational research, such as organization–employee relationships (Bolino, Turnley, & Bloodgood, 2002) and employee organizational citizenship behaviors (OCBs; Organ, 1990), has adapted social exchange framework to understand interactions among members in the workplace. While traditional economic exchange requires the exchange of tangible resources among parties in exchange interaction, social exchange is not based on financial or physical rewards such as return on investment (Gefen & Ridings, 2002). Rather, social exchange includes intangible costs and benefits, such as friendship and caring, and interactions that are deemed as interdependent and contingent on the actions of another person (Blau, 1964). Homans (1958) argues that these intangible elements in social exchange could even be more vital factors than physical resources because they more directly influence the power structure of the relationship among parties. Thus transactions based on social exchange have the potential to generate socio-emotional benefits, mutual affective commitment and trust among parties, and a high-quality relationship (Blau, 1964; Van Dyne, Graham, & Dienesch, 1994).

A party in social exchange considers that the other party provides reciprocal rewards through cooperation among parties (Blau, 1964). Mutual reciprocation is a basic form of social exchange through interpersonal behavior as individuals react in a manner similar to the treatment they received (Gergen, 1969). Organizational behavior research addresses mutual reciprocation between organization and employees through the psychological contract including mutual beliefs, commitment, perceptions, and obligations (Coyle-Shapiro & Kessler, 2002). For instance, employees in a favorable relationship of social exchange may conduct behaviors that benefit the organization because they may affectively commit to the organization (Lavelle, Rupp, & Brockner, 2007).

In addition, employees may form a global belief regarding the extent to which the organization values their contributions and cares about their welfare, which is understood as perceived organizational support (POS). Research on organizational behavior considers employee voluntary behaviors such as OCBs as important behavioral outcomes that

explain social exchange relationships between employees and their organization. By expanding this notion to customer behaviors, it is reasonable that a customer in a social exchange relationship with a company can engage in voluntary and discretionary behaviors—suggesting constructive ideas to the company, helping employees and/or the company, and providing feedback to improve the performance or offerings of the company.

### **Customer citizenship behaviors**

Many investigations in the organizational literature have argued OCBs, that is, employees take part in reciprocal behaviors for their organization when they feel a sense of obligation to assist their organization (Lavelle et al., 2007). According to Lavelle et al. (2007), employees in a favorable relationship of social exchange are more likely to participate in behaviors that benefit the organization because of their perception of an obligation to help the organization. Thus employees' OCBs are considered imperative behavioral consequences that explain social exchange relationships with their organization. As customers who participate in their own service production/delivery are considered partial employees of the organization, researchers have adapted the concept of OCBs in order to explain CCBs (Vargo & Lusch, 2004). By being described in various terms such as customer discretionary behavior (Ford, 1995), customer voluntary performance (Bettencourt, 1997), and customer extra-role behaviors (Ahearne, Bhattacharya, & Gruen, 2005), the concept of CCBs is defined as customers' 'voluntary and discretionary behaviors that are not required for the successful production and delivery of the service but that, in the aggregate, help the service organization overall' (Groth, 2005, p. 11).

Along with the conceptualization of CCB, researchers have argued that CCBs are composed of multiple dimensions or categories (Bettencourt, 1997; Garma & Bove, 2011; Groth, 2005; Yi & Gong, 2013). As one of the most recent investigations, Yi and Gong (2013) identify that feedback, advocacy, helping, and tolerance are components that measure CCBs by distinguishing CCBs (extra-role) from customer participation (in-role) behavior in the service encounter context. Of these dimensions that represent CCBs, *helping* represents customer actions targeted at assisting others (Yi & Gong, 2013). *Advocacy* refers to customers' behaviors in recommending the service provider to other customers (Groth, Mertens, & Murphy, 2004). *Tolerance* means customer actions that understand the service provider and include customer's patience even when the provided service falls short of the customer's expectations (Yi & Gong, 2013). Lastly, *feedback* refers to consumers' behaviors to provide with constructive ideas and skills as well as solicited and unsolicited information in helping the service provider to improve the service production process (Groth et al., 2004).

## **Hypotheses development and theoretical framework**

### **Customer's affective commitment and customer citizenship behaviors**

Allen and Meyer (1990) define affective commitment as 'an affective or emotional attachment to the organization such that the strongly committed individual identifies with, is involved in, and enjoys membership in the organization' (p. 2). That is, the reason

employees with strong affective commitment continue to work in the organization is not because they need to, but because they want to (Allen & Meyer, 1990). Organizational research argues that organizational commitment is an important component that endures the direction and incentives that lead to an organizational participant's behavior (Organ, 1990). This argument is consistent with studies based on social exchange theory in which employees who have strong organizational commitment are likely to show reciprocal behaviors that help their organization (Carmeli, 2005; O'Reilly & Chatman, 1986). Similarly, Meyer, Allen, and Smith (1993) argue that affective commitment is closely related to proactive behaviors including cooperation and problem solving.

Specifically, Meyer and Allen (1984) propose three components of organizational commitment (i.e. continuance, normative, and affective commitment), which lead to a variety of employees' behaviors such as turnover and job performance. However, continuance commitment, which refers to the commitment based on the costs associated with leaving the organization, may not have significant influence on employees' voluntary behaviors for two reasons. First, Meyer and Allen (1991) argue that 'employees who want to belong to the organization (affective commitment) might be more likely than those who need to belong (continuance commitment) ... to exert effort on behalf of the organization' (p. 73–74). Second, some research has found that continuance commitment results in lower job performance and turnover (Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989), but not employee's voluntary behaviors beyond those required to maintain the relationship (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002).

On the other hand, even though Meyer et al. (2002) reveal that normative commitment, which reflects a perceived obligation to remain in the organization, has positive impact on employee's voluntary behaviors, its impact is weaker than that of affective commitment. Meyer and Herscovitch (2001) also argue that individuals with affective commitment may be more inclined to engage in discretionary behaviors than those with normative or continuance commitment. Furthermore, normative commitment, perceived obligation for the organization, may be more related to economic exchange rather than social exchange as employees are financially paid by the organization. Thus researchers in social exchange theory consider affective commitment as a function of transaction based on social exchange (Blau, 1964; Van Dyne et al., 1994), resulting in voluntary or discretionary behaviors.

