

The Mediating Role of Overall Justice in Justice-Employees Attitudes Relationship: A Test of Five Factors Model

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Abstract

This study evaluates the relationship between organizational justice (OJ) dimensions and employees attitudes through the mediating mechanism of overall justice. It has two main objectives: to evaluate whether our proposed additions in OJ justify theoretically from the experts point of view, and to analyze the mediating mechanism of overall justice between OJ dimensions and employees attitude. One sample t-test and simultaneous equation models (SEM) were used for testing of hypotheses. The results reflect that experts opinion on our proposed additions in existing scales have appeared on positive side, that is, they were more inclined toward agreed side than disagreed. In addition, OJ is better covered in five major dimensions, such as, distributive justice, process procedural justice, rater procedural justice, interpersonal justice, and informational justice. Similarly, overall justice partially mediates between OJ dimensions and employees attitude. The implications of results have been discussed for both theory and practice.

Key words: Organizational Justice, Distributive Justice, Process Procedural Justice, Rater Procedural Justice, Interpersonal Justice, Informational Justice, Mediation Model

Introduction:

The concept of OJ has been developed and examined by the research scholars during the last four decades (Colquitt, 2012). Despite of the fact that 500 research papers and more than 20 books have been contributed in this research area up to 2005 (Colquitt *et al*, 2005), there is still little understanding on the concept of overall justice. For example, how OJ dimensions contribute towards overall justice, which one contribute better relative to other dimensions. Moreover, whether overall justice mediates between different OJ dimensions and employees attitudes? The study in hand aims to answer these two questions.

In spite of the fact that concept of OJ developed over time in both theory and practice up to the level that it provide good insight to both researchers and practitioners; however, there is limited

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understanding on the intervening mechanism of overall justice between OJ dimensions and employees attitude. Moreover, the research in this area largely focused on individual OJ dimensions and their outcomes, such as, job satisfaction, organizational commitment, organizational citizenship behavior, and employee's turnover. Many researchers, however, argue that employee's experiences of justice are best explained by overall justice than individual dimension of justice (Lind, 2001; Ambrose and Schminke, 2009; Shapiro, 2001). In addition, several researchers also suggested a need for research on overall justice (Hauenstein *et al*, 2001; Ambrose and Arnaud, 2005).

The study in hand consulted OJ expert's opinion pertaining to the inclusion of our proposed additions and their relevancy in existing OJ scales. Qualitative research design was initially used consulting 37 OJ experts from all over the world; while, data from 294 faculty members was then collected to rate the actual prevailing conditions of organizations. This paper is divided into five sections. The theoretical gaps in literature and the importance of our proposed additions have been presented in the respective dimensions of OJ in section 2. Similarly, literature on the importance of overall justice over individual dimension of justice has also been highlighted. Research methodology is presented in section 3, covering both experts opinion and faculty members perception. The empirical results along with the interpretations are given in section 4. Finally, the implications for theory and practice have been highlighted in the last section.

The concept of OJ developed well over the time in both theory and practice, however, it need further exploration. In addition, the research on individual dimension of OJ and its outcomes has been very useful for developing theories, such as, fairness heuristic theory, organizational justice theory, and agent system model etc. However, many contemporary researchers argue that the focus of individual dimension of OJ and its outcomes may not capture the exact prevalence of justice within the organization. Therefore, there is a need of research to further explore the concept of OJ, and to measure overall justice within the organization. These propositions provide strong foundation for this study.

This study aims to achieve the following objectives.

1. To evaluate whether our proposed additions in OJ dimensions justify theoretically from the expert's point of view.
2. To evaluate whether overall justice mediate between organizational justice dimensions and employees attitudes.
3. To frame suggestions that may be helpful for policy makers and top level management.

This study was restricted to private sector higher educational institutions of Pakistan and was therefore of importance to the management and policy makers of education sector to improve the working conditions of their institutions for the faculty members. Since, private sector organizations share almost similar organizational culture and structure, this study therefore assume vast implications of this study to undergraduate and lower level education with in Pakistan. Hence, top level management should take notice of the insignificant OJ dimensions and take remedial measures to minimize the problems with insignificant dimensions of OJ.

The second important dimension of this study is to become aware of existing conditions of overall justice within the private sector higher educational institutions of Pakistan. Although all OJ dimensions prevail within the organizations; however, their prevalence be further strengthened with appropriate remedial action to further improve employees perceptions pertaining to overall justice, which in turn lead to positive employees attitude.

