



Revisiting the Missing Theories of Organizational Justice

Ahmed Ullah Shah¹, Anwar F. Chishti², Zeeshan Zeb Khattak³

Abstract

Organizational justice (OJ) literature focuses on the well-established theories of OJ dimensions (distributive, procedural, interpersonal, and informational justices) and the relative significance of different OJ dimensions on dependent variables (Ambrose & Schminke, 2009). However, literature suggest an equal focus on relevant missing theories of justice to have a complete understanding of this concept. The researchers assume that the inclusion of relevant missing theories in their respective OJ dimensions would yield better results. They used two data sets to test this assumption. One data set, include well-established theories using Colquitt (2001) scale, while the second data set include well-established theories along with the relevant missing theories, such as, external equity, equality, and need etc. They concluded that with the incorporation of relevant missing theories in their respective OJ dimensions; overall, results improved in terms of diagnostic statistics including specifically *t*-statistics (*p*-values), *F*-statistics and *R*²; however, missing theories claim has not been substantiated.

Keywords: Justice, Missing theories, Justice and job satisfaction, Overall justice

1. Introduction

The concept of organizational justice (OJ) developed significantly during the previous four to five decades (Gilliland, 2018; Colquitt, 2012). A significant number of researchers have devoted their time and resources for this concept in three fields, namely, human resource management, industrial and organizational psychology, and organizational behaviour (Latham & Pinder, 2005; Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Gilliland, 2018; Shah & Khan, 2019). Owing to researchers' contributions, the concept has evolved and developed into four major dimensions (Colquitt, 2001; Colquitt & Shaw, 2005; Khan, Sheraz & Maher, 2018; Shah & Khan, 2019). Meanwhile, many theoretical models and theories (uncertainty management theory, fairness heuristic theory, the group engagement model, the relational

1 Assistant Professor in Management Sciences, Kohat University of Science & Technology, Kohat, Pakistan.

Email: dr.ahmed@kust.edu.pk

2 Professor, City University of Science & Technology, Peshawar, Pakistan.

3 Associate Professor in Management Sciences, Kohat University of Science & Technology, Kohat, Pakistan.

ARTICLE HISTORY

19 Apr, 2021 Submission Received

05 Jun, 2021 First Review

27 Jul, 2021 Second Review

19 Aug, 2021 Accepted

model, fairness theory, denounce theory) have been developed and referred by many researchers (Colquitt & Zipay, 2015; Colquitt, Rodell, Zapata, Scott, Long, Conlon & Wesson, 2013).

Despite the fact that scholars have been successful in developing substantial literature in this area (Colquitt, Greenberg, & Scott, 2005), there still exists theoretical gaps in existing literature (Enoksen, 2015; Greenberg, 1993; Cropanzano, Rupp, Thornton, & Shao, 2016; Rupp, Shapiro, Folger, Skarlicki, & Shao, 2017). The aforementioned scholars further believe that some of the relevant theories, such as, external equity, equality, needs, upward communication, and interpersonal interaction between colleagues are not included in OJ, and in its existing dimensions (Rupp, Shapiro, Folger, Skarlicki, & Shao, 2017). Wherever, researchers have focused on well-established theories, the inclusions of less prevalent theories are equally important (Rupp, Shapiro, Folger, Skarlicki, & Shao, 2017).

Whereas Greenberg (1993) has already recognized the importance of missing theories and called it a state of “intellectual adolescence”, some researchers (Shapiro, 2001; Greenberg, 2007; Ambrose, Wo, & Griffith, 2015; & Shah & Khan, 2017) still believe that there are many theoretical gaps available for conceptual development. Enoksen (2015) found that some dimension of justice did not perform well and further suggested inclusion of more items in their respective dimensions. He further suggested that omitted variables bias should be evaluated in future research. Gilliland (2018) also attracted researchers’ attention towards relevant missing theories and further suggested to adopt all elements pertaining to justice.

The researchers strongly believe that due to significant theoretical gaps in existing OJ scales, a significant number of researchers might have drawn incomplete or biased conclusions. For instance, Ambrose et al., (2015) stated that the OJ dimensions generally explain less than half the variance in overall OJ, suggesting that there are missing theories of OJ that may be included in existing OJ to complete this concept.

