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## Article

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## **Impact of Organizational Justice on Citizenship Behavior: Mediating Role of Faculty Trust**

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### **Abstract**

The purpose of the study was to explore the mediating role of faculty trust in the relationship between organizational justice and teachers' citizenship behavior in university teacher-education faculties in the Punjab province of Pakistan. The participants of the study were teacher-educators (lecturers, assistant professors, associate professors, professors) teaching at the Education Faculties of twelve universities (eight in public and four in the private sector) offering at least master's degree program in Education. The strategy for selecting sample was stratified proportionate random sampling. The instruments of data collection were adapted for the study based on Organizational Justice Scale by Niehoff and Moorman (1993), Faculty Trust Scale by Hoy and Tschannen-Moran (2003), and Organizational Citizenship Behavior Scale by Podsakoff et al. (1990). The proposed model was then tested through mediation analysis. The results indicated that the effect of organizational justice on organizational citizenship behavior was significantly mediated through faculty trust. The finding implies that positive perception of organizational justice not only strengthens faculty trust, but this fortified trust also stimulates teachers' citizenship behavior. It also signifies the value of justice in an educational organization.

**Keywords:** organizational justice, faculty trust, organizational citizenship behavior, teacher-education.

### **1. Introduction**

The study of organizational behavior in a variety of organizational contexts has been a prolific area of research for the last few decades. Generally, the researchers focused mostly on business and managerial sectors, while the educational organizations were ignored. Now though, as the education system and the education discipline are becoming more market-oriented, and business paradigm is prevailing over education programs, researchers have started taking more interest in the educational context. Organizational justice is an essential attribute of any organization and might be the key factor in the success or failure of an organization. Organizational justice/fairness has been studied in relation to various other organizational characteristics such as trust, employee's

performance, job satisfaction, organizational citizenship behavior, organizational commitment, counterproductive work behaviors, stress and burnout, and job attrition etc. in a variety of organizational contexts. In case of an educational setup, teachers' perception of organizational fairness is a key aspect that defines their work behaviors. If teachers feel absence of justice or lack thereof, this might cause such behaviors which not only can harm them, but also result in students' poor learning/achievement and ultimately degradation in the organizational environment and outcomes. On the other hand, if teachers have positive perceptions regarding the norms of justice in their organization, that might result in positive outcomes for teachers, students, and the organization. Literature supports that employees' perceptions of justice play an integral role for organizational success or failure. The present study is an attempt to understand not only the effect of organizational justice on faculty trust and teachers' citizenship behavior; but also the mechanism of interaction of these organizational characteristics i.e. the mediating role of faculty trust in the relationship of organizational justice and teachers' citizenship behavior in teacher-education faculties of Pakistani universities. The findings of the present study will expand the existing literature on the role and impact of organizational justice; explore the role of faculty trust as mediator; and also help in understanding the linkage of organizational justice, faculty trust, and teachers' citizenship behavior in teacher-education institutions.

## **2. Literature Review**

Although, the studies exactly in educational context are few, most of other studies on organizational behavior are, in general, equally relevant to the "social systems" (term used by Owens, 1991) and "management of human behavior" (term used by Luthans, 1995). Owens, in his renowned book, *Organizational Behavior in Education*, frequently applied the management theories and models in education. This leads to the conclusion that findings of the studies concerning "human behavior" are generally common to social-educational systems. In this perspective, the review of studies is presented below.

### *2.1. Organizational Justice and Organizational Citizenship Behavior*

A study was conducted by Moorman (1991) in two management firms of America exploring the linkages between organizational justice and organizational citizenship behavior. The results of the study indicated that procedural justice and interactional justice (two dimensions of organizational justice) were related to citizenship behavior, while distributive justice (third dimension of organizational justice) had no such relationship. Tansky (1993), though, in her study found no effect of organizational fairness on citizenship behavior of employees. Niehoff and Moorman (1993) reviewed the research work on organizational justice and organizational citizenship behavior and concluded that the "employee perceptions of both distributive and procedural justice influenced OCB. [That is] If employees perceive that outcomes of their evaluations to be fair or perceive the process by which outcome allocation decisions are made to be fair, they will likely to reciprocate by performing behaviors to benefit their organization that go beyond the in-role performance of their job" (p. 533). In the same vein, Organ and Moorman (1993) noted that there is sufficient evidence regarding the significant role of justice in guaranteeing OCB. However, Schappe (1998) found no evidence of any relationship between procedural justice and citizenship behavior. In another important study, Williams, Pitre, and Zuinubia (2000) found that the employees' positive state of mind had positive relationship with performing organizational citizenship behavior. They