Review of Literature

The concept of OJ refers to employee perceptions regarding how employees are treated and the outcomes they receive are reasonable, impartial, and in compliance with ethical and moral values (Cropanzano *et al*, 2007; Greenberg, 1990). The theory of OJ has been developed from one to two dimensions, two to three dimensions, and finally from three to four dimensions (Colquitt and Shaw, 2005). The researchers in the field of OJ by and large agree that it has four major dimensions, such as, distributive justice, procedural justice, informational justice and interpersonal justice. However, some researchers argue that procedural justice is best covered in two separate dimensions, namely, process procedural justice, and rater procedural justice (Erdogan, 2002; Erdogan *et al*, 2001; Nabatchi *et al*, 2007).

Distributive justices (DJ) refer to the employee's perceptions regarding the distribution of resources, which includes benefits, rewards, recognition, pay, and promotions etc. People compare their contributions and inducements to that of other employees. Employee's assessment that inducements are unfair and unjust leads them to perceive treatment as unfair (Adam, 1965; Leventhal, 1976). Researchers have extended the scope of distributive justice from equity to equality, followed by need based allocation. Today, it consist of three allocations rules such as, equity theory (Adam, 1965), equality, and need based distribution (Deutsch, 1975).

Procedural justice (PJ) is the employee's perceptions concerning the fairness of the decision-making processes. Employee's assessment

that managers and corporation adopt unfair practices and procedures to reach the decisions leads them to perceive treatment as unfair (Leventhal, 1980; Thibaut and Walker, 1975; Greenberg and Folger, 1983). Researchers, by and large have measured procedural justice through, process control (Thibaut and Walker, 1975), procedural fairness (Leventhal, 1980; Leventhal *et al*, 1980; Folger & Bies, 1989) and due process model (Folger *et al*, 1992). Process control refers to the degree to which people have sufficient time to present their arguments, which provide basis for decision (Thibaut and Walker, 1975). Process control is also referred to as “voice” (Folger, 1977; Lind and Tyler, 1988). Leventhal (1980) have identified an extended list of six procedures and called it “procedural fairness”, which include; consistency, bias suppression, accuracy, correctability, ethicality, and the degree to which they allow voice and input. Almost similar procedural justice criteria were identified by (Folger and Bies, 1989), which include; (1) giving adequate consideration to employees viewpoints (2) Bias suppression (3) consistent application of decision criteria (4) timely feedback (5) providing justification for decisions (6) truthfulness in communication and (7) courteous/civil treatment of employees. Based on the above mentioned criteria, people decide whether or not management adopts fair and transparent procedures to arrive at decisions leads to perceptions of fair treatment (Greenberg and Folger, 1983; Leventhal, 1980; Thibault and Walker, 1975).

Contemporary researchers like Mark, Helen, & Maureen (2012) proposed that the above mentioned components identified by different scholars can be, and indeed have been systematically combined in the due process model (Folger *et al*, 1992). Many researchers have proposed “due process model” to measure procedural justice in organization decision making (Folger *et al*, 1992; Posthuma, 2003; Weller, 2009). Posthuma (2003) have further emphasized that both procedural justice and due process model share similar dimensions and the same underlying rationale, and so well developed conceptions of the former can be used to better understand the latter. Due process model according to Folger *et al*, (1977) includes three major dimensions, such as, (1) advance notice (2) fair hearing and (3) decision based on evidence. This model has been recently used by (Mark *et al*, 2012) to measure overall procedural justice with regard to poor performance, misconduct, and redundancy (downsizing) situations.

Our review reflect that researchers have generally used a single scale to measure overall procedural justice, however, some researchers (Erdogan *et al*, 2001; Nabatchi *et al*, 2007) proposed that overall procedural justice can be divided into two different types; namely,

process procedural justice and rater procedural justice. Similarly, procedural justice scales by and large do not cover objective measure of procedural justice and have largely measured procedural justice subjectively i.e. through employee perceptions. Contemporary researchers like (Weller, 2009) mentioned that, in addition to subjective measures, procedural justice dimension is also defined objectively. This review help us to conclude that there is a need of a scale which may cover overall procedural justice, under (1) rater procedural justice (fairness of procedures implement by decision maker) and (2) process procedural justice (fairness of procedures used by the organization).

Interactional dimension of justice refers to interpersonal treatment employees receive when decisions are implemented (Bies and Moag, 1986); or it refers to the treatment which is established while enacting organizational processes (Bies and Moag, 1986). It also deals with the sense of fairness of different interaction aspect. Whereas, (Greenberg, 1993) suggested that interactional justice could better be conceptualized in two separate dimensions, such as, interpersonal justice, and informational justice, (Colquitt, 2001) have empirically tested and verified that interactional justice should be divided into two dimensions, such as, interpersonal and informational justice.