In this paper, the researchers studied the relationship between distributive justice (DJ), process procedural justice (PPJ), rater procedural justice (RPJ), interpersonal justice (INPJ), informational justice (INFJ), overall OJ and employees’ job satisfaction (JS). They assume overall OJ mediates the relationship between OJ dimensions (DJ, PPJ, RPJ, INPJ, & INFJ) and employees’ JS. They used two data sets to test the afore-mentioned relationship. In the first data set, they check whether or not overall OJ mediates the relationship between OJ dimensions and JS using well established theories, only. In the second data set, they check the same relationship using well established theories in addition to missing theories. They believe the inclusion of relevant missing theories in Colquitt (2001) scale would not only complete the concept

of OJ but would also provide better results.

2. Missing Theories

The theory of OJ has been developed from one to two, two to three and then to four dimensions (Shah & Khan, 2019; Colquitt & Shaw, 2005; Virtanen & Elovainio, 2018). The researchers in the field of OJ agree that it has four major dimensions, such as, DJ, PJ, INFJ, and INPJ (Colquitt et al., 2013; Khan, Sheraz & Maher, 2018). Both, theoretical and empirical support exist for this conceptualization, and significant literature has reported the relationship between OJ dimensions and employees' attitude through the mediating mechanism of overall OJ (Ambrose & Schminke, 2009). However, contemporary scholars, such as, (Ambrose et al., 2015; Cropanzano et al., 2016; Shah & Khan, 2017; Rupp et al., 2017) have largely doubted the benefits of relying entirely on existing dimensions (well established theories) of OJ, suggesting an equal focus on missing dimensions and sub-dimensions (less prevalent theories) of OJ (Shapiro, 2001; Greenberg, 2007; Ambrose et al., 2015; Rupp et al., 2017).

There are many reasons to include the missing theories in OJ. First and foremost, there is growing recognition in the OJ literature, that exclusive focus on existing dimensions (well established theories) of OJ may not completely cover employees' justice experiences (Shapiro, 2001; Shah & Khan, 2017; Greenberg, 2007; Ambrose et al., 2015; Cropanzano et al., 2016; Rupp et al., 2017). Second, existing OJ dimensions generally explain less than half the variance in overall OJ (Ambrose et al., 2015); therefore, missing theories should be added to complete the concept. Each of these theories are discussed, as follows.

2.1. Importance of Missing Theories

Theoretically, a large number of research scholars have identified problems concerning to the entire focus on existing theories. For example, Greenberg (2007) believes that there are many theoretical gaps available for conceptual development, suggesting a particular focus on relevant missing theories of OJ (less prevalent theories). While in his other work, he called it a state of "intellectual adolescence" (Greenberg, 1993). Similarly, Colquitt (2001) has also recognized the importance of missing theories (for example, equality & need); however, he focused on internal equity for the purpose of generalizability. Consistent with these arguments, Shapiro (2001) has referred this alarming situation and asked the researchers to stop avoiding the existing theories. In this vein of research, some scholars specifically mentioned that contemporary perspectives of assessing OJ perceptions have failed to cover OJ domain, as it was coined by pioneers (Ambrose et al., 2015; Cropanzano et al., 2016; Shah & Khan, 2017; Rupp et al., 2017). While referring to the missing theories, they further stated

that despite the fact that there exists a strong base in rappers of “classical” theories, OJ has yet to systematically outline the field of OJ.

While methodologically, missing a relevant theory or variable would provide incomplete or biased results (Gujrati, 2004; Becker & Gerhart, 1996; & Huselid & Becker, 1996; Rupp et al., 2017). For example, Ambrose et al., (2015) reported that the OJ dimensions generally explain less than half the variance in overall OJ, suggesting that there are missing theories of OJ that may be included in existing OJ to complete the concept. Similarly, omission of relevant variable/theory from the model (for example, external equity) not only leads to specification error, but also provide biased results (Gujrati, 2004; Becker & Gerhart, 1996; & Huselid & Becker, 1996; Rupp et al., 2017). Hence, like existing well established theories, the missing theories are equally important for the concept of OJ.

