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The impact of firm-based organizational citizenship behavior on continuance and normative commitment among pharmaceutical executives: An SEM approach

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Abstract

Aim/purpose – The study was based on social exchange theory and addressed the effects of firm-based organizational citizenship behavior (OCB) on normative and continuance organizational commitment (OC). Multigroup behavioral differences among pharmaceutical executives were also evaluated.

Design/methodology/approach – This study employed an empirical, explanatory cross-sectional study with online questionnaires administered to four hundred and one randomly selected pharmaceutical executives in Nigeria. The covariance-based structural equation modeling technique was used for testing hypotheses. Firm-based OCB domains – conscientiousness, sportsmanship, and civic virtue were regressed on OC domains of continuance, and normative. The hypothesized effects of firm-based OCB on the domains of OC were examined using Analysis of Moment Structures (AMOS).

Findings – The structural model had acceptable fit measures. Conscientiousness and sportsmanship behaviors were negatively related to normative OC while civic virtue had a positive significant relationship with normative OC. Multigroup comparisons based on gender, profession, and type of organization revealed significant effects on the relations between civic virtue and normative OC. Employees highly vested with enhancing and

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representing their company's image, tend to be more obligated to continue and remain with the organization. The more self-directed, and less-complaining employees are, the lower the tendency to remain with the organization. The nuances of group differences among employees had an impact on examined relationships.

Research implications – Human resource managers should adequately stimulate and motivate employees to be ambassadors of the organization. This is achievable by instilling a sense of ownership and loyalty in employees. Further implications are discussed.

Originality/value/contribution – The study disentangled the relations between OCB and OC in the context of pharmaceutical executives in a developing country. The study highlighted the essence of group-specific differences in behavioral evaluation among pharmaceutical executives.

Keywords: organizational citizenship behavior, normative commitment, continuance commitment, pharmaceutical industry, structural equation modeling, social exchange theory.

JEL Classification: C38, D21, D23.

1. Introduction

The literature in the management and social sciences is replete with studies on employer-employee relations and the impact of this relationship on both individual and organizational productivity or performance (Allen & Meyer, 1991, 1997; Cropanzano et al., 2017; Lee & Allen, 2002; Mercurio, 2015; Suryani & Tentama, 2020). The engagement of employees by managers and employers requires an appreciation of the role of social exchange theory to enhance the relevance and understanding of how the constructs of organizational citizenship behavior (OCB) and organizational commitment (OC) apply in the workplace. Hence, the concept of OCB and OC plays pivotal roles in influencing job satisfaction, motivation, and turnover intentions of employees. Likewise, management scholars have been vested in exploring the dynamics or mechanisms influencing employee retention, and turnover as well as matching the expectations of employees with that of the organization they work in (Cropanzano et al., 2017; Suryani & Tentama, 2020). Social exchange theory is relevant in the discourse concerning citizenship and commitment from employees toward employers and thus it is an essential consideration in any model evaluating both behaviors (Blau, 1964; Homans, 1958). The reciprocal behavior and attitude of a person to the action or inaction of their manager or employer depend largely on what they gain or are expecting to benefit in return for services rendered (Cropanzano & Mitchell, 2005; Organ, 1988). Globally, the key characteristics of the pharmaceutical marketing and sales sector are principally focused on medicine supply to the private and public health sectors through distribution channels (Inayat

& Khan, 2021; Oamen, 2021). These channels include distributors, retailers (hospitals, clinics, and pharmacies), and direct to the final consumers. The human and social relations in the workplace have been the subject of empirical studies aimed at identifying best practices and strategies to enhance, engage, develop, motivate, and retain a productive workforce (Ahmad et al., 2020; Inayat & Khan, 2021; Oamen & Omorenuwa, et al., 2022). However, in the pharmaceutical marketing industry, challenges associated with ensuring work satisfaction, commitment to organizational objectives, poor remuneration, inadequate work tools, employer-employee conflict, work climate, and turnover rates are still ongoing concerns (Babapour et al., 2018; Oamen & Omorenuwa, et al., 2022; Oamen & Omorenuwa, 2021; Triantafillidou & Koutroukis, 2022). Hence, this scenario situates the social exchange theory as a basis to further our understanding of the relevance of exploring employee and management relations within the context of organizational behaviors-organizational commitment and citizenship.