clarified that mere justice perception means positive state of mind. On the whole they confirmed the positive relationship between the perceptions of organizational justice and OCB. Isbasi (2000, cited in Ince & Gul, 2011) also emphasized that employees' positive perceptions of justice is the key factor that stimulates citizenship behavior in organization. A meta-analysis by Colquitt, Conlon, Wesson, Porter, and Ng (2001), covering 183 studies on organizational justice, found that organizational justice is related to organizational citizenship behavior alongside several other outcomes. Ishak and Alam (2009) conducted a study in a banking organization of Malaysia and concluded that "interactional justice contributed to the performance of altruism and consideration dimensions of OCB". The other two types of organizational justice i.e. procedural justice and distributive justice had no effect on employees' organizational citizenship behavior. Abu Elanain (2010) found low OCB as a result of negative perceptions regarding justice. Ahmad (2010) conducted a study on "Direct and interactive effects of organizational justice and perceptions of politics on personal and organizational outcomes" in Pakistan. The research had a sample of 608 employees of national and multinational banks. The study "highlighted the distinctive role of interactional justice in a collectivist culture to predict organizational commitment, job performance, OCB and turnover intention" (p. 108). Rangriz (2012) conducted a study on the relationship between organizational justice and organizational citizenship behavior with a sample of 186 experts of Ministry of Economic Affairs and Finances in Iran. The results of the study indicated positive relationship of organizational justice with citizenship behavior. Batool (2013) conducted a study in Pakistan's banking sector and found that organizational justice had "no considerable positive effect in the direction towards OCB of a banker" (p. 653). In a study conducted in a Social Security Organization (Tehran, Iran), Gharagheieh and Shokri (2014) also confirmed the positive significant relationship between organizational justice and organizational citizenship behavior.

In the context of educational organizations, a study conducted in Malaysia found that fairness positively affected teachers' organizational citizenship behavior (Ahmad, 2006). In another study conducted among teachers of Iranian schools Heidari, Rajaeepoor, Davoodi, and Bozorgzadeh (2012) found significant relationship between organizational justice and citizenship behavior. Iranzadeh and Chakherlouy (2011) found positive relationship between citizenship behavior and organizational justice among the employees of Mohaghegh Ardebili University, Iran. The sample of the study consisted of 190 bureau employees and the members of different faculties. Tatlah, Saeed, and Iqbal (2011) conducted a study using a sample of 300 teachers and heads of 60 secondary schools in Punjab (Pakistan). The study revealed that two dimensions of OCB i.e. altruism and generalized compliance were significantly correlated with procedural and interactional justice. Iqbal, Aziz, and Tasawar (2012) explored the effect of justice on OCB at the University of the Punjab with a sample of 200 teachers. It was found that the procedural justice was the strongest predictor of OCB, while distributive justice had somewhat weak influence on OCB. In the public bank employee's context, Farahbod, Azadehdell, Rezaei-Disgah, and Nezhadi-Jirdehi (2012) confirmed the effect of organizational justice on organizational citizenship behavior. In another study in Pakistan, Danish et al. (2014) investigated the role of justice on teacher's extra-role performance [OCB] in public-private sector universities of Pakistan. The sample was one hundred and fifty faculty members. They found that justice is significantly and positively related with the extra-role behavior [OCB].

## 2.2. *Organizational Justice and Trust*

Interpersonal treatment (element of organizational justice) results in developing trust among the employees (Mayer, Davis, & Schoorman, 1995). Positive perceptions of employee regarding processes and procedures are significantly related to higher levels of trust among employee in the organization (Brockner & Siegel, 1996, cited in Jeong, 2009). Colquitt (2001) found that interpersonal justice leads to employees' trust in their heads. Greenberg and Cropanzano (2001) indicated that interactional justice (information sharing) in the organization leads to trust among employees. Kernan and Hanges (2002) investigated the relationship and found that justice is a predictor of trust in an organization. Another study found that justice in the policies/procedures in organization is a key feature leading to organizational trust (Albrecht & Travaglione, 2003). Thornhill and Saunders (2003) stressed that if there is no justice, there is no possibility of trust. According to Mariam (2011, cited in Bews & Uys, 2002), procedural justice is a major aspect in promoting trust in the organization. Wong, Ngo, and Wong (2006) explored the relationship of perceived organizational justice, trust, and OCB and concluded that distributive and procedural justice revealed a significant positive effect on trust in organizations. Dolan, Tzafrir, and Baruch (2005) found that procedural fairness is a significant predictor of employees' trust. Lambert, Hogan, and Griffin's (2007) confirmed that "fairness at work-place had strong impact on employees' performance, job satisfaction, organizational commitment, and organizational trust" (p. 644). Bakhshi, Kumar, and Rani's (2009) also showed that organizational justice to the employees led to more trust in management. Rezaian et al. (2010) conducted a study at a hospital in Tehran (Iran) and confirmed the significant effect of organizational justice on trust.