3. Contributions of the Study

The explanation presented in preceding section indicates that research scholars by and large suggest incorporation of relevant missing theories, then omitting such theories from the model (Rupp et al., 2017). So, this study contributes to the existing body of knowledge by incorporating relevant theories in their respective OJ dimensions. From theoretical perspective, this study would provide relatively complete picture of OJ as compared to existing OJ. From methodological perspective, this study would provide comparatively better results as there would be no omitting variable bias. Hence, incorporating the relevant missing theories in OJ are important both theoretically, and methodologically (Rupp et al., 2017).

4. OJ Dimensions

There is a debate in literature pertaining to OJ dimensions (Colquitt, 2001; DeConick, 2010; Khan, Abbas, Gul, & Raja, 2015; Raja, Sheikh, Abbas, & Bouckenooghe, 2018). Initially, many researchers over the years focused on two dimensions models of OJ; which include: DJ, and PJ (Sweeney & McFarlin, 1993). With the emergence of third dimension, this debate extended to three dimensions models, which include: DJ, PJ, and IJ (Bies & Moag, 1986). Later on, Greenberg (1993) further expanded this debate to four-dimension models, by suggesting two different dimensions of IJ; which include: INPJ, and INFJ. Contemporary researchers also talked about five dimensions of OJ (Erdogan, Kraimer, & Liden, 2001; Shah & Khan, 2017; Erdogan, 2002; Nabatchi, Bingham, & Good, 2007).

A significant literature accepts three major dimensions of OJ, such as, DJ, PJ, and INPJ (Konovsky, 2000; Cropanzano, Byrne, Bobocel, & Rupp, 2001). Recent-

ly, research scholars have also used four major dimensions of OJ, namely, DJ, PJ, INPJ, and INFJ (Virtanen & Elovainio, 2018; Shah & Khan, 2019; Bouazzaoui, Wu, Roehrich, Squire & Roath, 2020; Colquitt, 2001; Colquitt, Conlon, Wesson, Porter, & Ng, 2001). In fact, there exists strong theoretical and empirical support for above-mentioned conceptualizations, and it has reported the relationship between each dimension of OJ and a wide range of employees' attitudes (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). However, research scholars, such as, Rupp et al., (2017) suggest an equal focus on both well-established theories/dimensions and less prevalent missing theories of OJ.

For example, a review of DJ reflects that it has three allocation criteria for distribution of resources, such as, equity theory (Adam, 1965), equality, and need (Deutsch, 1975). The simultaneous review of relevant literature and existing scales help us to identify three allocation criteria for distribution of resources (Khan, Sheraz & Maher, 2018; Alzayed, Jauhar & Mohaidin, 2017); however, researchers have generally focused on internal equity, due to which, it is well established in literature as compared to other allocation criteria (Shah & Khan, 2017; Rupp et al., 2017). In this context Rupp et al. (2017) reported that the whole focus on internal equity provide incomplete picture of DJ; thus limited researchers' ability to understand what encompasses DJ. To overcome this issue, (Chen, 1995; & Fischer, 2004) draw researchers' attentions towards other allocation criteria, such as, external equity, equality and need. Similarly, Fischer (2004) stated that very few scholars has studied the relationship between employees need and reward allocation decisions at an individual level within organizational settings. Moreover, Cropanzano et al. (2016) reported many referents of equity theory; however, this field largely use internal equity. Therefore, missing theories of external equity, equality, and need should be included in DJ to complete the concept.