Considering customers as partial employees, it makes sense that a customer's affective commitment (CAC) to a particular organization such as a service provider may lead to perform CCBs. According to Bettencourt's (1997) empirical investigation, customer commitment is positively related to customer participation in organizational issues. Ennew and Binks (1999) reveal that customers who have strong affective commitment to an organization tend to support their beliefs by actively engaging in the organization's activities or events. Keh and Teo (2001) also suggest the positive relationship between customer commitment and CCBs, which is featured in three separate forms of customer cooperation, customer participation, and customer tolerance. More specifically, Bove et al. (2009) empirically confirm that when customers have commitment to a specific service employee, potentially perceived as a representative of the organization, they participate in CCBs. Additionally, online shoppers' commitment positively leads to intention of CCBs toward an online retailer, including helping behavior and providing useful information to improve service performance (Anaza & Zhao, 2013). Thus affectively committed

customers are viewed as a predictor to increase their involvement in the service provider's activities.

**H1.** Customers' affective commitment (CAC) is positively related to actual CCBs.

### *Customers' perceived support and customer's affective commitment*

The organizational literature argues that employees have global perceptions of the extent to which the organization values their dedication and loyalty, called perceived organizational support (Eisenberger, Huntington, Hutchison, & Sowa, 1986; Shore & Wayne, 1993). Consistent with the social exchange framework, Eisenberger et al. (1986) suggest that employees with a high level of POS are more likely to feel an obligation to reward their organization. In other words, POS results in a perceived obligation to care about the welfare of an organization and to benefit the organization (Rhoades & Eisenberger, 2002). Additionally, Rhoades, Eisenberger, and Armeli (2001) argue that an employee's POS leads to the integration of organizational affiliation and role status into social identity. Thus POS should not only satisfy a sense of belonging and identification but also strengthen employees' beliefs that their contributions are rewarded by the organization (Rhoades & Eisenberger, 2002).

According to social exchange theory, individuals tend to direct their correspondence efforts toward an object that benefits them by having commitment to the object (Blau, 1964). Based on this logic, Rhoades et al. (2001) argue that POS influences increase of affective commitment through the fulfillment of desires for esteem, approval, and affiliation. More recently, Shore, Tetrick, Lynch, and Barksdale (2006) also demonstrate POS has a positive impact on affective commitment, which results in employee OCBs. Adapting the concept of employee's POS to the consumer context, it is possible for customers to perceive that an organization that is in a relationship with them cares and supports them. Keh and Teo (2001) argue that a customer's perceived support (CPS) from the organization influences his/her positive perceptions and behaviors toward the organization. Similarly, Yi and Gong (2008) find that CPS is related to positive affect such as satisfaction in the service delivery situation. Bettencourt's (1997) empirical investigation shows that CPS has a positive impact on a customer's commitment, which results in customer voluntary performance. Thus this study predicts the following hypothesis.

**H2.** Customers' perceived support (CPS) is positively related to customers' affective commitment (CAC) to the service provider.

### *Customer's perceived justice and customers' affective commitment*

According to social exchange and equity theory, employees' perceptions of organizational justice are derived from various aspects. For example, employees may perceive justice by evaluating fairness related to organizational procedures and by experiencing consistent interpersonal treatment (Bies & Moag, 1986; Tyler, Degoey, & Smith, 1996). Moreover, if employees perceive the fair equilibrium regarding the ratio of their inputs or efforts to that of the organization with regard to compensation received from the organization, they may perceive organizational justice (Bies & Moag, 1986). Researchers have found that employee perceptions of organizational justice influence their voluntary or



discretionary behaviors that may benefit their organizations (Greenberg, 1993; Jafari & Bidarian, 2012; Moorman, 1991). Lind and Tyler (1988) argue that employees have a strong sense of affiliation to their organization when they feel themselves to be fairly treated by the organization. This perception results in high commitment to their organization, which leads to employees' OCBs (Meyer et al., 1993; Organ, 1990). The relationship between employees' justice perceptions, commitment, and OCBs has been supported by many empirical studies (Greenberg, 1993; Moorman, Blakely, & Niehoff, 1998; Sweeney & McFarlin, 1993).

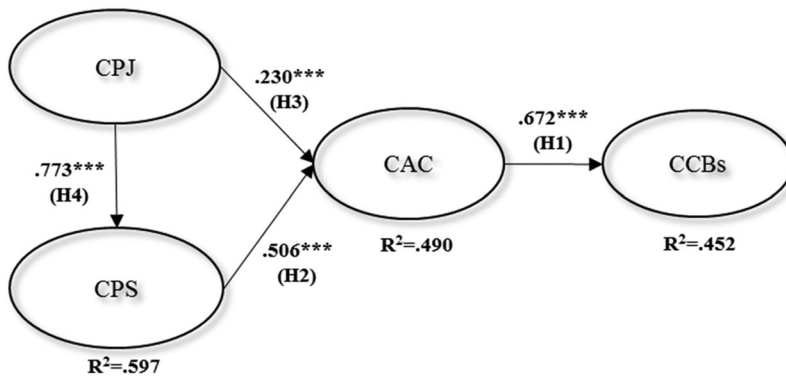
By adapting this logic to the consumer context, researchers in consumer behavior literature have investigated that customer justice perception, which refers to the degree to which consumers feel that they have been treated fairly regarding service production and delivery (adapted from Blodgett, Granbois, & Walters, 1993; de Matos, Rossi, Veiga, & Vieira, 2009), has a strong impact on attitudes or behaviors towards an organization. According to Yi and Gong (2008), customer justice perception is the customers' evaluation based on psychological contract between the customer and the organization. When customers evaluate that their organization's treatment is fair, it is possible for them to perceive positive affect, resulting in CCBs (Yi & Gong, 2008). Blodgett et al. (1993) also confirm a positive influence of customer's perceived justice (CPJ) on positive word-of-mouth and repurchasing behavior. In line with this finding, de Matos et al. (2009) demonstrate that CPJ towards the organization positively influences customer satisfaction in service recovery situation. Even though previous studies have investigated the impact of perceived justice on consumers' responses such as satisfaction, trust, and behaviors (de Matos et al., 2009; Goodwin & Ross, 1992; Sparks & McColl-Kennedy, 2001), the relationship between CPJ and CAC has not been investigated. As an important contribution, the current study proposes the following hypothesis.