## 2.3. *Trust and Organizational Citizenship Behavior*

Moorman (1991) found that in the management context, the employees having trust involved themselves positively in citizenship behavior. Aryee et al. (2002) observed employees perceptions in a business organization with regard to development of "trust" into "action", which led to their firm "citizenship behavior". Tschannen-Moran (2003) studied the role of trust in developing citizenship behavior in educational setup. The survey included 3000 teachers in 55 middle schools. The study confirmed that teachers' trust in their institutions had a positive effect on the faculty's citizenship behavior. Burns and Carpenter (2008), in an educational setting, examined the organizational citizenship behavior in elementary and secondary education and concluded that leadership style and trust are significant factors toward promoting OCB in educational institutions. Tschannen-Moran (2011) in a review of studies on OCB and trust in school perspective concluded that trust has definite link "to school effectiveness, collaboration, collective efficacy, organizational citizenship, and teacher professionalism" (p. 1).

## 2.4. *Trust as Mediator*

There are very few studies linking organizational justice and organizational citizenship behavior with trust acting as a mediator. However, as the organizational leader/head is mainly responsible for ensuring justice in the organization, some studies linking leader's behavior are included in this section. Podsakoff et al. (1990), examined the "impact of transformational leader behaviors on OCB and the mediating role of subordinates' trust". The data were obtained from employees of a large petrochemical company. The results of the study showed "that the effects of transformational leader behaviors on citizenship

behaviors are indirect rather than direct, in that they are mediated by followers' trust in their leaders" (p. 108). Konovsky and Pugh (1994) also confirmed that "trust" toward the organizational head is the major mediating factor in strengthening a "positive relationship of procedural justice and organizational citizenship behavior" (p. 108). Aryee et al. (2002) in their study "Trust as a mediator of the relationship between organizational justice and work outcomes: test of a social exchange model", found that all the three dimensions (distributive, procedural, and interactional) were related to trust in organization. Trust as mediator "fully mediated the positive relationship between interactional justice and work outcomes". Ngod (2008), in a Malaysian study argued that "procedural justice directly influences trust. Trust in turn, exerts direct influence on organizational citizenship behavior, organizational commitment, and job satisfaction" (p. 93). In Pakistan, Shahzad et al. (2013) examined the "relationship between servant leadership (SL) and organizational citizenship behavior (OCB)" along with the mediating effect of trust. The study was conducted in four HEC (Higher Education Commission, Pakistan) accredited universities based at Islamabad capital. Full-time 345 faculty members (Lecturers and Assistant Professors) were the participants. The study confirmed that "trust partially mediates positively in servant leadership and OCB links" (pp. 273-274).

The literature review highlights that organizational justice is associated with trust and citizenship behavior. Trust is also found to be in relation to employee's citizenship behavior in an organization, while it also acts as a mediator in transmitting the effect of organizational head's decisions and actions on employees' perceptions and ultimately to organizational outcomes and its effectiveness. The literature review raised an important question as to whether the three organizational variables are in a chain of relations i.e. in a causal sequence, such that the effect of organizational justice is transmitted to teachers' citizenship behavior through faculty trust. The present study is focused on investigating this causal sequence in the context of teacher-education faculties at university level in the Punjab province of Pakistan.

### **3. Methodology**

The paradigm of the study was quantitative in nature. The data were collected through survey instruments, and then assessed through mediation analysis. The population of the study comprised of teacher-educators (lecturers, assistant professors, associate professors, professors) working in teacher-education faculties/institutes/departments (offering at least master's degree program in Education) in twelve recognized universities in the Punjab province ( $N=380$ ). Out of twelve recognized universities, eight were in the public sector, while four in the private sector (Public  $N=344$ ; Private  $N=36$ ).