The pharmaceutical marketing industry in a developing country like Nigeria has a fast-growing potential and capacity to meet both medicine supply needs and create jobs. Sadly, the industry largely experiences high turnover rates within the industry as well as exit to other industries (Oamen, 2021; Oamen & Omorenuwa, 2021). This creates the conceptual basis to investigate the relations between the constructs of organizational citizenship and organizational commitment to improving human resource management practices in the pharmaceutical industry. Furthermore, the domains of OCB have been operationalized into two main constructs namely: firm-based OCB (conscientiousness, sportsmanship, and civic virtue) as they imply that they are directly linked to helping the organization achieve its primary purpose (Hasani et al., 2013; Lee & Allen, 2002; Williams & Anderson, 1991), while employee-based OCB (courtesy and altruism) in which employees provide support, and friendship in a selfless manner to their co-workers (Hasani et al., 2013; Lee & Allen, 2002; Podsakoff et al., 2000; Williams & Anderson, 1991). The dichotomy between firm-based OCB and employee-based OCB provides a basis for exploring and gaining insight into their possible impact on the OC of pharmaceutical executives in the pharmaceutical industry in Nigeria.

Consequently, in the context of this paper, there is a need to explore how firm-based OCB influence continuance and normative OC in the pharmaceutical marketing industry. The main purpose of the study was to examine the effect of firm-based OCB on normative and continuance OC using covariance-based structural equation modeling. Next, a multigroup analysis was used to investi-

gate behavioral differences in the hypothesized structural model based on gender, professional training, and type of organization.

This empirical research paper has five main sections: Section 1 introduces the basis of the research paper, Section 2 provides a comprehensive overview of the extant literature on key variables, Section 3 outlines the research methodology, and Section 4 provides results and a discussion of findings. Finally, the conclusion and limitations of the study are covered in Section 5.

2. Literature review and hypothesis development

2.1. Social exchange theory and reciprocity

Every employee-employee or manager-subordinate relationship is defined by the sociological concept of social exchange theory. The theory asserts rational behaviors by individuals or persons who seek favorable rewards or outcomes and perceptions tend to vary over time and from person to person (Blau, 1964; Homans, 1958). This theory has been shown to exist in education, technology, marketing, human resource management as well as health industries (Redmond, 2015). The social exchange theory is premised on the understanding that any initiating action either positive or negative by an actor or perpetrator would elicit a reaction/response (reciprocating response; attitudinal, and behavioral) by the target or recipient (Cropanzano et al., 2017; Meyer et al., 2002). In other words, an exchange of actions may be relational or economic, whereby one individual tends to repay either positively (or negatively) to another individual. This concept sets the framework for organizational behavior such as organizational commitment and citizenship (Cropanzano & Mitchell, 2005; Organ, 1988). Invariably, in the context of the pharmaceutical marketing industry, relations between the sales workforce and management or employers in general terms, adopt the social exchange pattern.

2.2. Organizational citizenship behavior and organizational commitment

OCB is considered to be the willingness (mostly voluntary) of an employee to engage in tasks and actions that are beneficial to both their colleagues at work and the organization. This concept was proposed and advanced by several authors (Habeeb, 2019; Mohammad et al., 2011; Organ, 1988; Podsakoff et al.,

2009; Smith et al., 1983). The domains of OCB are altruism, conscientiousness, sportsmanship, civic virtue, and courtesy. Altruism depicts the selflessness and willingness of an employee to help others without expecting any reward or compensation. Conscientiousness considers the self-drive to do what is expected without recourse to supervision and monitoring. Civic virtue entails the tendency of an employee to represent and portray the image of their organization in a positive light. Courtesy relates to positive and supportive relations between colleagues which creates an enabling and friendly work environment (Hasani et al., 2013; Lee & Allen, 2002). In the literature, OCB has been positively linked to improved performance and minimized turnover among employees in an organization (Chib, 2016). In line with these definitions, the domains of OCB have been operationalized into two main constructs, namely firm-based OCB (conscientiousness, sportsmanship, and civic virtue) (Hasani et al., 2013; Lee & Allen, 2002; Williams & Anderson, 1991) and employee-based OCB (courtesy and altruism) (Hasani et al., 2013; Lee & Allen, 2002; Podsakoff et al., 2000; Williams & Anderson, 1991).