**H3.** Customers' perceived justice (CPJ) is positively related to customers' affective commitment (CAC) to the service provider.

### *CPJ and CPS*

Organizational support theory argues that employees' POS may be improved when they receive positive treatment from an organization or supervisor (Eisenberger et al., 1986; Shore & Wayne, 1993). Moorman et al. (1998) insist that employees' perceptions of procedural justice, as one aspect of positive treatment or respect of employees, positively influence their POS. In addition, Shore and Shore (1995) argue that fairness in distribution of resources may have a crucial impact on POS based on employees' perceptions, that is the organization cares about their welfare. Given this theoretical notion, researchers have demonstrated that procedural and distributive justice positively influences individuals' perceptions of organizational support in the organizational setting (Masterson, Lewis, Goldman, & Taylor, 2000; Rhoades & Eisenberger, 2002; Shore & Shore, 1995). Loi, Hangyue, and Foley (2006) provide empirical evidence regarding the mediating effect of POS between POJ (perceived organizational justice; procedural and distributive justice) and organizational commitment. DeConinck (2010) also finds the positive impact of procedural and distributive justice on POS, which results in organizational trust. In line with the theoretical and empirical research, the following hypothesis is proposed.





**Figure 1.** Social Exchange Antecedents of CCBs: Proposed Unidimensional Model. **Model fit:**  $\chi^2_{(260)} = 1222.901$ ;  $p < .000$ ; CFI = .931; TLI = .920; IFI = .931; RMSEA = .075.

Note: \*\*\* $p < .001$ ; CPJ = Customer Perceived Justice; CPS = Customer Perceived Support; CAC = Customer Affective Commitment; CCBs = Customer Citizenship Behaviors.

**H4.** Customers' perceived justice (CPJ) is positively related to customers' perceived support (CPS).

The conceptual model of social exchange-based antecedents is depicted in Figure 1.

## Methodology

### Sampling and data collection

To test the proposed hypotheses, a self-administered online survey was developed to target a general customer sample (see Sen, Bhattacharya, & Korschun, 2006). The list of participants was obtained from an online survey research firm, which maintains a reliable national customer panel. Given several advantages of online surveys such as lower cost, no interviewer bias, and geographically diverse respondents (Ritter & Sue, 2007; Schillewaert & Meulemeester, 2005), the data was collected via a web-based survey between November and December 2014. Because the present study examined CCBs that customers *actually* conducted, respondents were restricted to those who had transacted with an offline service provider in a face-to-face interaction in the last six months. The offline context that requires a face-to-face service interaction allows customers to have more opportunities to receive a customized service and to involve more varied incidents to engage in as compared to the product-oriented context and/or online context (Choi, 2015). Respondents were also restricted to customers who are 18 years old or over and have the ability to read and write English.

To enhance the generalizability of the study across a wide range of service providers, three variations of a questionnaire were developed by adapting Bowen's (1990) three classifications of service providers, which depends on the levels of customer contact and customization. Service Sector 1 includes service providers characterized as high customization, high customer contact, and directed at people (e.g. restaurants, hair salons, and medical services). Service Sector 2 is composed of services directed at things and characterized by low customer contact and moderate customization (e.g. appliance

repair, shoe repair, dry cleaning services, and retail banking). Lastly, Service Sector 3 contained the service providers that are characterized as directed at people, with moderate employee–customer contact and low customization (e.g. cafeteria, fast food, and movie theaters).

Gender in the sample was nearly equally distributed (42.3% males and 57.7% females). More than half of the respondents (i.e. 64.3%) were 35 years or older, 43.6% were single, and 78.2% were Caucasian. In addition, 21.9% of the sample reported that they had an annual family household income of more than \$70,000. In addition, we conducted a chi-square comparison test to ascertain differences in demographic variables of respondents among the three service sectors. The results confirmed that there were no differences in the demographic characteristics across the three sectors—gender, age, ethnicity, marital status, annual household income, and education level ( $p > .05$ ).

### Measures

To measure CPS, we used validated scale items from the study of Bettencourt, Ostrom, Brown, and Roundtree (2002), which modified employee's POS (Eisenberger et al., 1986) into the customer context. Ambrose and Schminke (2009) developed scale items to examine the effect of overall justice perception on employees' OCBs, confirming validation. Thus by revising the wording for the goal of the current study, six items from Ambrose and Schminke (2009) were adapted to measure CPJ. Scale items to measure CAC were adopted from Meyer et al. (1993) and Huang and You (2011) as they validated the scale items as the most appropriate measurement of the affective dimension of commitment. Yi and Gong's (2013) research is one of the most recent investigations that integrate prior literature regarding the development of CCB measure (i.e. Garma & Bove, 2011; Groth, 2005). For example, Groth (2005) develops three dimensions of CCBs (i.e. recommendation, helping other customers, and providing feedback), whereas Yi and Gong's (2013) measure suggests the broader spectrum of customer voluntary behaviors for the organization by including additional dimension, tolerance. Also, by differentiating the measures representing customer participation behaviors (in-role) and CCBs (extra-role), Yi and Gong (2013) confirm strong validity and reliability of the CCB measures with customer data. Furthermore, previous studies have employed Yi and Gong's (2013) scale items to measure CCBs by providing strong evidence of validity and reliability (Hsiao, Lee, & Chen, 2015; Revilla-Camacho, Vega-Vázquez, & Cossío-Silva, 2015). Thus this study adapted Yi and Gong's (2013) scale items comprising four dimensions of CCBs: four for helping, three for advocacy, three for tolerance, and three for feedback. All scales were measured using a 7-point Likert scale from 'Strongly disagree' (1 point) to 'Strongly agree' (7 point).

To ensure that the measures selected have acceptable psychometric qualities for this study and that respondents appropriately understand the questionnaire, a pilot test was conducted with 202 respondents. After excluding questionnaires with a high number of missing data, there were 193 usable questionnaires for the pilot test. Because the results of the pilot test revealed no confusion on survey format or question type, no further modifications were made to the questionnaire prior to the main test. Additionally, the reliability for all the constructs ranged between .685 and .940, indicating satisfactory levels (Hair, Hult, Ringle, & Sarstedt, 2014).