Similarly, PJ refers to the extent to which procedures are adopted and implemented by an organization for their HRM related activities (Pakpahan, 2018). Its criteria include; process control (Thibaut & Walker, 1975), procedural fairness (Leventhal, 1980; Leventhal et al., 1980; Folger & Bies, 1989) and due process model (Folger, Konovsky, & Cropanzano, 1992). Contemporary researchers have also confirmed the aforementioned criteria of PJ (Khan, Sheraz & Maher, 2018; Kaur & Bedi, 2017). This review reflects that, PJ criteria which have already been well established in literature include process control and procedural fairness; while, due process is largely disregarded. Moreover, some researchers (Erdogan, Kraimer, & Liden, 2001; Nabatchi, Bingham, & Good, 2007) also suggest that PJ can be divided into two dimensions, namely, process procedural justice (PPJ), and rater procedural justice (RPJ); however, researchers have largely used a single scale to measure PJ. Hence, a separate scale one each for PPJ and RPJ needs to be formulated and the relevant missing theories be

included to have complete understanding of the concept.

This review further reflects that scholars have generally measured INPJ with ‘how employees are treated by their immediate supervisor’ and generally ignored interpersonal interaction between employees and top management, as already suggested by some researchers (Baron & Kreps, 1999). This fact suggests that there is a need to incorporate the stated missing theories in INPJ to complete this dimension. Furthermore, a review of INFJ shows that researchers have mostly measured INFJ with downward communication and have generally ignored upward communication, which flows in a higher level within organization (Robbins & Judge, 2013). This fact also indicates that there is a need to incorporate upward communication in this dimension to complete the construct. This review reveals that researchers have generally focused on well-established theories, and largely ignored less prevalent theories. Hence, there is a dire need to incorporate the missing theories in their respective dimensions to complete the concept of OJ.

The need of incorporating missing theories in their respective dimensions exists in literature of OJ; however up till now, no empirical research has tested this assumption. In this paper, the researchers evaluate whether the inclusion of missing theories in their respective dimensions would yield better results. For this purpose, they test the following hypothesis:

H₁: The inclusion of relevant missing theories in their respective OJ dimensions would yield better results.

Hypotheses H₁ would be accepted if the significance of the results of our proposed scale happens to be greater or better than that of Colquitt (2001) scale.

Hypotheses H₁ would be tested via two different data sets. In the first data set, the researchers check whether or not overall OJ mediates the relationship between OJ dimensions and employees’ attitudes (JS) using Colquitt (2001) scale. In the second data set, they check the same relationship using Colquitt (2001) scale by incorporating the relevant missing theories. They believe that the inclusion of relevant missing theories in Colquitt (2001) scale would not only complete the concept of OJ but would also provide better results.

Similarly, a review of literature regarding OJ dimensions reflects that scholar have generally focused on single dimension of OJ and its impact on different employees’ attitude and behavior (Loi, Yang, & Diefendor, 2009; Sohail & Nuhu, 2010; Al-Zubi, 2010; Colquitt et al., 2013; Rupp et al., 2014; Shah & Khan, 2017). This means that prior literature by and large presents that how three or four facets of OJ affect employees’ attitude and behavior. This individual dimension effect on different out-

comes was, however, replaced by the concept of overall OJ (Lind, 2001; Lind & Van den bos, 2002; Colquitt & Rodell, 2015; Colquitt & Zipay, 2015; Shah & Khan, 2017). They suggested that individual facet of OJ may not cover the complete picture of employees' experiences within the organization. This theory, therefore, proposes that OJ dimensions directly affect employees' attitudes, rather they effect overall OJ, which in turn affect employees' attitudes and behavior (Lind, 2001).

5. Methodology

5.1. Study 1: Method:

5.1.1. Sample and sampling procedure

The researchers have used triangulation method as proposed by Easterby-Smith, Thorpe and Lowe (1991). They have proposed four approaches, such as, theoretical, methodological, data, and investigator triangulation. The former two approaches have been employed in this study.

The survey was conducted from faculty members working in private sector universities. Faculty members were involved to get their responses regarding OJ and employees' JS. In this regard, multiple respondents' criterion was adopted to minimize both measurement and non-measurement errors, as proposed by eminent scholars (Boselie, Dietz, & Boon, 2005; & Gerhart, Wright, McMahan, & Snell, 2000). Therefore, the researchers selected seven faculty members from each private university for data collection purpose.