#### *3.1. Sample of the Study*

The technique for selecting the sample of the study was Stratified Proportionate Random Sampling. The technique ensured the presence of key subgroups within the sample; representation of small subgroup/s in the population (in the present study, the teacher-educators of private sector universities); and higher statistical precision, as variability in subgroups is lower as compared to when a sample is taken from the entire population as whole. The entire target population was divided into two strata/subgroups i.e. Public and Private. Seventy-five percent (75%) proportionate samples (the same proportion/fraction for each stratum, irrespective of the size of stratum in the total population) were

randomly taken from each stratum. In this way, “subgroups in the population are represented in the sample in the same proportion that they exist in the population” (Gay, 2000). The sample of the study, thus, comprised of 285 teacher-educators (Public n=258; Private n=27).

There were a few important considerations for selecting a large sample size i.e. 75% of the target population. Frankel and Wallen (2009) emphasized that “a sample should be as large as the researcher can obtain with a reasonable expenditure of time and energy” (pp. 101-102). Gay (2000) also stresses that “samples should be as large as possible” (p. 129). A major reason for selecting a large sample was that, according to a study by Stone and Sobel (1990), “a sample size of at least 200 was required for adequate mediated effect variance estimation” (cited in MacKinnon, Warsi, & Dwyer, 1995, p. 42). Bartlett, Kotlik, and Higgins (2001) highlight another important issue with reference to educational research which “often use data collection methods such as surveys [resulting] in response rates [sic] typically well below 100%” (p. 46). They cited Salkind (1997), who recommended that in case of “mailing out surveys or questionnaires”; increase the “sample size by 40%-50% to account for lost mail and uncooperative subjects” (p. 107). Another important concern was with reference to statistical power. A problem pointed out by Onwuegbuzie and Collins (2007) is that, “in the majority of quantitative inquiries, the statistical power for conducting null hypothesis significance tests is inadequate [due to small samples]”, so a large sample is vital “to detect statistically significant differences or relationships” (p. 297). In the same vein, discussing power considerations in terms of sample size, Howell (1987) argues that, “large sample sizes are almost a necessity” in order to correctly rejecting a false null hypothesis (p. 206). In the same direction, Recker (2011) adds that a “sample size is simply the single most important factor in establishing adequate power for a statistical test to identify intended effects” (p. 103). Another key consideration was with reference to making generalizations from the sample to the target population, as it needs a larger sample to avoid the “crisis of representation” (Onwuegbuzie & Collins, 2007). According to Gay (2000), “in general, the larger the sample, the more representative it is likely to be, and the more generalizable the results of the study are likely to be” (p. 129). As emphasized by Onwuegbuzie and Collins (2007), “the choice of sample size” is a key issue in research, as it “determines the extent to which the researcher can make statistical and/or analytic generalizations” (p. 287). Recker (2011) also signifies that “the larger the sample ---- the more valid will be the statistical conclusions drawn from the survey data” (p. 103).

### 3.2. Instruments of the Study

Based on the review of related literature, three instruments of data collection (for each variable of the study), comprising of self-report questions were adapted in the context of teacher-education faculties in universities in Pakistan. For each item of these three instruments, the participants of the study responded on a 6-point Likert type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). The complete questionnaire was comprised of four sections: the first section covered the demographic data (university type, gender, age, experience, position, education, and tenure), the second section covered the Organizational Justice Scale (OJS) having 23 items, the third section was Faculty Trust Scale (FTS) with 27 items, and the last section was Organizational Citizenship Behavior Scale (OCBS) comprised of 24 items. All three instruments were modified according to the context of teacher-education in Pakistan’s university

environment. For this purpose, under the guidance of a panel of experts, the draft instruments were modified with reference to the language, clarity of items, professional authenticity, and university context. The panel of experts consisted of six university professors having specialization in educational administration, organizational behavior, and educational research. The content of the modified instruments was evaluated and validated by the panel of experts; and further confirmed by conducting a pilot study on a small sample of the target population (n=42).

#### 3.2.1. Organizational Justice Scale (OJS)

Organizational justice was the independent variable of the study. Based on the review of literature/measures, Niehoff and Moorman's (1993) scale was adapted for this particular study. The scale measures organizational justice across its three dimensions, i.e. distributive justice; procedural justice; and interactional justice. The reliability of the scale is well established and has been in use for the last two decades. The Cronbach alpha coefficient of the reliability of this scale is .95.