## Data analysis and results

### Preliminary data analysis

A total of 665 usable responses was obtained for hypotheses testing (Service Group 1:  $N = 197$ ; Service Group 2:  $N = 213$ ; Service Group 3:  $N = 255$ ). MANOVA tests were carried out to discern whether or not there were significant differences in CCBs among the three service groups, and the results indicated no differences ( $p = .972$ ). Thus data from the three service groups were combined together for further analyses.

An issue of common method variance (CMV) was tested to confirm if there are spurious relationships among the variables (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003). Initially, a factor loading analysis showed that a single factor does not account for the majority of the variance, showing 41.3 percent of explained variance ( $<.50$ ). For further analysis of CMV, Harman's single-factor test was conducted by loading all the measurements into a single latent construct (Podsakoff et al., 2003). The one-factor model explained only 37.2 percent of variance, providing additional evidence that common method bias was only minor.

Exploratory factor analysis (EFA), principal components analysis with Varimax rotation, was performed not only to refine the measurement for each construct but also to confirm the subdimensions of CCB. Removing items that had low commonalities ( $\leq .30$ ), high cross-loadings ( $\geq .40$ ), and low factor loadings ( $\leq .50$ ) and extracting the number of factors based on an Eigenvalue exceeding 1, four items were retained for CPJ ( $\alpha = .960$ ), three items for CPS ( $\alpha = .933$ ), and five items for CAC ( $\alpha = .901$ ). The results of the EFA also confirmed that CCB is a multidimensional construct with a second-order nature. This result confirms Yi and Gong's (2013) study that generated four dimensions of CCB—Helping ( $\alpha = .898$ ), Advocacy ( $\alpha = .922$ ), Tolerance ( $\alpha = .724$ ), and Feedback ( $\alpha = .646$ ). Appendix 1 provides the final set of scale items for this study.

### Testing of measurement model

A confirmatory factor analysis (CFA) was conducted to assess internal consistency, construct validity, and discriminant validity of the measures of each construct. Any item that did not meet a satisfactory level of standardized loading, standard errors,  $t$ -value, construct reliability, and AVE was removed from further analysis (Fornell & Larcker, 1981) (see Table 1). The result of the measurement model, i.e.  $\chi^2_{(250)} = 805.385$ ;  $p < .000$ ; CFI = .960; TLI = .952; IFI = .960; RMSEA = .058, indicated acceptable and good model fit.

Convergent validity was confirmed by evaluating reliability, factor loadings, and AVE of each construct. Construct reliability of each latent construct was acceptable ( $\geq .70$ ), and all items significantly loaded on their related constructs (Anderson & Gerbing, 1988). Additionally, the AVE of each construct exceeded a recommended standard ( $\geq .50\%$ ) by verifying the convergent validity of each construct (Fornell & Larcker, 1981). To assess discriminant validity, we first compared the AVE of each construct to the squared intercorrelation coefficients (SICs) (see Table 2). The results revealed that AVE of most constructs was greater than the SIC between constructs, except for (i) CPJ and CPS and (ii) helping and feedback. An additional pairwise chi-square difference test allowed to verify the discriminant validity of the sets of constructs (Bagozzi, Yi, & Phillips, 1991). As a result, the chi-square values of the constrained models, compared with that of the unconstrained

**Table 1.** Measurement model testing: mean, standard deviation, and CFA results.

| Construct              | Item | Mean  | Std. deviation | Std. loading | Std. error | t-Value | Construct reliability | AVE  |
|------------------------|------|-------|----------------|--------------|------------|---------|-----------------------|------|
| CPJ                    | OJ1  | 5.546 | 1.526          | .928         | .023       | 43.447  | .960                  | .856 |
|                        | OJ2  | 5.526 | 1.515          | .929         | .023       | 43.607  |                       |      |
|                        | OJ3  | 5.559 | 1.501          | .918         | .023       | 41.833  |                       |      |
|                        | OJ4  | 5.525 | 1.529          | .925         | –          | –       |                       |      |
| CPS                    | OS1  | 5.054 | 1.572          | .876         | .032       | 30.655  | .941                  | .751 |
|                        | OS2  | 4.913 | 1.604          | .856         | .033       | 29.382  |                       |      |
|                        | OS3  | 5.020 | 1.614          | .868         | –          | –       |                       |      |
| CAC                    | AC1  | 4.298 | 1.780          | .905         | –          | –       | .931                  | .729 |
|                        | AC2  | 4.170 | 1.735          | .845         | .030       | 30.709  |                       |      |
|                        | AC3  | 3.800 | 1.795          | .810         | .032       | 28.150  |                       |      |
|                        | AC4  | 4.665 | 1.671          | .845         | .028       | 30.914  |                       |      |
|                        | AC5  | 4.041 | 1.825          | .860         | .030       | 32.020  |                       |      |
| CCBs<br><i>Helping</i> | HP1  | 3.929 | 1.805          | .806         | –          | –       | .890                  | .669 |
|                        | HP2  | 3.844 | 1.770          | .822         | .035       | 28.174  |                       |      |
|                        | HP3  | 3.638 | 1.824          | .801         | .046       | 21.842  |                       |      |
|                        | HP4  | 3.811 | 1.836          | .842         | .046       | 23.063  |                       |      |
| <i>Advocacy</i>        | AD1  | 5.173 | 1.661          | .860         | –          | –       | .925                  | .804 |
|                        | AD2  | 4.997 | 1.750          | .925         | .034       | 33.416  |                       |      |
|                        | AD3  | 4.859 | 1.769          | .903         | .035       | 32.151  |                       |      |
| <i>Tolerance</i>       | TR1  | 4.230 | 1.754          | .754         | –          | –       | .762                  | .559 |
|                        | TR2  | 4.755 | 1.556          | .776         | .099       | 12.286  |                       |      |
|                        | TR3  | 4.711 | 1.583          | .711         | .093       | 12.093  |                       |      |
| <i>Feedback</i>        | FB1  | 4.015 | 1.730          | .729         | –          | –       | .723                  | .542 |
|                        | FB2  | 4.873 | 1.512          | .694         | .064       | 9.979   |                       |      |
|                        | FB3  | 4.295 | 1.877          | .782         | .073       | 10.263  |                       |      |

Note: CPJ, Customer Perceived Organizational Justice; CPS, Customer Perceived Organizational Support; CAC, Customer Affective Commitment; CCBs, Customer Citizenship Behaviors.