Census method was used to collect data from 483 respondents working in sixty-nine (69) private higher educational institutions operated in Pakistan. Questionnaires were distributed among faculty members through in person visit. 309 questionnaires were returned to this researcher, out of which 06 questionnaires were excluded due to incomplete personal data. In addition, 4 questionnaires were also excluded due to missing of data on relevant dependent and/or independent variables. Similarly, the data of 5 respondents have to be omitted due to the lowest extreme values creating normality problem. Therefore, the final census size rested on number of 294 respondents, creating a response rate of 60 percent.

5.1.2. Measuring scale and data analysis

A 5-point Likert scale questionnaire was adopted from Colquitt (2001). Results of reliability test of all dimensions were found in acceptable range, reflecting Cronbach's alpha coefficients for DJ ($\alpha=0.82$), PJ ($\alpha=0.76$), INPJ ($\alpha=0.77$), INFJ ($\alpha=0.78$), and overall OJ ($\alpha=0.86$). Employees JS was measured through job satisfaction scale

adopted from Cammann, Fichman, Jenkins and Klesh, (1983), and its reliability was also in acceptable range ($\alpha = 0.60$) (Sekaran, 2003).

The data analysis was objectively used for testing the hypothesis already stated. Data collected from the faculty members was analyzed via Kenny (2012) contemporary mediation analysis, using SPSS 21 version.

5.1.3. Results of study I and discussion

The faculty members' responses on all four dimensions along with that of overall OJ (DJ, PJ, INPJ, INFJ, & OJ) were separately analyzed using SPSS for reliability test as already stated; results are provided along with the results of Pearson correlation, in table 1.

Table 1: Cronbach's Alpha & Correlation Coefficient

Construct	A	1	2	3	4	5	6
DJ	0.82	1					
PJ	0.76	-0.001	1				
INPJ	0.77	-0.111*	0.397*	1			
INFJ	0.78	-0.116*	0.470*	0.463*	1		
OJ	0.86	-0.024	0.502*	0.488*	0.681*	1	
JS	0.60	-0.093	0.196*	0.252*	0.321*	0.310*	1

Note. DJ=distributive justice, PJ= procedural justice, INPJ=interpersonal justice, INFJ=informational justice, OJ=organizational justice, JS= job satisfaction, α = Cronbach alpha.

The results of reliability analysis are in acceptable range as already explained. Results of Pearson correlation between OJ and DJ are insignificant and negative; similarly, correlation between OJ and PJ are insignificant, suggesting that both of explanatory variables do not determine OJ, perhaps due to some missing elements.

Table 2: Impact of OJ Dimensions on Overall OJ

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.028	.207		4.970	.000
DJ	.043	.031	.056	1.375	.170
PJ	.148	.037	.188	4.010	.000
INPJ	.131	.034	.181	3.867	.000
INFJ	.439	.042	.515	10.562	.000

Dependent Variable= OJ

F= 82.090 (p=0.000), R²= 0.532, R² adjusted = 0. 525

The results of table 2 reported the impact of OJ dimensions on overall OJ. Results reflect that the overall model was significant ($F = 82.090$, $p < 0.001$), and DJ, PJ, INPJ, and INFJ are collectively responsible for 53.2 % changes in overall OJ ($R^2 = 0.532$). However, DJ ($b_1 = 0.043$, $p > 0.001$) have insignificant impact; while PJ ($b_2 = 0.148$, $p < 0.001$), INPJ ($b_3 = 0.131$, $p < 0.001$) and INFJ ($b_4 = 0.439$, $p < 0.01$) have significant impact on overall OJ. These results suggest that with the exception of DJ, all other dimensions have significant positive impact on overall OJ. Therefore, DJ need special attention for overall OJ of Pakistani private sector higher educational institutional faculty members.