Interpersonal justice (INPJ) is the level to which employees within organization are treated with politeness, respect and dignity by supervisors (Colquitt, 2001). The assessment that they are not treated with dignity and respect will lead to perceptions of unfair treatment (Bies and Moag, 1986; Colquitt, 2001; Greenberg, 1993). The interpersonal justice research is mostly confined to interaction between employees and his supervisor; however, (Baron and Kreps, 1999) mentioned that employees have different types of interaction with in the organization, such as, interaction between employees and supervisor, interpersonal interaction between employees, and interaction between employees and top management. The interpersonal justice research is largely limited to how employees are treated by their immediate supervisor and have generally ignored interpersonal interaction between employees and interaction between employees and top management, as already suggested by some researchers (Baron and Kreps, 1999). This suggests that there is a need of a scale which may cover how employees are treated by supervisor, colleagues and top management.

Informational justice (INFJ) refers to information convey to people are adequate, true and on time. Employees assessment that information is untrue or not on the time and do not provide sufficient explanations leads to perceptions of unfair treatment (Bies and Moag,

1986; Colquitt, 2001; Greenberg, 1993). Bies and Moag (1986) proposed two criteria to measure informational justice, which include: truthfulness, and justification. However (Shapiro *et al*, 1994), while studying perceived adequacy of explanation proposed additional variable such as; the information should be reasonable, timely and specific. The review of information justice scales shows that researchers mostly have measured informational justice with downward communication and have generally ignored upward communication, which flows in a higher level within organization (Robbins and Judge, 2013). This indicates that there is a need of another scale which may cover both upward and downward communication.

Scholars in the field of organizational behavior believe that people usually have thousands different types of attitudes, but organizational behavior talked about only work-related attitudes (Robbins and Judge, 2013). Moreover, the research in organizational behavior has focused on three major attitudes, which include, job involvement, job satisfaction, and organizational commitment (Robbins and Judge, 2013). So, for the purpose of this study, attitudes will include job involvement, job satisfaction, and organizational commitment.

The literature reflects that OJ research by and large focused on individual dimension of justice and different outcomes. That is, how different dimensions of justice individually affect employee's attitude and behavior. However, contemporary researchers (Ambrose and Arnaud, 2005; Lind and Van den bos, 2002) suggest that such singular dimension of justice may not capture the exact picture of individuals' justice experiences. Lind (2001) clearly mentioned that employees within an organization form overall justice perception as they receive information pertaining to justice. So, employees use the prevalence of overall justice to measure whether to positively support the supervisors and behave accordingly. Therefore, overall OJ is more proximal to employee's attitude than different dimensions of OJ (Lind, 2001).

The seminal work presented by Lind (2001) helps the researchers to suggest that overall OJ should be linked with more proximal measures because they are theoretically and methodically easier to link. OJ dimensions are proximal to overall OJ which itself is proximal to employee's attitudes and behavior. Ambrose and Schminke (2009) empirically examined the mediating mechanism of overall justice between different types of justice and employee attitudes and behavior. The three dimensions of OJ used in their study include: distributive justice, procedural justice, and interactional justice. Structural Equation Model (SEM) was applied to test the mediating mechanism of overall

justice. They found that overall justice mediate the relationship between different types of justice and employee attitudes and behavior.

In this context, Holtz and Harold (2009) also used the perceptions of overall OJ and found that DJ, PJ, and INPJ are the significant predictors of overall OJ. Likewise, Jones and Martens (2009) have also used the concept of overall justice, and found that DJ and INPJ were the main contributor relative to PJ and INFJ. In addition, Marzucco *et al.*, (2014) reported that overall OJ mediates between organizational justice dimensions and employees attitude. More recently, Patel *et al.*, (2012) have also used the concept of overall OJ and found that all four dimensions are significant predictors of overall OJ. Therefore, overall justice was used as a mediator between different types of justice and employees attitudes.

Research Hypotheses

H₁: OJ experts would agree with the suggested additions in OJ scale.

H₂: OJ dimensions have positive and significant impact on overall OJ, which in turn affect employee's attitudes.

H_{2A}: OJ dimensions have positive and significant impact on overall OJ.

$$OJ = f(DJ, PPJ, RPJ, INPJ, INFJ) \quad (\text{Model 1})$$

H_{2B}: Overall OJ mediates between different dimensions of OJ and employee attitudes.

$$ATT = f(DJ, PJ, INPJ, INFJ, OJ) \quad (\text{Model 2})$$

Research Methodology

The research in hand required consulting the basic stakeholders, which include: experts in the area, and faculty members of private sector higher educational institutions. The selection of multiple respondents in turn required multi-method (expert opinions & survey) approaches for data collection.