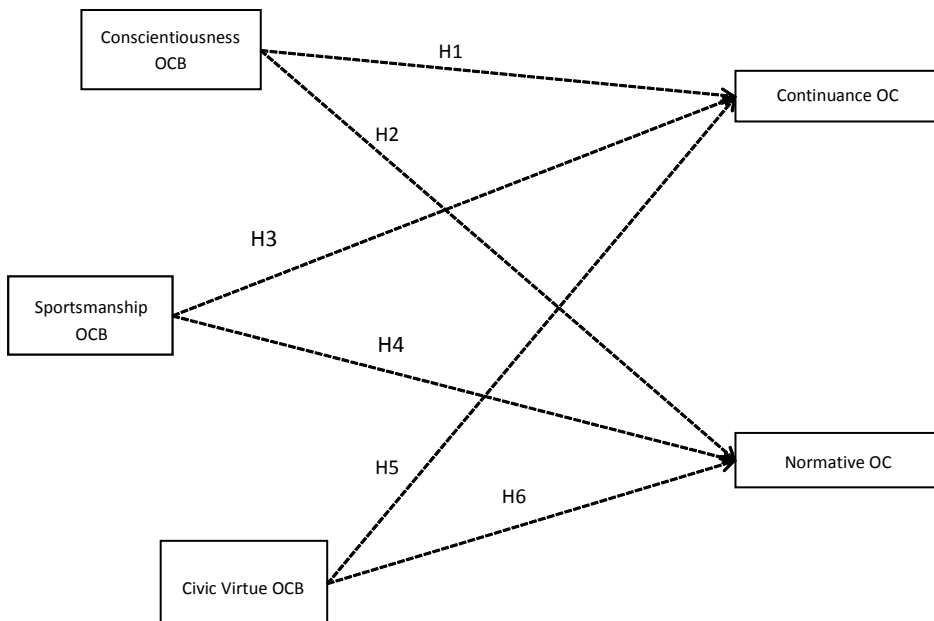
Organizational commitment (OC) refers to the sense of involvement, attachment, and engagement of an employee to the goals and ideals of their organization. OC is a major indicator and predictor of the motivation and satisfaction of employees. According to Ud Din et al. (2016), OC is strongly and positively linked to low turnover intentions and loyalty among employees. There are three key domains of OC: affective, continuance, and normative (Allen & Meyer, 1991, 1997; Nguyen et al., 2022; Spik, 2016). Affective OC refers to the emotional attachment and positive inclination to remain with an organization. Affective OC refers to an emotional state of involvement in which the employee has strong feelings partly due to perceived benefits enjoyed. Continuance OC suggests that the employees choose to stay with the organization because of the uncertainty associated with leaving and loss of income from leaving the organization. Continuance OC suggests that the employee has considered the cost of risks and benefits of leaving the organization (Allen & Meyer, 1991, 1997; Habeeb, 2019; Nguyen et al., 2022). Continuance OC is the calculated consideration by the employee as to the need to remain working with the organization. Normative OC refers to the sense of obligation and loyalty to remain with the organization. It supposes that there exists a sense of reciprocity since the employee feels obligated to remain with the organization because of what they had benefited from and/or are benefiting from the organization. Or perhaps what the organization is getting in return from them. The benefit from the organization

could be in training, fringe benefits, or incentives among other welfare packages (Allen & Meyer, 1991, 1997; Meyer & Parfyonova, 2010).

Several studies have revealed that OC is highly related to OCB. There is empirical evidence to show that high levels of OC shown by employees elicit high levels of OCB. Also, a positive and significant relationship between OC and OCB is strongly indicative of high employee engagement, reward, and mutually beneficial working environments (Idrees et al., 2020). A study of bank employees revealed that supportive OC strengthened appropriate OCB attitudes and actions (Zayas-Ortiz et al., 2015). This assertion is further substantiated by Nguyen et al. (2022) who showed that domains of OCB strongly influence OC among employees working in higher institutions in Vietnam (Nguyen et al., 2022).

Hence, this survey-based empirical study was premised on the social exchange theory that postulates that a sociological relationship exists between an employee and employer based on a perception of cost and reward. The conceptual relationship is hinged on the hypothesized causal effect of firm-based organizational citizenship behaviors: conscientiousness, sportsmanship, and civic virtue on the organizational commitment of pharmaceutical executives in Nigeria. This framework is depicted in Figure 1.