**Table 2.** Discriminant validity testing: AVE compared SIC.

|           | Mean  | SD    | 1           | 2           | 3           | 4           | 5           | 6           | 7           |
|-----------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| CPJ       | 5.539 | 1.433 | <b>.856</b> | .883***     | .603***     | .140**      | .787***     | .329***     | .317***     |
| CPS       | 4.996 | 1.459 | .780        | <b>.751</b> | .771***     | .286***     | .758***     | .299***     | .412***     |
| CAC       | 4.195 | 1.564 | .364        | .594        | <b>.729</b> | .439***     | .631***     | .300***     | .513***     |
| Helping   | 3.805 | 1.583 | .020        | .082        | .193        | <b>.669</b> | .361***     | .467***     | .761***     |
| Advocacy  | 5.010 | 1.607 | .619        | .575        | .398        | .130        | <b>.804</b> | .466***     | .550***     |
| Tolerance | 4.586 | 1.311 | .108        | .089        | .090        | .218        | .217        | <b>.559</b> | .549***     |
| Feedback  | 4.494 | 1.310 | .100        | .170        | .263        | .579        | .303        | .301        | <b>.542</b> |

Note: SD, Standard Deviation. The numbers in diagonal line are the average variance extracted (AVE) by each construct. The numbers below (left) the diagonal are the SICs between the constructs and the numbers above (right) the diagonal are correlation between the constructs.

\*\*\* $p < .001$ ; \*\* $p < .01$  (2-tailed).

model, were significantly increased: (i) CPJ and CPS ( $\Delta\chi^2 = 5.990$ ,  $\Delta df = 1$ ,  $p < .05$ ) and (ii) helping and feedback ( $\Delta\chi^2 = 72.626$ ,  $\Delta df = 1$ ,  $p < .001$ ). Thus discriminant validity for all constructs was verified.

### Testing of group comparisons

Even though similarities in CCBs among the three service sectors were confirmed through MANOVA tests, multi-group analyses were conducted to confirm the generalizability and applicability of this study's findings across all domains of the service business. Whether the proposed model is similar across the three service sectors was assessed through multi-group measurement invariance model including configural invariance, full metrics

invariance, and intercept invariance models (Steenkamp & Baumgartner, 1998). The configural invariance model was supported with satisfactory levels of fit for confirmatory fit index (CFI), Tucker–Lewis index (TLI), incremental fit index (IFI), and root mean square error of approximation (RMSEA):  $\chi^2_{(753)} = 1571.820$ ;  $p < .000$ ; CFI = .942; TLI = .930; IFI = .942; RMSEA = .041 (Hu & Bentler, 1995). We compared this configural invariance model to the full metrics invariance model, which constrains the factor loadings to be equal across groups. The fit between the two models was not significantly different ( $\Delta\chi^2 = 40.123$ ,  $\Delta df = 36$ ,  $p > .001$ ).

Next, the full metrics invariance model was compared to the intercept invariance model that constrains intercepts of all items to be equal. The fit difference between the two models was slightly significant ( $\Delta\chi^2 = 150.574$ ,  $\Delta df = 50$ ,  $p < .001$ ). But, the difference of CFI between the intercept invariance and the full metrics invariance model was less than .01, showing that the model fit was not worse ( $\Delta CFI = -.007$ ,  $\Delta TLI = -.004$ ,  $\Delta IFI = -.007$ ,  $\Delta RMSEA = .001$ ) (Cheung & Rensvold, 2002). In addition to that, RMSEA was overlapped in 90% confidence intervals (Cadiz, Sawyer, & Griffith, 2009). Because invariance exists among the configural, full metric, and intercept model, the result confirmed the similarity of the proposed model across three different service sectors.

To test path comparisons in the proposed model, all paths among the three service sectors were estimated without constraints to the baseline model. Comparing the baseline model with a structural invariance model constraining all paths to be equal among service sectors ( $\Delta\chi^2 = 11.195$ ,  $\Delta df = 8$ ,  $p > .01$ ), the result indicated no differences in the relationship between the proposed constructs across the three different sectors of service providers (see Table 3). To provide further support of the findings, detailed statistics of the chi-square difference tests are provided for each pair of service sectors showing no differences in associations among the constructs in the service groups ( $p > .01$ ). Thus data integrated from the three service groups were allowed for research model testing.

### Testing of structural model

In order to test the hypotheses, the proposed theoretical model was analyzed with a latent regression model and path analysis. The results showed satisfactory model fit indices for the structural model ( $\chi^2_{(260)} = 1222.905$ ;  $p < .000$ ; CFI = .931; TLI = .920; IFI = .931; RMSEA = .075). Figure 1 shows the results of the structural model that depicts the proposed theoretical model of social exchange antecedents of CCBs. H1 predicted that CAC to the service provider positively influences CCBs. The results of SEM revealed that CAC has a strong positive impact on CCBs ( $\beta = .672$ ,  $p < .001$ ), supporting H1. H2 and H3 also proposed that CPS and CPJ positively influence CAC, respectively. The results indicated that CPS and CPJ had a significant positive impact on CAC ( $\beta = .506$  and  $\gamma = .230$ ,  $p < .001$ , respectively), supporting H2 and H3. In addition, as this study predicted that CPJ is positively related to CPS (H4), the result confirmed the strong positive impact of CPJ on CPS ( $\gamma = .773$ ,  $p < .001$ ). Furthermore, as shown in Table 3, the coefficients of all the paths in the three service groups were also significant ( $p < .05$ ).

Additionally, the mediation effects of CPS and CAC were tested using the bootstrapping procedures in AMOS as the two constructs play as intervening variables in the proposed model. According to Preacher and Hayes (2008), the bootstrapping analysis that tests indirect effects serves as a rigorous test of mediation and generates an empirical sampling