Procedure For Experts Opinion

The experts in the field of OJ were consulted for their expert opinion on our proposed additions in OJ questionnaire. The experts were also able to add their opinion and give additional remarks or so if they so desired. For this purpose, scale was sent via email and by post, to national and international experts.

Procedure For Survey Approach

The survey was conducted to get faculty members responses regarding OJ and its effect on enhancing positive employee attitudes. In the faculty member's survey, faculty members would rate the prevailing conditions of organizational justice and its impact on their attitudes.

Population

People belong to private educational institutions of management sciences department constitute the population for this research study. The data

was collected from all private (69) universities; hence, the census for this study was 69 and census size was 483 ($7 * 69 = 483$).

Data Analysis Methods

Two different analytical tools were used to test the hypotheses of this study. First, data collected from the OJ experts was analyzed using one-sample t-test. While, data collected from the faculty members was analyzed via simultaneous equation modeling (SEM), using SPSS 21 version. More specifically, mediation model was applied to test the mediating effect of overall OJ between OJ dimensions and employee's attitude.

Results and Discussion

This section provides the results of the statistical analysis along with the interpretation and discussion. A total of 483 questionnaires were distributed among the faculty members, out of which 309 questionnaires were returned to the researcher. 10 questionnaires were eliminated either due to the missing of relevant dependent or independent variables data. Similarly, the data of five respondents was also omitted due to the lowest extreme values creating normality problem. Therefore, the final census size for testing was 294, creating a response rate of 60 percent. However, before the OJ scale was distributed among the faculty members, it was first evaluated by the experts in this field.

Experts Opinion

In order to evaluate the experts opinion whether or not our propose items measures OJ and its four major dimensions, 48 new questions (our proposed items) were tested. The data of expert's opinion was tested via one sample t-test. The experts opinions on all questions have appeared on positive side, that is, they were more inclined toward agreed side than disagreed. Moreover, with the exception of some items (EE4, DJ1, DJ2, PPJ1, SDM3, INFJ2), the mean-differences of the majority items are statistically significant at ($p < 0.05$). This indicate that the experts opinion are significantly away from the midpoint (= 3) than near-to 'Agreed' situation. As far as the insignificant mean differences of the stated six items are concerned, these items were rephrased as per the valuable comments and suggestion of eminent experts.

Reliability Test and Detection of Multicollinerity

Table (1) provides the correlations coefficient and Cronbach's alpha of OJ dimensions and its outcomes, such as, employee's attitude. The respondent's feedbacks on all seven dimensions (DJ, PPJ, RPJ, INPJ, INFJ, OJ, & ATT) were individually evaluated through SPSS for reliability test; the Cronbach's alphas estimated are presented in table (1). The reliability results of our six dimensions, (DJ, PPJ, RPJ, INPJ, INFJ, & OJ) are near to one, which indicates that these measures provide

good results; however, the reliability of employee's attitude is under the acceptable range. These results suggest that the reliability of our measures ranges from moderate to high reliability (DJ, PPJ, RPJ, INPJ, INFJ, OJ, & ATT).

Table-1: Cronbach's alpha & Correlation coefficient

construct	α	M	S.D	1	2	3	4	5	6	7
DJ	0.966	3.37	0.874	1						
PPJ	0.952	3.80	0.932	0.08	1					
RPJ	0.964	3.96	0.893	-0.03	0.50*	1				
INPJ	0.950	4.02	0.722	-0.04	0.41*	0.38*	1			
INFJ	0.926	4.08	0.604	-0.07	0.40*	0.41*	0.39*	1		
OJ	0.888	4.06	0.586	-0.02	0.48*	0.46*	0.45*	0.72*	1	
ATT	0.758	3.84	0.331	0.01	0.16*	0.20*	0.23*	0.19*	0.21*	1

Similarly, table (1) also illustrate that the correlation coefficients are highly significant but not too strong among different dimensions, with the exception of employee's attitude and behavior; however, it is still in tolerable limit. So, on the basis of correlation test, we may conclude that our model is not plagued with the problem of multicollinerity.

Structural Equation Model (SEM)

In model (1), overall OJ was regressed on DJ, PPJ, RPJ, INPJ, and INFJ. The results are presented in table (2).