Figure 1. Hypothesized relationships



The hypotheses of the study were stated as follows:

- H1:** There is a relationship between conscientious OCB and Continuance OC among pharmaceutical executives.
- H2:** There is a relationship between conscientious OCB and Normative OC among pharmaceutical executives.
- H3:** There is a relationship between sportsmanship OCB and Continuance OC among pharmaceutical executives.
- H4:** There is a relationship between sportsmanship OCB and Normative OC among pharmaceutical executives.
- H5:** There is a relationship between civic virtue OCB and Continuance OC among pharmaceutical executives.
- H6:** There is a relationship between civic virtue OCB and Normative OC among pharmaceutical executives.
- H7:** There are differences in absolute path coefficients of the domains of OCB (independent variables) in the structural model.

A multigroup analysis is a very useful tool for uncovering the possible differences that may occur among a demographically diverse group of respondents (Gaskin & Lim, 2018; Oamen & Idiake, et al., 2022). This approach has been shown to reveal differences within subpopulations of a sample population (Nguyen et al., 2022). Furthermore, there is a need to investigate whether there are path differences across gender, professional training, and type of pharmaceutical organization (Gaskin & Lim, 2018).

- H8:** There are no behavioral differences in the hypothesized structural model based on gender, professional training, and type of organization.

3. Research methodology

3.1. Study design

A quantitative cross-sectional study design was used to obtain relevant data from randomly selected pharmaceutical executives (N = 401) in Nigeria. The online questionnaire approach was used by administering anonymized online Google form questionnaires to prospective respondents through pharmaceutical associations and WhatsApp platforms of pharmaceutical executives across the nation. Before filling out the questionnaire, respondents were briefly introduced to the goal of the study and guaranteed anonymity. Informed consent was obtained from respondents before filling out the questionnaire forms. Data collec-

tion was conducted from April to June 2022. The questionnaire was adapted from Allen and Meyers' (1991, 1997) organizational commitment scale and organizational citizenship questionnaire (Habeb, 2019; Organ, 1988; Podsakoff et al., 2009). Sample size determination was based on the inverse square root method developed by Kock and Hadaya (2018) for structural equation modeling studies. The stipulated basis for sample size computation was a significant path coefficient of 0.2 and statistical power of 80% which produced 155 (Kock & Hadaya, 2018).

3.2. Data analysis

The statistical package for the social sciences version 25 was used for basic data analysis (Arbuckle, 2014). Co-variance-based structural equation modeling technique in the analysis of moment structures (AMOS) version 24 was used to develop the relationship between independent variables (conscientiousness, sportsmanship, and civic virtue) and criterion variables (normative and continuance OC). The maximum likelihood estimator was used for computation with data assumed to be normally distributed.

3.3. Multigroup analysis

For significant paths in the model, multigroup differences were investigated across groups. A basic assumption is that the measurement weights of each examined path are constrained to be equal. To evaluate any differences, the constrained model is compared to the unconstrained model. To achieve this, a constrained model with parameter estimates or coefficients was created using the AMOS program, which was assumed equal across groups under comparison. Therefore, a chi-square difference (χ^2) test was executed at one degree of freedom with a baseline value of 3.84 at a significance level of 5%. Statistical difference between groups was established with a χ^2 value greater than 3.84. The group with a larger path coefficient is considered to be significantly stronger than the other. The use of multigroup plugin macro in AMOS software was used to evaluate these proposed differences (Gaskin & Lim, 2016).

3.4. Measurement of variables

As shown in Table 1, OCB constructs were measured with a 5-point Likert scale where 5 = always, 4 = often, 3 = sometimes, 2 = rarely, and 1 = never. While OC constructs were measured with a 5-point Likert scale where 5 = strongly agree, 4 = agree, 3 = indifferent, 2 = disagree, and 1 = strongly disagree.