#### 3.2.2. Faculty Trust Scale (FTS)

Faculty trust was the proposed mediator variable for the study. Based on the review of literature/measures, Hoy and Tschannen-Moran's scale (2003) was adapted for this study. The scale measures faculty trust across its three domains i.e. trust in heads, trust in colleagues, and trust in clients with reference to six facets: vulnerability; benevolence; reliability; competence; honesty; and openness. The Cronbach alpha coefficient of reliability of the scale is .98.

#### 3.2.3. Organizational Citizenship Behavior Scale (OCBS)

Organizational Citizenship Behavior was the dependent variable of the study. Based on the review of literature/measures, Podsakoff et al.'s (1990) scale was adapted for the present study. The scale measures citizenship behavior across its five dimensions, i.e. altruism; courtesy; sportsmanship; conscientiousness; and civic virtue. The Cronbach alpha coefficient of reliability of the scale is .92.

### 3.3. Data Collection

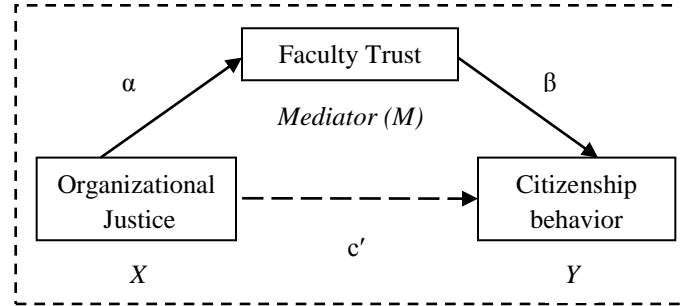
After finalizing the instruments, the survey was conducted. The researcher obtained 238 completed questionnaires (with a response rate of 83.5%). The final analytic sample, thus, resulted in an effective response rate of 62.6% out of the total target population. The data collected were tabulated and analyzed using the statistical software package SPSS.

## 4. Mediation Analysis and Interpretation

The indirect effect of an independent variable X on a dependent variable Y through a mediator variable M is referred to as Mediation ( $X \rightarrow M \rightarrow Y$ ). According to MacKinnon, Fairchild, and Fritz (2007), mediation "suggests a chain of relations where an antecedent variable affects a mediating variable, which then affects an outcome variable" (p. 594); in other words, "a mediating variable transmits the effect of an independent variable on a dependent variable" (p. 593). In a research study, mediation analysis can be very useful to get interesting information regarding the causal mechanisms. Lockwood and MacKinnon (1998), explicate that "mediation analysis seeks to go beyond the question of whether an independent variable causes a change in a dependent variable. Mediation addresses the question of *how* that change occurs." (p.

997). In contemporary mediation analysis, mediation is measured and tested for significance through the estimation of *Indirect Effect*.

For the present study, the proposed mediation model hypothesizing that the independent variable (Organizational Justice) causes the mediator variable (Faculty Trust), which in turn causes the dependent variable (Citizenship behavior), is illustrated in Figure 1. The indirect/ mediated effect is that by which X indirectly affects Y through M i.e.  $X \rightarrow M \rightarrow Y$ . A study by Stone and Sobel (1990), found that “a sample size of at least 200 was required for adequate mediated effect variance estimation” (cited in MacKinnon et al., 1995). For the present study, sample > 200 (N = 238).



**Figure 1: Proposed Mediation Model**

#### 4.1. Indirect Effect

In order to calculate the coefficient for the indirect effect, the *Product of Coefficients* approach is used, in which, the coefficient for path XM ( $\alpha$ ) is multiplied by the coefficient for path MY ( $\beta$  i.e. the Beta value for M from the multiple regression predicting Y from X and M). For this purpose, a series of regression analyses were performed:

1. For the first regression, independent variable is Organizational Justice and dependent variable is the mediator variable i.e. Faculty Trust. To ensure that there is no violation of the assumptions of regression, preliminary analysis was conducted. Linear relationship between independent variable and dependent variable was confirmed through simple scatter plot. To check for normality and homoscedasticity (homogeneity of variance or equal variance), *Normal Probability Plot (P-P) of the Regression Standardized Residual* and the *Scatter plot* were inspected. The points in the Normal P-P plot “lie in a reasonably straight diagonal line from bottom left to top right, suggesting [sic] no major deviations from normality”; while the Scatter Plot of the standardized residuals confirmed the homoscedasticity assumption as “the residuals roughly rectangularly distributed, with most of the scores concentrated in the center (along the 0 point)” (Pallant, 2007). The required unstandardized coefficients and their standard errors are given in the Table 1.