Table 3: Mediating Effect of Overall OJ

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.544	.368		6.920	.000
DJ	-.062	.044	-.078	-1.399	.163
PJ	-.045	.062	-.056	-.728	.467
INPJ	.025	.056	.034	.456	.649
OJ_HAT	.486	.133	.345	3.646	.000

a. Dependent Variable: JSM

$F = 9.8$ ($p = 0.000$), $R^2 = 0.12$, R^2 adjusted = 0.10

Table 3 measures the mediating effect of overall OJ on JS, as suggested by eminent researchers (Ambrose & Schminke, 2009). Kenny (2012) contemporary mediation methodology has been used to test the mediating effect of overall OJ. The model as whole was significant ($F = 9.8$, $p < 0.001$), and DJ, PJ, INPJ, INFJ and overall OJ are collectively responsible for 12 percent changes in JS ($R^2 = 0.12$). Majority of the variables, such as DJ ($b_1 = -0.062$, $p > 0.001$), PJ ($b_2 = -0.045$, $p > 0.001$), and INPJ ($b_3 = 0.025$, $p > 0.001$) have insignificant impact; while overall OJ ($b_4 = 0.486$, $p < 0.01$) has significant impact on JS, which fulfills the criteria set for mediation. As per the requirements of mediation, with the incorporation of 'overall OJ', the effects of DJ, PJ, and INPJ variables have reduced from $b_1 = 0.043$, $b_2 = 0.0148$, and $b_3 = 0.131$, (table 3) to $\beta_1 = -0.062$, $\beta_2 = -0.045$, and $\beta_3 = 0.025$, (table 4), respectively. It is important to note that the last variable (INFJ) was excluded from the later model due to high multicollinearity problem. Hence, overall OJ fulfills the criteria set for mediation analysis, and since all other variables are not significant, it means that overall OJ is largely mediating.

Since all OJ dimensions are insignificant; hence $C' = 0$; while $ab = 0.3489$; hence $c = c' + ab$ becomes $0.3489 = 0 + 0.3489$; hence direct effect is zero and indirect/

mediational effect = 100%.

5.2. Study 2: Method:

5.2.1 Procedures for expert's opinion

As earlier referred that existing OJ dimensions explain less than half the variance in overall OJ, which suggest, there are some missing theories of OJ that may be included in existing OJ to complete the concept (Ambrose et al., 2015). In compliance with this suggestion, the researchers have incorporated the missing theories in their respective dimensions. In this regard, the experts/researchers in the field of OJ were consulted for their expert opinion on our proposed additions (questions with star) in OJ scale/questionnaire.

Annexure 1 reflect that 37 eminent experts provided their expert opinion on our proposed items included in the OJ scale. The panel of the experts was comprised of 31 (83.8 %) male researchers/experts and 6 (16.2 %) female researchers/experts. The large majority (97.29 %) of researchers/experts have completed their PhD, with the exception of only one (2.7 %) who have completed his Master of Sciences. The average experience of the experts was 20.27, with SD = 10 years. The experts/researchers represented different job titles which consist of 4 (10.8 %) lecturer, 2 (5.4 %) senior lecturer, 7 (18.9 %) assistant professor, 5 (13.5 %) associate professor, 17 (45.9 %) professor, and 1 each (2.7 %) was training consultant and chair of business ethics.

5.2.2 Procedures for survey approach

The survey approach covered the basic stakeholders; namely, faculty members working within private sector universities. Faculty members were involved to get their responses regarding OJ and its effect on enhancing positive employee attitudes (JS).

Census method was used to collect data from all sixty nine (69) universities operated in the private higher educational institutions of Pakistan. A total of 483 questionnaires were distributed in sixty nine (69) private universities operated in the private higher educational institutions of Pakistan. Questionnaires were distributed among faculty members through courier, and in person visit. 309 questionnaires were returned to the researcher, out of which 06 questionnaires were eliminated due to the incomplete personal data. Moreover, 4 questionnaires were also eliminated due to the missing of relevant dependent or independent variables data. Similarly, the data of 5 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.

5.2.3. Measurement scales

Since the researchers had to consult different stakeholders (experts, and faculty members), we had used different scales, one each for each of the stakeholders.