**Table 3.** Multi-group path comparison testing.

|                              | $\chi^2$ | df  | $\Delta\chi^2$ | $p$ -value |
|------------------------------|----------|-----|----------------|------------|
| Unconstrained baseline model | 1998.147 | 816 |                |            |
| <i>Constrained paths</i>     |          |     |                |            |
| CPJ → CPS                    | 1998.678 | 818 | .531           | .767       |
| CPJ → CAC                    | 1998.640 | 818 | .493           | .782       |
| CPS → CAC                    | 2000.071 | 818 | 1.924          | .382       |
| CAC → CCBs                   | 2000.937 | 818 | 2.790          | .248       |
| All paths constrained        | 2009.342 | 823 | 11.195         | .191       |

| Path              | Service sector 1   |            | Service sector 2 |            | Service sector 3 |            |
|-------------------|--|------------|------------------|------------|------------------|------------|
|                   | Std. estimates   | $p$ -Value | Std. estimates   | $p$ -Value | Std. estimates   | $p$ -Value |
| CPJ → CPS         | .811   | .000       | .753             | .000       | .745             | .000       |
| CPJ → CAC         | .209   | .019       | .255             | .000       | .199             | .009       |
| CPS → CAC         | .541   | .000       | .530             | .000       | .457             | .000       |
| CAC → CCBs        | .638   | .000       | .734             | .000       | .639             | .000       |
| Model fit indices | $\chi^2_{(824)} = 2009.342$ , CFI = .916, TLI = .908, IFI = .916, RMSEA = .047 |            |                  |            |                  |            |

| Path              | Service sector 1   |            | Service sector 2 |            | Service sector 3 |            |
|-------------------|--|------------|------------------|------------|------------------|------------|
|                   | $\Delta\chi^2$   | $p$ -Value | Std. estimates   | $p$ -Value | Std. estimates   | $p$ -Value |
| CPJ → CPS         | .004   | .948       | .815             | .000       | .757             | .000       |
| CPJ → CAC         | .416   | .519       | .198             | .029       | .251             | .000       |
| CPS → CAC         | .008   | .931       | .554             | .000       | .535             | .000       |
| CAC → CCBs        | 2.721  | .099       | .637             | .000       | .735             | .000       |
| Model fit indices | $\chi^2_{(542)} = 1309.212$ , CFI = .913, TLI = .904, IFI = .914, RMSEA = .059 |            |                  |            |                  |            |

| Path              | Service sector 1   |            | Service sector 3 |            | Service sector 3 |            |
|-------------------|--|------------|------------------|------------|------------------|------------|
|                   | $\Delta\chi^2$   | $p$ -Value | Std. estimates   | $p$ -Value | Std. estimates   | $p$ -Value |
| CPJ → CPS         | .451   | .502       | .811             | .000       | .744             | .000       |
| CPJ → CAC         | .000   | .999       | .203             | .024       | .193             | .012       |
| CPS → CAC         | 1.319  | .251       | .544             | .000       | .459             | .000       |
| CAC → CCBs        | .958   | .328       | .638             | .000       | .635             | .000       |
| Model fit indices | $\chi^2_{(542)} = 1299.092$ , CFI = .920, TLI = .911, IFI = .920, RMSEA = .056 |            |                  |            |                  |            |

| Path              | Service sector 2   |            | Service sector 3 |            | Service sector 3 |            |
|-------------------|--|------------|------------------|------------|------------------|------------|
|                   | $\Delta\chi^2$   | $p$ -Value | Std. estimates   | $p$ -Value | Std. estimates   | $p$ -Value |
| CPJ → CPS         | .242   | .623       | .750             | .000       | .742             | .000       |
| CPJ → CAC         | .369   | .543       | .264             | .000       | .212             | .005       |
| CPS → CAC         | 1.595  | .207       | .521             | .000       | .444             | .000       |
| CAC → CCBs        | .593   | .441       | .734             | .000       | .640             | .000       |
| Model fit indices | $\chi^2_{(542)} = 1386.644$ , CFI = .914, TLI = .905, IFI = .914, RMSEA = .058 |            |                  |            |                  |            |

distribution of the mediation effect. Thus the results of bootstrapping analysis with 2000 samples provided the effects, 95% confidence intervals (CI), and  $p$ -values for the total, direct, and indirect effects, showing accepted ranges for good model fit ( $\chi^2_{(258)} = 1118.135$ ;  $p < .000$ ; CFI = .938; TLI = .928; IFI = .938; RMSEA = .071). As shown in Table 4, all total, direct, and indirect effects are statistically significant ( $p < .01$  and  $p < .001$ )

**Table 4.** Mediation effect of CPS and CAC: bootstrapping analysis.

| Path             | Total  | Direct               | Indirect | 95% CI |       | Result            |
|------------------|--------|----------------------|----------|--------|-------|-------------------|
|                  |        |                      |          | Lower  | Upper |                   |
| CPJ → CPS → CAC  | .689** | .237**               | .452**   | .360   | .546  | Partial mediation |
| CPJ → CAC → CCBs | .439** | .295***              | .145**   | .075   | .249  | Partial mediation |
| CPS → CAC → CCBs | .114** | .018 <sup>n.s.</sup> | .096**   | .050   | .165  | Full mediation    |

CI = Confidence intervals.

\*\* $p < .01$ .

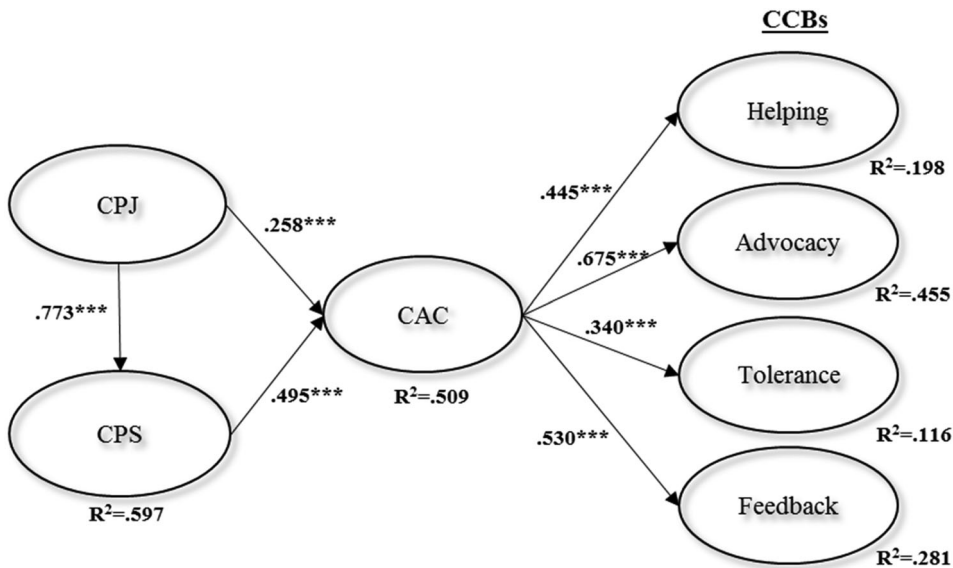
\*\*\* $p < .001$ .

except for the direct effect of CAC between CPS and CCBs. Specifically, the results revealed that CPS mediates the relationship between CPJ and CAC, providing evidence of partial mediation. Similarly, CAC also has the partial mediation effect that links CPJ and CCBs. However, the results showed that CAC fully mediates the relationship between CPS and CCBs as the direct effect of CPS on CCBs was not significant ( $\beta = .018, p = .380$ ).