Table-2: OJ dimensions contribution in overall OJ

Model		Un-standardized		Standardized	t	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
1	(Constant)	.176	.216		.817	.415
	DJ	.038	.035	.038	1.064	.288
	PPJ	.038	.031	.058	1.239	.216
	RPJ	.029	.029	.043	.991	.322
	INPJ	.091	.039	.103	2.357	.019
	INFJ	.767	.050	.691	15.249	.000

a. Dependent Variable: OJ

$F = 106.31$ ($p=0.000$), $R^2 = 0.649$, $R^2_{adjusted} = 0.643$

Model (1) incorporates the effects of five dimensions of OJ to measure overall OJ, as suggested by Ambrose and Schminke (2009). The model as whole was significant ($F = 106.631$, $p < 0.001$), and DJ, PPJ, RJP, INPJ, and INFJ are collectively responsible for 64.9 percent changes in overall OJ ($R^2 = 0.649$). However, DJ ($b_1 = 0.038$, $p > 0.001$), PPJ ($b_2 = 0.038$, $p > 0.001$), and RPJ ($b_3 = 0.029$, $p > 0.001$) have statistically insignificant contribution; while, INPJ ($b_4 = 0.091$, $p < 0.05$) and INFJ ($b_5 = 0.767$, $p < 0.001$) have statistically significant contribution towards

overall OJ. These results reflect that INPJ, & INFJ have significant positive contribution in measuring of overall OJ; while, DJ, PPJ, RPJ have insignificant contribution, which need special attention for overall OJ of Pakistani private sector higher educational institutions. Therefore, hypothesis 2_A is partially accepted.

In model (2), employees' attitude was regressed on DJ, PPJ, RPJ, INPJ, INFJ and OJ. The results are provided in table (3).

Table-3: The mediating effect of overall OJ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
		1	(Constant)	3.237		
	DJ	-.055	.032	-.099	-1.726	.085
	PPJ	-.005	.028	-.013	-.176	.860
	RPJ	.016	.027	.043	.601	.548
	INPJ	.032	.038	.063	.839	.402
	OJ	.153	.057	.217	2.698	.007

a. Dependent Variable: ATT

F= 5.66 (p=0.000), R²= 0.090, R²_{adjusted} = 0.074

The results suggest that the model as a whole is statistically significant (F = 5.664, p < 0.01), and R²= 0.090 suggest that 9 percent variations in the dependent variable employees attitude is due to DJ, PJ, RPJ, INPJ, and overall OJ. As per the condition set for contemporary mediation, overall justice variable is significant (b₅ = 0.153, p = 0.007); hence, it fulfills the requirements of mediation. Further, in compliance with mediation criteria, with the incorporation of 'overall justice, the significant variables are either no more significant or the contributions of independent variables DJ, PPJ, RPJ, INPJ have reduced from b₁ = 0.038, b₂ = 0.038, b₃ = 0.029, b₄ = 0.091, and b₅ = 0.767 (Model 1) to β₁ = -0.055, β₂ = -0.005, β₃ = 0.016, and β₄ = 0.032 (Model 2), respectively. Hence, overall OJ fulfils the criteria set for mediation analysis, and since variable DJ is still significant at 10 percent level of significance, therefore, variable overall OJ is partially mediating. Results suggest that variable overall OJ positively contribute towards measuring of employee's attitude. Thus, hypotheses H_{2B} is partially accepted. However, it is important to mention that INFJ was also excluded from the model due to high multicollinearity.

Calculation of total, indirect and direct effect

Wherever researchers (Kenny, 2012) by and large suggest not to focus on traditional statistical significance testing of the estimated coefficients, they have also recommended more emphasis be given to

total effect and its division into indirect (ab) and direct effect (c'); therefore:

$$\text{Total effect} = \text{Direct effect} + \text{Indirect effect} \quad (3a)$$

$$c = c' + ab \quad (3b)$$

Where, c is the total effect of explanatory variables on the dependent variable, c' is the direct effect of explanatory variables on dependent variable, and ab is the mediated effect passing through mediator (overall justice). It is highly relevant to mention that the equality of abovementioned equation holds only in certain conditions. More specific to structural equation modeling (SEM), equality holds in: (a) when SEM is used without latent variables; (b) when the same SEM models are used throughout the analyses; and (c) when the same covariates are applied in SEM. However, both sides of the equation are only approximately equal for SEM when latent variables are included in the model. Moreover, the total effect (c) should be computed through direct and indirect effect (c' + ab), and not directly computed from equation one (Kenny, 2012). It is, however, required that the mediated/indirect effect be analyzed for its statistical significance via (i) causal steps tests, (ii) product of the coefficients test/Sobel test, (iii) difference in coefficient test and (iv) bootstrapping (MacKinnon *et al*, 2004).