Table 1. Measurement of constructs and indicator items

Construct	Indicator items	Code	Source
Conscientiousness OCB	I make effort to meet assigned goals	Cc1	adapted from Allen & Meyers, 1991, 1997
	I am a problem solver	Cc2	
	I do my work without supervision	Cc3	
Sportsmanship OCB	I take care not to complain when things do not go my way	Ss1	adapted from Allen & Meyers, 1991, 1997
	I gossip when things do not go my way	Ss2	
	I find faults or loopholes in what my organization is doing.	Ss3	
Civic Virtue OCB	I speak favorably about my organization	Cv1	adapted from Allen & Meyers, 1991, 1997
	I present my organization in a positive light	Cv2	
	I am conscious of public perception of my organization	Cv3	
Continuance OC	It would be difficult for me to leave my present job	OCC1	Habeeb, 2019; Organ, 1988; Podsakoff et al., 2009
	My life would be disrupted if I leave my organization	OCC2	
	Staying with my job is a matter of necessity	OCC3	
	I have few options if I leave my organization	OCC4	
	There is a scarcity of available job options elsewhere	OCC5	
	Leaving would require considerable personal sacrifice	OCC6	
Normative OC	I feel obligated to remain with my organization	OCN1	Habeeb, 2019; Organ, 1988; Podsakoff et al., 2009
	I do not feel it is right to leave	OCN2	
	My organization deserves my loyalty	OCN3	
	I would feel guilty if I leave my organization	OCN4	
	I would not leave my organization right now	OCN5	
	I owe a great deal to my organization	OCN6	

Source: Authors' own computation.

4. Research findings and discussion

4.1. Demographic attributes of participants

About two-thirds of the study participants are male ($n = 264$, 65.8%) and one-third are female ($n = 137$, 34.3%). This reflects the prevalent gender distribution of the pharmaceutical workforce in Nigeria as suggested by other studies (Oamen, 2021; Oamen & Omorenuwa, 2021). In terms of marital status, 208 (51.9%) are married, and 191 (47.6%) are single. Age-wise, respondents between the age of 20 to 40 years accounted for predominantly 94.3% compared to 12.2% ($n = 31$), representing 41 to above 50 years. Furthermore, based on professional training, 94, representing 23.5%, are pharmacist-trained while a vast majority ($n = 307$, 76.6%) are non-pharmacists. A majority of respondents ($n = 258$), representing 64.3%, worked in Indigenous or privately owned pharmaceutical companies, while 143 (35.7%) worked with multinational companies at the time of the survey.

Table 2. Internal reliability of research instrument

Construct	Code	No. of items	McDonald's Omega (ω)	Inference
Conscientiousness	ConSci	–	0.728	satisfactory
Sportsmanship	SportsM	3	0.709	satisfactory
Civic Virtue	CivicVirt	3	0.822	satisfactory
Continuance Organizational Commitment	ConOC	6	0.769	satisfactory
Normative Organizational Commitment	NormOC	6	0.792	satisfactory

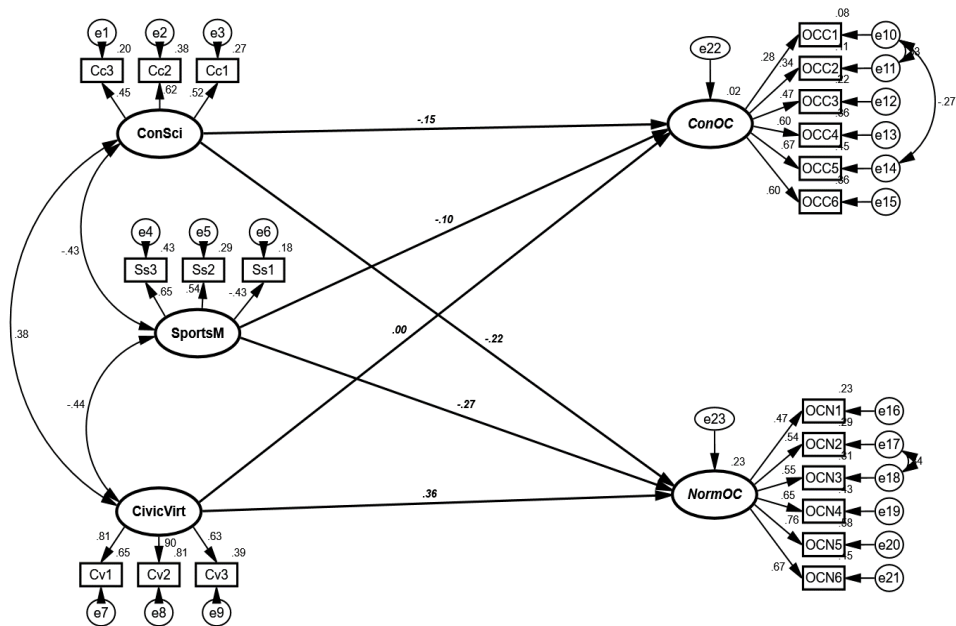
Source: Authors' own computation.