The mediating role of CPS and CAC was further tested using Sobel testing. The results of the Sobel test confirmed the mediating role of CPS between CPJ and CAC (Sobel z-value = 11.205,  $p < .001$ ). The analysis of the main effects showed that the direct impact of CPJ on CAC ( $\beta = .610, p < .001$ ) increases as CPS is mediated ( $\beta = .880, p < .001$ ). In addition, the mediation role of CAC between CPJ and CCBs and between CPS and CCBs was supported by the Sobel test (z-value = 9.511, z-value = 8.622,  $p < .001$ , respectively). Interestingly, the main effects revealed that the direct influence of CPJ and CPS on CCBs diminished as CAC, the mediator, was presented: CPJ ( $\beta_{\text{Direct}} = .342, \beta_{\text{Indirect}} = .306, p < .001$ ) and CPS ( $\beta_{\text{Direct}} = .375, \beta_{\text{Indirect}} = .281, p < .001$ ). Therefore, the mediating role of CPS and CAC is confirmed.

**Post hoc analysis**

Even though the research model, that is, CCB is conceptualized as a unidimensional latent construct in the same way performed by Yi and Gong (2013), was confirmed through the data analysis, the current study proposes the four-dimensional model by distinguishing four types of CCBs into four latent variables. It may be meaningful to confirm not only if CAC positively influences each of the four dimensions as they represent CCBs but also



**Figure 2.** Post hoc Analysis: Alternative Four-Dimensional Model. **Model fit:**  $\chi^2_{(261)} = 1299.719; p < .000$ ; CFI = .925; TLI = .914; IFI = .925; RMSEA = .077.

Note:  $***p < .001$ ; CPJ = Customer Perceived Justice; CPS = Customer Perceived Support; CAC = Customer Affective Commitment; CCBs = Customer Citizenship Behaviors.



how different the impact of CAC on each dimension. Thus the *post hoc* analysis was conducted and the result showed satisfactory model fit ( $\chi^2_{(261)} = 1299.719$ ;  $p < .000$ ; CFI = .925; TLI = .914; IFI = .925; RMSEA = .077). As shown in Figure 2, all the paths in the alternative four-dimensional model were supported as the results of the proposed unidimensional model showed (see Figure 1). Specifically, the results reconfirmed empirical supports for H2, H3, and H4. Specifically, CAC had significant and positive impact on the four dimensions of CCBs (helping:  $\beta = .445$ ,  $p < .001$ ; advocacy:  $\beta = .675$ ,  $p < .001$ ; tolerance:  $\beta = .340$ ,  $p < .001$ ; feedback:  $\beta = .530$ ,  $p < .001$ ). Therefore, the results of the *post hoc* analysis also reinforced evidence to support H1.

## Discussion

The present study argues that customers' positive perceptions toward the service provider, based on non-economic, relationship factors, lead them to participate in CCBs. Specifically, social exchange theory argues that CPS and CPJ positively influence CAC, and, in turn, CAC is likely to be positively related to CCBs (Lavelle et al., 2007). The statistical results of this research, based on the initially proposed unidimensional model, reveal that CAC has a positive impact on CCBs. The *post hoc* analysis, which ascertains whether CAC positively influences each of the four dimensions representing CCBs, strengthens this finding by providing more specific outcomes. For example, if customers are affectively committed to the organization, they are more likely to help other customers or service provider and/or recommend the service provider to others. Moreover, customers with affective commitment tend to more put up with service outcomes not meeting their expectation and/or suggest constructive ideas to improve the service. Interestingly, CAC has the strongest impact on advocacy. This implies that customers who have affective commitment may be potential advertising sources by disseminating the positive information of the service provider to others. On contrary, CAC has the weakest impact on tolerance, meaning that customers may want to receive their service as expected even though they understand situations related to service failures or mistakes. As anticipated, the results also support that CPS and CPJ are significantly positively related to CAC. Additionally, CPJ has strong positive impact on CPS. The finding is in line with prior empirical research that *employees'* perceived justice positively influences their perceptions of organizational support (DeConinck, 2010; Masterson et al., 2000). Similarly, this study's results indicate that *customers'* perceptions of justice through service providers increase their perceptions of support from those service providers. Thus, in this sense, these findings in the consumer context support the concept of social exchange relationship that has been found in the organizational literature.

An additional analysis regarding the mediating roles of CPS and CAC also confirm the argument of social exchange theory. The results uncover that CPS significantly and partially mediates the relationship between CPJ and CAC. Although the existing research on social exchange theory has argued the role of CPS as an indicator of CAC, most do not provide evidence of the mediation effect of CPS in the relationship between CPJ and CAC. Furthermore, this research shows that CAC partially mediates the relationship between CPJ and CCBs. This result is consistent with previous studies, that is, an effort to satisfy consumers' needs for fairness perceptions and uncertainty reduction leads them to feel positive affect, resulting in being more cooperative, expressive, and conscientious in their performance during the service encounter (see Moorman, 1991; Yi & Gong, 2008). Additionally, the

results show that CAC has the full mediation effect between CPS and CCBs. As found in Bettencourt (1997), this study also demonstrates that the effect of CPS on CCBs is mediated through CAC. However, even though Bettencourt (1997) reveals that CPS directly influences customer voluntary performance, including cooperation and participation with the service firm, this study's findings do not show CPS's direct impact on CCBs. Further research may be needed to examine the direct influence of CPS on CCBs. Lastly, *post hoc* analysis is conducted to assess whether there are differences in the relationships between constructs across three service sectors. The theoretical model indicates that differences in relationships do not exist among constructs across the three service sectors.