**Table 1: Regression Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	53.578	4.122		12.997	.000
	OJS_Total	.686	.041	.739	16.843	.000

a. Dependent Variable: FTS\_Total

- The coefficients table provides the data required to predict Faculty Trust from Organizational Justice. It reveals that the effect of Organizational Justice on Faculty Trust is statistically significant (Sig. = .000).
  - The zero-order unstandardized regression coefficient for predicting the mediator (Faculty Trust) from the independent variable (Organizational Justice) is 0.686.
  - The standard error for that coefficient is 0.041.
2. For the second regression (multiple regression), independent variables are Organizational Justice and Faculty Trust, while the dependent variable is Organizational Citizenship behavior. To ensure that there is no violation of the assumptions of regression, preliminary analysis was conducted. Linear relationships between independent variables and dependent variable were confirmed through simple scatter plots. To check for normality and homoscedasticity (homogeneity of variance or equal variance), *Normal Probability Plot (P-P) of the Regression Standardized Residual* and the *Scatter plot* were inspected. The points in the Normal P-P plot “lie in a reasonably straight diagonal line from bottom left to top right, suggesting [sic] no major deviations from normality”; while the Scatter Plot of the standardized residuals confirmed the homoscedasticity assumption as “the residuals roughly rectangularly distributed, with most of the scores concentrated in the center (along the 0 point)” (Pallant, 2007). The collinearity statistics indicated no problem of multi-collinearity as Tolerance=0.45 (VIF=2.20). The required unstandardized coefficients and their standard errors along with the Confidence Intervals are given in the Table 2 (SPSS output).

**Table 2: Regression Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	80.528	5.118		15.733	.000	70.444	90.612
	OJS_Total	-.054	.057	-.079	-.935	.351	-.167	.059
	FTS_Total	.390	.062	.536	6.314	.000	.268	.511

a. Dependent Variable: OCBS\_Total

- The coefficients table provides the data required to predict Organizational Citizenship Behavior from Faculty Trust. It reveals that the partial effect of Faculty

Trust on Organizational Citizenship Behavior is statistically significant (Sig. = .000).

- The partial unstandardized regression coefficient for predicting the dependent variable (Organizational Citizenship Behavior) from the mediator (Faculty Trust) holding constant the independent variable (Organizational Justice) is 0.390.
  - The standard error for that coefficient is 0.062.
  - The direct effect is near zero and it is non-significant (Sig. = .351). The 95% confidence interval includes zero (-0.167 to 0.059).
3. The coefficients obtained in step 1 and 2 were used to calculate the regression coefficient for the indirect effect:

$$\text{Indirect Effect (X} \rightarrow \text{M} \rightarrow \text{Y)} = (\alpha)(\beta) = (0.686)(0.390) = 0.26754$$

#### 4.2. Significance testing of Indirect Effect

After calculating the regression coefficient for the indirect effect, it needs to be tested for significance. In order to test for the significance of indirect effect, the following methods were applied. In the first method, the indirect effect is divided by the standard error, which is then compared to a standard normal distribution, while the second method is “based on the distribution of the product of two normally distributed random variables” (MacKinnon, Lockwood, & Williams, 2004, p. 104).

##### 4.2.1. Sobel Test

The Sobel test for the significance of indirect effect is computed by dividing the indirect effect coefficient by its standard error (Sobel, 1982, 1986). The key assumption of Sobel test is that the sampling distribution is normal. The test also requires large sample size. According to Shrout and Bolger (2002), for samples > 200 (as is the case in this study), the test gives an accurate estimate. MacKinnon, Lockwood, Hoffman, West, and Sheets (2002), found that the Sobel formula to estimate standard error of the indirect effect, had the least bias of several formulas. Using Sobel formula, the resulting Z value is 5.886 which is larger than 1.96, thus providing significant evidence of indirect effect at the .05 level.