The alternative robust method of assessing the internal reliability of the questionnaire was McDonald's Omega macro incorporated into SPSS as developed by Hayes (Hayes & Coutts, 2020). The rationale for the use of McDonald's omega is premised on the increased likelihood of Cronbach's low values due to fewer items, in particular, for firm-based constructs with three indicator items only and the less restrictive nature of the method (Dunn et al., 2014). As shown in Table 2, all reflective constructs had acceptable measures of internal reliability (greater than the 0.7 threshold value) (Hayes & Coutts, 2020).

4.2. Structural model: Model fit measures

The model generated from the domains of OCB, continuance OC, and normative OC gave an initial fit. However, to establish optimum model fit to data, the error terms of related indicators of constructs were covaried: e10 to e11, e10 to e14, and e17 to e18, as shown in Figure 2. The final fitted model had the following measures: χ^2 /difference test (430.112, df = 177) = 2.430 (acceptable, threshold – 1 and 3), approximate comparative fit index (CFI) = 0.90 (satisfactory, threshold > 0.90), standardized root mean residual (SRMR) = 0.088 (acceptable, absolute threshold < 0.1), root mean square error of approximation (RMSEA) = 0.060 (acceptable, threshold < 0.08). The overall structural model fits the data appropriately and hence, it is adequate to be used for drawing statistically important and relevant inferences (Browne & Cudeck, 1993; Hu & Bentler, 1999).

Figure 2. Standardized path coefficients of causal relationships



Note: **ConOC** = continuance organizational commitment, **NormOC** = normative organizational commitment, **ConSci** = conscientiousness, **SportsM** = sportsmanship, **CivicVirt** = civic virtue.

Table 3. Structural relationships between constructs and hypotheses testing

Dependent variable	Relations	Independent variable	Path coefficient	t-value	p-value	Hypothesis
ConOC	<---	ConSci	-0.152	-1.439	0.150	H1: not supported
NormOC	<---	ConSci	-0.215	-2.201	0.028*	H2: supported
ConOC	<---	SportsM	-0.100	-0.972	0.331	H3: not supported
NormOC	<---	SportsM	-0.273	-2.690	0.007**	H4: supported
ConOC	<---	CivicVirt	0.004	0.051	0.959	H5: not supported
NormOC	<---	CivicVirt	0.361	4.307	0.001**	H6: supported

Note: * $p < 0.05$, ** $p < 0.01$, significance at t-values > 1.96 and 3.84 , respectively.

Source: Authors' own computation.

4.3. Path analysis of structural model

The results showed that a negative relationship existed between conscientiousness OCB and normative OC (Table 3). This implies that pharmaceutical employees with higher levels of conscientiousness tend to have lower levels of normative OC. Invariably, innovative, problem solvers, creative, self-directed, and task-focused employees who require little or no supervision have a higher chance of not being obligated to remain with their organizations. The inverse relationship invariably suggests a disproportionate contribution of the organization or management to the overall welfare of the individual employee. This is because organization commitment tends to improve with enhanced employee engagement, and enabling work conditions. This finding is supported by several authors that explored the determinants and influencers of organizational commitment (Bojrenou et al., 2019; Ficapal-Cusi et al., 2020; Saha, 2016). This is of particular relevance to managers and employers in the pharmaceutical industry in Nigeria. Retention strategies targeted at highly conscientious executives to win their long-term loyalty are of core importance. Progressive salary increment, career growth, job flexibility, and mentoring are organizational strategies advocated to strengthen normative OC. Furthermore, the study revealed that employees with higher levels of sportsmanship had a negative significant relationship to normative OC. This means that employees who exhibit admirable levels of sportsmanship, that is, do not complain or gossip or fault finding, tend to have lower chances of being obligated to the organization (Bodjrenou et al., 2019; Ficapal-Cusi et al., 2020). However, a positive significant causal relationship existed between civic virtue and normative OC. In this direction, managers have a role to play to encourage and provide incentives for executives who display