The most contemporary approach to mediation analysis requires putting the values of direct effect (c') and indirect/mediated effect (ab) in above mentioned model, and solving it for total effect (c) (Kenny, 2012). The total effect is then divided in to indirect (ab) and direct effects (c') by applying the following formulas.

$$\text{Direct effect (\%)} = (c'/c) \times 100 \quad (4a)$$

$$\text{Indirect effect (\%)} = (ab/c) \times 100 \quad (4b)$$

The values of c', ab, required for the abovementioned models 3 and 4 (a – b), are provided in their respective models 1 – 2. It is, however, important to be mentioned that the contribution of our first three independent variables (DJ RPJ & PPJ) in SEM seems either insignificant or holds a negative sign, which suggest that these variables are 'inconsistent candidate' for mediation analysis. Most recently, (Kenny, 2012) have discussed a number of reasons, which make a variable 'inconsistent candidate' for mediation. However, the calculations made for direct and indirect effect of all explanatory variables are provided in Annexure table (1).

The direct and indirect effects have been computed using formulas 3 and 4 (a – b); the results of direct and indirect effects indicate that the direct effect of variable INPJ on employees attitudes is 69.68 percent, while the mediated effect of 'overall justice' relative to INPJ is

30.33 percent. To analyze whether or not our mediator considerably mediates between OJ dimensions and employees attitude, researchers (MacKinnon *et al*, 2004; Kenny, 2012) generally suggest testing the mediated effect (ab) through following tests.

- (a) Causal step test
- (b) Product of coefficient test/Sobel test
- (c) Difference in coefficient test
- (d) Resampling method/bootstrapping

The first two tests have been applied here to check the mediated effect of overall justice between organizational justice dimensions and employee's attitude.

Causal Step Test

As one way to test $H_0: ab = 0$, is to test $a = 0$, and $b = 0$. Most contemporary researchers recommends that scholars use causal step test in combination with other tests, such as, Sobel test (Kenny, 2012; Fritz and MacKinnon, 2007; Fritz *et al*, 2012).

Hypothesis $H_0: a = 0$ was substantiated in Model 1; which reflects that p-value of DJ ($b_1 = 0.038$, $p = 0.288$), PPJ ($b_2 = 0.038$, $p = 0.216$), and RPJ ($b_3 = 0.029$, $p = 0.322$) are statistically insignificant, and that of INPJ ($b_4 = 0.091$, $p = 0.019$) and INFJ ($b_5 = 0.767$, $p = 0.000$), are statistically significant.

Hypothesis $H_0: b = 0$ was substantiated in Model 2; the results indicate that p-value of b_5 , relating to mediating variable 'overall justice', is statistically significant (0.007).

The causal step test help us to identify that, the mediated or indirect effect (ab) of variable INFJ appears to be strongly statistically significant ($p = 0.000$), followed by variable INPJ, which have moderately significant effect ($p = 0.019$), while remaining variables (DJ, PPJ, RPJ) have no or very little mediated effect.

Sobel Test

To test $H_0: ab = 0$, Sobel test or the product of coefficient test uses the following test statistic.

$$\text{Test: } Z_{ab} = ab/s_{ab} \quad (5a)$$

This test follows Z-distribution, specifically, ab/s_{ab} will fall within ± 1.96 interval for $ab = 0$; if not, it will fall outside of the stated interval. Where S_{ab} were calculated, using the following formula:

$$S_{ab} = \sqrt{(a^2 S_b^2 + b^2 S_a^2)} \quad (5b)$$

Where, S_a and S_b are the standard errors of a and b, respectively. The detailed calculations made for the product of coefficient test/Sobel test, applying formulae given in 5 (a & b) are provided in Annexure table (2). The results of Z_{ab} , calculated for indirect or mediated effect (ab) of overall justice on variables DJ, RPJ, INPJ and PPJ, falls within the range

of ± 1.96 , while that of variables INFJ fall outside of the stated range, indicating that the indirect or mediated effects in respect of the former four variables are statistically significant, and that of latter variable is statistically insignificant. However, it has been earlier mentioned that the contribution of our first three independent variables (DJ, RPJ & PPJ) seems either insignificant or holds negative signs, which suggest that these three variables are 'inconsistent candidates' for mediation analysis.