##### 4.2.2. MacKinnon et al. Distribution of the Product

Sobel test is the most widely used method to estimate the standard error of the indirect effect (MacKinnon et al., 2007; MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002). However, in a study of a variety of methods from diverse disciplines, to evaluate the indirect/mediated effect, MacKinnon et al. (2002), found that, “tests based on the normal distribution for mediated effect estimators divided by their respective standard errors” had low statistical power, because “the resulting ratio does not always follow a normal distribution” (MacKinnon et al., 2007), “in fact, it is skewed for nonzero indirect effects” (MacKinnon et al., 2004). MacKinnon et al. (2002) accentuate that “a method with low statistical power will often fail to detect real effects that exist in the population. A method with Type I error rates that exceed nominal rates (e.g., larger than 5% for nominal alpha = .05) risks finding nonexistent effects” (p. 84).

According to MacKinnon et al. (2007) “in comparison with commonly used methods, significance tests for the mediated effect based on the distribution of the product had more accurate type-I error rates and statistical power” (p. 601). In this method, the critical paths ( $\alpha$  and  $\beta$ ) are converted into z scores by dividing their unstandardized regression

coefficients by the standard errors (these are, in fact, the *t* scores reported in the SPSS output for testing those paths). For the present data, that yields:

$$Z_{\alpha} Z_{\beta} = 16.843 * 6.314 = 106.346702$$

For the .05 significance level, for the  $P = Z_{\alpha} Z_{\beta}$  distribution, the critical value is 2.18, rather than 1.96 for the normal distribution (MacKinnon et al., 2004), thus revealing significant evidence of indirect effect ( $p < 0.02$ ). It is important to note that the *p* value was obtained from the table/s given by MacKinnon et al. (2002), instead of the standard normal distribution.

#### 4.3. Bootstrap Analysis

With the increase in computer processing power and better software, bootstrapping is increasingly becoming a preferred method for mediation analysis. MacKinnon et al. (2007) call this analysis as ‘computer-intensive’. The bootstrap analysis “involves having a computer program generate a series of data sets that are designed to resemble the ones that would be observed if the estimation study were repeated many times. Each bootstrap data set is obtained by sampling (with replacement) from the original data” (Shrout & Bolger, 2002). The original data/sample is treated as a “population reservoir from which a large number of random samples are drawn” (Mallinckrodt, Abraham, Wei, & Russell, 2006). Sampling with replacement means that “a given case can be selected as part of a bootstrap sample not at all, once, twice, or even multiple times” (Preacher & Hayes, 2008). For mediation analysis, the indirect effect is computed from each of these samples, thus empirically generating a sampling distribution.

According to Shrout and Bolger (2002), bootstrap analysis is “particularly useful in studying indirect effects in mediation models” (p. 440). MacKinnon et al. (2007) argue that a computer-intensive method is significant as not only it “provide[s] a general way to test significance and construct confidence intervals in a wide variety of situations ---- [it also doesn’t] require as many assumptions as other tests, which is likely to make [it] more accurate than traditional mediation analysis” (p. 602). Preacher and Hayes (2008) strongly recommend bootstrapping for mediation analysis as it “provides the most powerful and reasonable method of obtaining confidence limits for specific indirect effects under most conditions”. For the present analysis, the SPSS macro INDIRECT written by Andrew F. Hayes (Preacher & Hayes, 2008) was applied. The bootstrap estimates presented here are based on 5,000 bootstrap re-samples. The estimates and 95% CIs (percentile, BC, and BCa) are shown in Table 3.

**Table 3: Bootstrap Results for Indirect Effect of IV on DV through Proposed Mediator**

					Percentile 95% CI		BC 95% CI		BCa 95% CI	
	Data	Boot	Bias	SE	Lower	Upper	Lower	Upper	Lower	Upper
<b>Faculty Trust</b>	.2674	.2665	-.0009	.0618	.1488	.3913	.1540	.4008	.1598	.4078

Note: BC = Bias Corrected; BCa = Bias Corrected and Accelerated; Number of Bootstrap Resamples = 5,000.

In the bootstrap results, *Data* is the indirect effect calculated from the original sample, *Boot* value is the mean of the indirect estimates computed across all bootstrap samples

resulting in an estimate of the true indirect effect in the underlying population (very close to the indirect effect calculated from the sampled data), while *Bias* is the difference between *Data* and *Boot* values. The true indirect effect via Faculty Trust (.2665) is 95% likely to lie within the Confidence Interval range (be it percentile, bias-corrected, or bias-corrected and accelerated CI). In agreement with results of the Sobel test and the Distribution of the Product approach, bootstrap analysis also confirms that the indirect effect of Faculty Trust is significant.