such attitudes. This would affirm and minimize any possible feeling of apathy if civic virtues are not recognized and appreciated. Findings revealed that higher levels of civic virtue exhibited by pharmaceutical executives elicited a greater tendency for the employee to feel obligated and loyal to organizations (Hasani et al., 2013; Lee & Allen, 2002; Podsakoff et al., 2000; Williams & Anderson, 1991). Therefore, this finding suggests that employees who tend to represent positivity about their organization and are concerned about the image of the organization, tend to have high normative OC. This outcome asserts the fact that commitment to the organization and reduced turnover rates reflect positive investments by the company or organization in their employees (Ahmad, 2018; Hasani et al., 2013; Lee & Allen, 2002; Podsakoff et al., 2000; Williams & Anderson, 1991). This participatory, ambassadorial behavior is capable of enhancing the competitive essence and advantage of the organization (Crant, 2000; Ficapal-Cusi et al., 2020).

Therefore, aligning social exchange theory on the results of this study of the pharmaceutical industry in Nigeria, employers and managers should be aware that executives are most likely to exhibit loyal, firm-supporting behaviors and improved commitment (that is, less continuance and more normative) if they are rewarded and recognized for their efforts toward the organization.

The high coefficient of determination (R^2) of Normative OC showed that 23% of the dependent variable is explained by the domains of OCB as is presented in Figure 2. This reveals a moderate predictive effect value compared to 2% for continuance OC (Cohen, 1988). Hence, it means that firm-based OCB adequately explained normative OC. The relative absolute weights of the significant paths in the structural model showed that civic virtue had the highest at $|0.361|$, followed by sportsmanship at $|0.273|$, and the least was conscientiousness at $|0.215|$. This means that there is a difference in the absolute path coefficients of the independent variables on the dependent variable (Normative OC). In this case, civic virtue had the most relevance in the model. Thus, hypothesis (**H7**) was accepted.

However, the study revealed non-significant relationships between the domains of firm-based organizational citizenship and Continuance OC. This finding is supported by studies that showed that continuance OC is uncorrelated with OCB (Meyer & Herscovitch, 2001; Spik, 2016) Within the context of the pharmaceutical industry in Nigeria, there are several implications:

- The intrinsic attribute of continuance OC implicitly suggests that the executives are working because of the absence of a suitable or better job alterna-

tive. This view is supported by Spik (2016) who surmised that employees with lower-than-average levels of sportsmanship, civic virtue, and conscientiousness tend to exhibit continuance OC compared to Normative OC. This is in harmony with the social exchange theory which suggests that employees in an organization are more likely to display continuance OC when their perception of benefit/reward/appreciation from the organization is lower than their perceived contribution to the growth of the organization.

- It aligns with the summation that employees who exhibit continuance OC tend to have negative perceptions when faced with negative job characteristics and challenges (Meyer & Herscovitch, 2001; Spik, 2016).
- Therefore, managers must identify such tendencies and deploy more resources into training and development for such employees.

Table 4. Multigroup model comparison based on gender, professional training, and type of organization

Structural paths	Standardized Regression coefficients			Significance level	Inference
1	2	3	4	5	6
Path Name	Male	Female	Difference	p-value for Difference	Interpretation
ConSci → NormOC	-0.266*	-0.135	-0.131	0.975	The negative relationship between NormOC and ConSci is only significant for males
SportsM → NormOC	-0.332*	-0.225	-0.107	0.328	The negative relationship between NormOC and SportsM is only significant for males
CivicVirt → NormOC	0.337***	0.418**	-0.081	0.467	There is no difference
Path Name	pharmacist	non-pharmacist	Difference	p-value for Difference	Interpretation
ConSci → NormOC	-0.091	-0.210*	0.119	0.591	The negative relationship between NormOC and ConSci is only significant for non-pharmacist
SportsM → NormOC	-0.209	-0.288*	0.08	0.488	The negative relationship between NormOC and SportsM is only significant for non-pharmacist
CivicVirt → NormOC	0.450**	0.324**	0.126	0.475	There is no difference

Table 4 cont.

1	2	3	4	5	6
Path Name	Locally owned	Multinational-owned	Difference	p-value for difference	Interpretation
ConSci → NormOC	-0.299*	-0.22	-0.08	0.395	The negative relationship between NormOC and ConSci is only significant for Locally owned
SportsM → NormOC	-0.408**	-0.126	-0.282	0.444	The negative relationship between NormOC and SportsM is only significant for Locally owned
CivicVirt → NormOC	0.280*	0.521***	-0.241	0.581	There is no difference

Note: *p < 0.05, **p < 0.01, ***p < 0.001.