Discussion

The results of this study support our first hypothesis H_1 . The results of one sample t-test revealed that researchers or expert's opinion on all questions have appeared on positive side, that is, they were more inclined toward agreed side than disagreed. Moreover, with the exception of some items (EE4, DJ1, DJ2, PPJ1, SDM3, INFJ2), the mean-differences of the majority items are statistically significant at ($p < 0.05$). The results of researcher's opinions are according to our prior expectations that the concept of OJ is better covered with the incorporation of missing theories. The results of one sample t-test are consistent with existing literature. Greenberg (1993) argue that although the concept of OJ made significant theoretical advancement, but it still far away from the final stage of concept development, either due to underlying missing theories or inappropriate research objectives. It may be argued that missing a relevant sub-dimension from the model (for example, external equity or equality) would not only confine the scope of organizational justice dimensions, but it would also restrict our understanding of employees' justice experiences and their relevant attitude and behavior towards them. In fact, missing theories was one of the reason that many researchers mentioned that the focus of individual organizational dimension may not capture the exact picture of employees justice experiences (Ambrose and Arnaud, 2005; Lind and van den Bos, 2002; Tornblom and Vermunt, 1999). Thanks to their concerns, that Ambrose and Schminke (2009) had to introduce the concept of overall OJ to better capture the prevailing conditions of employees' justice experiences within the organization. However, including rather than omitting the relevant missing theories are important to contribute both theoretically and methodologically.

The results of this study partially support the hypothesis H_{2A} . The results indicate that INPJ and INFJ positively and significantly contribute towards overall OJ; while, DJ, PPJ, and RPJ did not contribute towards overall OJ. These results suggest that high prevalence of INPJ and INJ dimensions of justice may cover the problems of procedural and distributive dimensions of justice in the form of overall perceptions of justice. Our results are very well supported by Jones and Martin (2009)

study; they found that some dimensions of OJ are strongly related to overall OJ relative to other dimensions, and by Lind (2001) argument that the interplay between different dimensions contributions towards overall OJ is context specific. Therefore, the possible explanation in differences of results in literature may be attributed to the context under which data was collected, which largely affects the results of the study. Hence, this study should be conducted in both public and private sector educational institutions and other sectors to further validate the results.

The results of this study partially support the hypothesis H_{2B}. The results reflect that overall OJ partially mediates between OJ dimensions and employees attitude. The findings suggest that organizations interested in improving employees attitudes and their desired behaviors have to work on organizational justice dimensions, to improve their work life, which in turn would lead to positive attitude and behavior. That is, organizational justice dimensions contribute towards employees' attitude through the mediating mechanism of overall justice. Our results are consistent with the theory, that organizational justice dimensions are the antecedents of overall justice, and overall OJ is more proximal measure to employees' attitude than organizational justice dimensions (Lind, 2001; Ambrose and Schminke, 2009; & Jones and Martens, 2009). More recently, Ambrose and Schminke (2009) found that overall organizational justice mediate between different types of organizational justice and employees' attitude. Hence, overall OJ mediates between organizational justice dimensions and employees attitudes.

The results of this study indicate that OJ dimensions lead to overall justice which further lead to employees attitudes. As, it has been observed that some of the private sector organizations provides below the market rate wages, no job security, and having tough working environment. Hence, given such an organizational culture, the solution may be a total reward, which includes both financial and non financial aspect of rewards. The total rewards may include base pay, variable pay, share options, recognitions, autonomy, opportunities, work life balance, an extra day off and so on. Whatever the total reward, it is essential that people understand what the incentive plan is and how fairly it is distributed. Further, many people in private sectors are not properly communicated the policy, procedures and practices of the organization. In such situations, the managers or decision makers may be properly trained and procedures may be made more transparent and accessible. Whatever the policy and procedures may be, employees should be convinced that it would be fairly implemented. If managers are properly trained and encouraged to implement procedures consistently,

employee's attitude pertaining to their supervisor and organization could be improved. In the same token, all HRM practices such as fair recruitment and selection, training, and orientation etc could also improve overall employee's attitude. Hence, the message convey to people via HRM practices should be clear, consistent, and in compliance with moral and ethical standards.

Conclusions

First, the hypothesis that organizational justice experts/researchers would agree with the suggested additions in organizational justice scale is accepted for all organizational justice dimensions. This helps us to conclude that the concept of OJ has been developed over the time in both theory and practice; however, it would be further substantiated with the incorporation of missing theories. In additions, OJ is better covered in five major dimensions, which include: DJ, PPJ, RPJ, INPJ, and INFJ.