#### 4.4. Indirect Effect and Mediated Effect

According to Preacher and Hayes (2004), there is distinction between *indirect effect* and *mediated effect* i.e. a significant indirect effect is termed as a mediated/mediation effect, only when there is evidence for a significant total/overall effect  $X \rightarrow Y$ , even though “the terms mediated effects and indirect effects are sometimes used interchangeably” (p. 719). While assessing indirect effects, there is no such assumption that there is significant total effect  $X \rightarrow Y$ . Preacher and Hayes (2004), emphasize that, “it is quite possible to find that an indirect effect is significant even when there is no evidence for a significant total effect. Whether or not the [significant indirect] effect also represents mediation, [it] should be judged through examination of the total effect” (p. 719).

For the present study, the total effect of  $X \rightarrow Y$  is computed by conducting a linear regression to find the effect of Organizational Justice on Organizational Citizenship Behavior (zero-order effect), yielding the regression coefficient  $c = 0.214$  (significant positive effect), as shown in Table 4. Therefore, the significant indirect effect is established as a mediated/mediation effect. It is consistent with the interpretation that organizational justice leads to greater faculty trust, which in turn leads to greater citizenship behavior.

**Table 4: Regression Coefficients <sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	101.402	4.217		24.046	.000
	OJS_Total	.214	.042	.317	5.129	.000

a. Dependent Variable: OCBS\_Total

From the above mediation analysis, as the indirect/mediated effect is statistically significant, while the direct effect  $c'$  is near zero, is far from statistically significant (Sig. = .351), is less than the total effect  $c$  (i.e.,  $c'$  is closer to zero as compared to the  $c$  estimate), and the 95% confidence interval contains zero (-0.167 to 0.059); it might be argued that the data is consistent with complete/total mediation (Shrout & Bolger, 2002; MacKinnon, Krull, & Lockwood, 2000).

#### 5. Conclusion

The study shows that faculty trust fully mediated the relationship between faculty trust and organizational citizenship behavior. The findings are quite in line with the past study by Konovsky and Pugh (1994) that confirmed the major mediating role of trust in strengthening a positive relationship of justice and citizenship. In the similar direction, the current study endorses the research by Aryee et al. (2002) who found that all the three

dimensions (distributive, procedural, and interactional justice) were related to trust in a business organization. Their study confirmed that trust as mediator fully mediated the positive relationship between the interactional dimension of justice and OCB work outcomes. Shehzad et al. (2013), in a study at four recognized universities in Islamabad (Pakistan), found that faculty trust partially mediated the relationship between justice and citizenship behavior. The finding of the present study is consistent with the interpretation that organizational justice leads to greater faculty trust, which in turn leads to greater citizenship behavior.

Although, the present study provides evidence of significant mediating role of faculty trust in the relationship between organizational justice and teachers' citizenship behavior, there are some limitations to the study as well. Primarily, the study is focused only to the discipline of teacher-education. The inclusion of other teachers in the sample (such as focusing on teachers of social sciences) might lead to different findings due to change of participants and context. Secondly, the study is limited to only one province of Pakistan i.e. Punjab, and thus it cannot be generalized to the whole country. For future research, teachers belonging to universities from different cities of all regions/provinces of Pakistan can be involved to better understand the causal sequence explored in the present study. Thirdly, the nature of cross-sectional survey data means that one must be careful about causal relations. In order to provide a better understanding to the policy makers, a longitudinal study might give rich data to explore mediating role of faculty trust. A mixed method approach combining qualitative and quantitative methods might also help in triangulating the results of future research.

Despite the above mentioned limitations of this study, it has made some important contributions to the existing literature regarding organizational behavior in the context of teacher-education institutions at university level. The study provides strong evidence that positive perceptions of organizational justice lead to higher faculty trust, which results in greater citizenship behavior among teacher-educators. Another key contribution is the adaptation of three scales related to organizational behavior specifically the organizational justice scale, the faculty trust scale, and the organizational citizenship behavior scale; not only for teacher-educators but for all teachers at the higher education level. The major implication of the study is the crucial role of fairness in educational organizations towards cultivating trust among teachers, and making them realize that they are not merely routine employees at a workplace but rather good citizens of an organization; thus leading to an amiable and effective work environment manifesting in realizing university goals.

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