Source: Authors' own computation.

4.4. Multigroup comparison of the structural model

A multigroup analysis of the statistically significant paths in the structural model was evaluated across gender, professional training, and type of pharmaceutical organization, as shown in Table 4 (Gaskin & Lim, 2018). The results revealed that for gender, males had statistically significant path coefficients compared to females. Hence, it suggests that based on the effects of conscientiousness and sportsmanship, male pharmaceutical executives tend to have lower levels of normative OC compared to female pharmaceutical executives. However, the role of civic virtue on normative OC was significant for male and female executives. This affirms the relevance or importance of civic virtue to study participants as it inherently portrays the tendency to represent the interests and protect the image of their company. Furthermore, non-pharmacists tend to show significant effects of conscientiousness and sportsmanship on normative OC compared to pharmacists. The effect of civic virtue on normative commitment revealed similarities among both pharmacists and non-pharmacists. Concerning the organizational type, pharmaceutical executives from indigenously owned companies had a significant effect on conscientiousness and sportsmanship on normative OC. Civic virtue significantly affected normative OC for both indigenous and multinational organizations. Hence, hypothesis (H8) was supported.

4.5. Implications of study to pharmaceutical management

From the study outcomes, based on supported hypotheses, there are salient implications for human resource managers and employers in the pharmaceutical marketing industry. They are in four folds namely:

1. The absence of significance between firm-based behaviors on continuance OC suggests that managers should invest in employee welfare, remuneration, and work environment. Thereby, these actions would increase benefits accrued to the employee, which invariably raises the cost of leaving the organization.
2. Due to the prosocial nature of OCB, it is pertinent to encourage such behavior with adequate recognition and a reward system.
3. The study's strong relevance of civic virtue on normative OC strengthens the need for employees to act as influencers and ambassadors for the organizations they work for. The fallout is that it improves the corporate image and identity of the organization.
4. The study has provided further insight into the relevance and applicability of social exchange theory in the management of subordinates, co-employees, and employers.
5. Finally, managers and researchers in organizational behavior should explore the possibility of group-specific differences in OCB and OC using a multigroup analysis framework. This helps to improve the effectiveness of targeted strategies to improve employee perceptions of their organizations with consideration for their demographic attributes.
6. However, for the rejected hypotheses, it is apparent that OCB among pharmaceutical executives does not align with continuance OC: this implies that human resource and pharmaceutical managers should be adept at identifying and discouraging behaviors and attitudes that suggest a sense of continuance OC.

The study was limited to examining normative and continuance OC, without considering the affective OC component of organizational commitment. Also, the indicator items measuring domains of OCB were limited to three items each, and hence should be expanded in future research to include other measures.

5. Conclusions

Every employer seeks to retain productive and resourceful employees in the long term. Managers must evaluate how pharmaceutical executives respond by assessing their level of continuance and normative OC to the company. Firm-based OC attributes – sportsmanship, civic virtue, and conscientiousness provide an explanatory basis for this evaluation. To the best of the author’s knowledge, this is the first study to examine the effects of OCB on the domains of OC in the pharmaceutical marketing industry in Nigeria. The explanatory study drew from the concept of social exchange in exploring the relationship between firm-specific OCB on normative and continuance commitment among pharmaceutical executives. The study highlights the significance and relevance of encouraging organizational commitment by supporting civic virtue, conscientiousness, and sportsmanship behavior among pharmaceutical executives. Furthermore, group-specific differences in perception should be considered when evaluating relationships involving organizational behavior. Hence, the study adds to the management literature. Further research with a longitudinal study design is suggested and there is a need to explore the study constructs across other geographic regions. The study makes a significant theoretical and methodological contribution to evolving literature in pharmaceutical marketing. The structural equation modeling approach provides robust and extrapolatable results which could be applied to similar situations or scenarios involving employee-employer relations. In the same vein, this study adds to the growing use of multigroup analysis to explore group-specific differences that may occur in a structural relationship. Also, the study provides interesting information that would improve the understanding of human resource managers about the underlying behavioral constructs influencing employee perception, citizenship, commitment, and eventual turnover intentions.

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