The hypothesis that OJ dimensions have positive and significant impact on overall OJ is accepted for interpersonal and informational justice, and rejected for distributive justice, process procedural justice, and rater procedural justice. This suggests that informational justice and interpersonal justice prevail within the private sector universities; however, the remaining three dimensions are less prevalent. Hence, the management of private sector universities should consider this point and take remedial measures to overcome the problems associated with these dimensions.

Similarly, the hypothesis that overall OJ mediates between different dimensions of organizational justice and employee attitudes is partially accepted. This helps us to conclude that organizational justice dimensions affect overall OJ which in turn affects employee's attitudes. This suggests that there is chain of relationship starting from organizational justice dimensions, which contributes in overall OJ, which further lead to employee's attitudes.

Implications for Theory and Practice

The concept of OJ has been developed in both theory and practice; however, it was further substantiated with the incorporation of missing theories. Therefore, this study contributes to the literature by identifying the missing theories of OJ, which were included in existing OJ scales, to complete the concept. The identification of relevant missing theories are important to contribute both theoretically and methodologically. Theoretically the concept of OJ would be completed; while, methodologically, it would help the researchers to avoid specification error and misleading results. Thus, the identification of

missing theories provide basis for researchers to further validate their contributions in their respective dimensions.

The concept of OJ developed from one dimension to two dimensions, two to three dimensions, and finally from three to four dimensions. However, there is a debate whether PJ is best covered in two separate dimensions, namely, PPJ, and RPJ (Erdogan, 2002; Erdogan *et al*, 2001; Nabatchi *et al*, 2007). The results of this study confirmed that procedural justice is better covered under process procedural justice, and rater procedural justice. The concept of OJ therefore include; DJ, PPJ, RPJ, INPJ, and INFJ. This study contributes to the literature by confirming one additional dimension in to the construct and further suggests that future research need to explore OJ dimensions and test their contribution towards overall OJ.

The chain of relationship starting from OJ dimensions towards overall OJ and employees' attitudes suggest that employees' attitude survey should be formally conducted to identify the reasons behind employees' dissatisfaction. If the reason pertains to processes or procedures; they may be made more transparent and consistent; however, if the reasons are related to their managers; they may be effectively trained to comply with OJ concern. A sufficient literature in this regard indicates that managers can be effectively trained to work in compliance with justice rules (Skarlicki and Latham, 1996; Skarlicki and Latham, 2005).

The results of this study provide a picture of prevailing conditions within organizations and further identify the areas (DJ, PPJ, and RPJ), which need special attention for overall justice of Pakistani private sector higher educational institutions. The two dimensions of OJ, such as, INPJ and INFJ, significantly contribute in overall OJ; and DJ, PPJ, and RPJ appears to insignificantly contribute in overall OJ. This suggest that although INPJ & INFJ dimensions prevails in private sector educational institutions; however, their existence be further strengthened. Further, policy makers and management need to take notice of these facts and take suitable decisions to minimize the problems with PPJ, RPJ, and DJ.

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**Annexure
Table 1**

Coefficients	Direct and Indirect Effect				
	DJ	PPJ	RPJ	INPJ	INFJ
a	0.038	0.038	0.029	0.091	0.0767
b	0.153	0.153	0.153	0.153	0.153
ab	0.00581	0.00581	0.00443	0.013923	0.11735
c'	-0.055	-0.005	0.0167	0.032	0.0153
c=(c' + ab)	-0.04919	-0.04919	0.02113	0.045923	0.13265
Direct Effect (c'/c)	1.118	1.118	0.791	0.6968	0.1153
Percentage	111	111	79.1	69.68	11.53
Indirect Effect (ab/c)	0.1181	0.1181	0.2096	0.3033	0.8846
Percentage	11.81	11.81	20.96	30.33	88.46

**Annexure
Table 2**

Product of the coefficient test/Sobel Test					
	DJ	PPJ	RPJ	INPJ	INFJ
a^2	0.001444	0.001444	0.000841	0.008281	0.5883
b^2	0.023409	0.023409	0.023409	0.023409	0.023409
S_a	0.035	0.031	0.029	0.039	0.050
S_b	0.057	0.057	0.057	0.057	0.057
S^2_a	0.001225	0.000961	0.000841	0.001521	0.0025
S^2_b	0.003249	0.003249	0.003249	0.003249	0.003249
$a^2 S^2_b$	0.000004691	0.000004691	0.000002732	0.00002690	0.0019113
$b^2 S^2_a$	0.00002854	0.00002248	0.0000196	0.0000355	0.0000585
S_{ab}	0.005764	0.005212	0.004725	0.007899	0.044382
Z_{ab}	1.00798	1.1147	0.937566	1.762628	2.644089