## Implications

### *Theoretical implications*

Adapting the theories from organizational behaviors and social psychology, this study is capable of developing the conceptual model to explore antecedents of CCBs. As a significant contribution to interdisciplinary research, this study adds to the marketing literature on the investigation regarding how social exchange relationship between customers and the service providers influences CCBs. Even though there are many investigations pertaining to the positive impact of *employee* perceptions of organizational justice and support on employees' OCBs, empirical research is lacking in the examination of how *customers'* perceptions of organizational justice and support influence CCBs. More specifically, the present study simultaneously conceptualizes both CPJ and CPS as antecedents of CCBs by proving the positive impact of CPJ on CPS. In addition to the contribution, this research sheds new light on the mediating role of CPS and CAC among the constructs in the social exchange relationship. The findings are also important contributions to the literature because little empirical research simultaneously has investigated not only organizational justice and support as antecedents of voluntary behaviors in the consumer context but also organization support perception and CAC as mediators in the social exchange relationship.

Focusing on *actual* CCBs, empirical data were collected from respondents who actually performed beneficial behaviors for their service providers. Recognizing that existing research has mostly focused on willingness or intention of CCBs, this empirical study based on actual customer behaviors provides a quite meaningful contribution to the literature (see Bove et al., 2009). Measurement of actual CCBs allows to confirm feasibility of CCBs and suitability of CCB scale items, relatively new measures. More specifically, the current study verifies that the CCB construct is composed of four dimensions— *helping, advocacy, tolerance, and feedback*, as suggested by recent research (see Yi & Gong, 2013). This study is also based on the service context by choosing three categories of services (see Bowen, 1990). With the evidence of no differences in CCB across three sectors of service industry, the result demonstrates that the scales measuring CCB are generalizable, indicating that the measurement instrument is applicable to a variety of service industries.

### *Managerial implications*

The current study provides marketers' better understanding pertaining to the factors that lead customers to implement CCBs. Marketers need to know what types of factors lead

customers to perform CCBs to co-create value through collaboration with their customers. Specifically, this study helps marketers understand an important role of customers' perceptions of organizational justice and support to induce beneficial behaviors from their customers. Thus marketers should consider how to improve customers' perceptions of organizational justice and support. For example, marketers may provide customer relationship management programs and/or train their employees to serve customers impartially and supportively. Through such marketer's efforts, consumers may perceive fair treatment when service providers provide full information and disclosure prior to the service to be rendered in addition to ample support in the post-service phase. Understanding customers' attitudes perceived from interaction with the service provider, service marketers can design effective marketing strategies to encourage CCBs in co-creating value for customers and marketers alike.

Marketers in product-oriented industries can apply the findings of this study conducted in the service industry to their businesses. Essentially, product-oriented companies include face-to-face interaction with customers and offer customer service programs. This implies that customers in the product-oriented industry also have opportunities to engage in activities that assist the company, such as providing ideas for new products, helping other customers by showing how to use a product through posting videos, and recommending the product to others. Recently, Datacrowd, a market research firm, introduced a new application, called Shelfie. When shoppers recognize where and which products are out of stock in a store, they can alert the store by using the application and receive reward points that are redeemable in the store. Using such a kind of marketing strategies, product-oriented companies may expect to obtain benefits from customers. In addition, even though the study context of this research was focused on the offline service context, the online-based companies can apply the findings of this study to their businesses. For example, customers who have positive experiences with a specific online retailer or service provider may help the online company.

### Limitation and future research

This study is based on data collected from customers who had interacted in a variety of service types in the offline service industry. It helps this study to build the generalizability of the scale items and the study's findings. However, to establish stronger generalizability, it is necessary that the study context is extended to other industries and contexts, such as the product-oriented industry and the online context. Future research can also replicate and/or apply this study by considering various cultures for more concrete understanding of the present study. In addition, cultural values such as individualism/collectivism and power distance can be considered moderators on CCB relevant models. It would be a crucial and interesting contribution to the literature.

This study investigated only CAC as an outcome of customers' perceptions of organizational justice and support and as indicators of CCBs. Consequently, future research may consider other customers' responses and attitudes such as trust, satisfaction, and loyalty because it is possible for customers to develop trust, satisfaction, and/or loyalty toward the service provider when they have positive perceptions. Although the current research provides deeper insight pertaining to the application of social exchange theory, future

studies that integrate other constructs such as trust, satisfaction, and/or loyalty would contribute to richer and more insightful literature.

The relationship duration and/or use frequency may be considered. Future research may consider these two factors as moderators, which may influence the associations among CPS, CPJ, CAC, and CCBs. Considering that actual CCBs are based on previous interactions with offline service providers in the past, intention to perform CCBs may depend on how long they have transacted with their service provider and/or how frequently they use the service provider. Thus future studies that consider interaction-based factors such as relationship duration and use frequency would contribute to additional knowledge in this research area.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Appendix 1. Measures.

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### Customer Perceived Justice

- OJ1. Overall, I am treated fairly by the service provider
- OJ2. In general, I can count on this service provider to be fair
- OJ3. In general, the treatment I receive from the service provider is fair
- OJ4. For the most part, the service provider treats its customers fairly

### Customer Perceived Support

- OS1. The service provider really cares about my well-being
- OS2. The service provider values my contribution to its well-being
- OS3. The service provider cares about my opinions

### Customer Affective Commitment

- AC1. I feel a strong sense of belonging to the service provider
- AC2. This service provider has a great deal of personal meaning for me
- AC3. I feel emotionally attached to the service provider
- AC4. I am proud to belong to this service provider
- AC5. I feel like part of the family at the service provider

### Customer Citizenship Behaviors

#### *Helping*

- HP1. I have assisted other customers when they needed my help
- HP2. I have helped other customers when they seemed to have problems
- HP3. I have taught other customers to use the service correctly
- HP4. I have given advice to other customers

#### *Advocacy*

- AD1. I have encouraged friends and relatives to use the service organization
- AD2. I have recommended the service organization and the employee to others
- AD3. I have said positive things about the service organization and the employee to others

#### *Tolerance*

- TR1. I have put up with it when the service was not delivered as expected
- TR2. I have been patient and waited for the employee to recover from a mistake
- TR3. I have adapted to the situation when I have waited longer than I expected to receive the service

#### *Feedback*

- FB1. When I had a useful idea on how to improve service, I let the service organization know
  - FB2. When I experienced a problem, I let the service organization know about it
  - FB3. I have informed the service provider about great service received from an individual employee
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