5.2.3.1 Measurement scale for experts

Annexure 2 provides a five-point Likert scale and contains questions on all dimensions of OJ, including, DJ, PPJ, RPJ, INPJ, and INFJ. Two types of questions were included in each of the stated dimensions, some were without star and some were with star. Questions without star were adopted from eminent scholars whose references were also given along with the questions. Question with star were the additional suggested questions which were developed by this researcher to fill the gap felt necessary in our review of literature and theory to further substantiate OJ. This measurement scale (Annexure 2) sought expert's opinion on the inclusion of suggested additions (questions with star) in the OJ scale.

5.2.3.2. Measurement scale for faculty members

Measurement scale for faculty members provides a five-point Likert scale and contains questions on all dimensions of OJ, including, DJ ($\alpha=0.96$), PPJ ($\alpha=0.95$), RPJ ($\alpha=0.96$), INPJ ($\alpha=0.95$), INFJ ($\alpha=0.92$), and overall OJ ($\alpha=0.88$) to measure the prevailing conditions of OJ. Employees JS ($\alpha=0.60$) was measured through JS scale adopted from Cammann, Fichman, Jenkins and Klesh, (1983).

5.2.4 Data analysis

The data analysis was objectively used for testing the hypothesis. Data collected from the first respondent, that is, OJ experts/researchers was analyzed using one-sample t -test. While data collected from the faculty members was analyzed via Kenny (2012) contemporary mediation analysis, using SPSS 21 version.

5.2.5 Results

This section reports the empirical results of mediation analysis, and one-sample t -test. A total of 483 questionnaires were distributed among the faculty members, out of which 294 completed questionnaires were received, creating a response rate of 60 percent.

5.2.5.1 Reliability test

Correlation's coefficients, Cronbach's alpha, means, and standard deviations for all independent, dependent, and mediator variables are provided in table 4. The reliability of first five dimensions are near to one, which reflect that these measures

have very good reliability; overall OJ is in the level of good reliability; while, JS reliability is in acceptable range (Sekaran, 2003).

Table 4: Cronbach's Alpha & Correlation Coefficient

Con-struct	α	M	S.D	1	2	3	4	5	6	7
DJ	0.96	3.3	0.87	1						
PPJ	0.95	3.8	0.93	0.087	1					
RPJ	0.96	3.9	0.89	-0.03	0.50*	1				
INPJ	0.95	4.0	0.72	-0.04	0.41*	0.389*	1			
INFJ	0.92	4.0	0.60	-0.07	0.40*	0.419*	0.391*	1		
OJ	0.88	4.0	0.58	-0.02	0.48*	0.464*	0.450*	0.72*	1	
JS	0.60	4.2	0.60	-.009	0.16	0.233*	0.301*	0.28*	0.31*	1

Note. DJ=distributive justice, PPJ=process procedural justice, RPJ=rater procedural justice, INPJ=interpersonal justice, INFJ=informational justice, OJ=organizational justice, JS= job satisfaction, α =cronbach alpha, M=mean, SD=standard deviation

5.2.5.2 Validity test

5.2.5.2.1 Experts' opinion

The expert's agreed with the suggested additions instead of opting for disagreement. Moreover, with the exception of some items (EE4, DJ1, DJ2, PPJ1, SDM3, INFJ2), the mean-differences of 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 researchers/experts.

P-values in most of the cases are lower than 0.05, which help the researchers to conclude that this sample does not belong to that population whose average is equal to three. Furthermore, the mean score of the responses of OJ researchers in most of the cases are greater than three with the exception of few cases. This indicates that eminent researchers/experts by and large agree with proposed additions in organizational justice dimensions.

5.2.5.2.2 Confirmatory factor analysis (CFA)

In addition to content validity (assed via expert opinion) the researchers also run a number of models to test both convergent and discriminant validity. The fit indices indicates that five factor models is relatively better ($\chi^2 = 5923$, CFI=0.861, and

RMSEA=0.089) than other models. These indicators confirm moderate convergent validity of five factor model (Anderson & Gerbing, 1988). Similarly, they also tested discriminant validity via different methods. The empirical results reflected in table (5) indicates significant difference between one factor and five factor model ($\Delta\chi^2 = 7444$, $p < 0.01$), indicating a discriminant validity.

Table 5: Comparison of Five Factor Models

Measurement Model	χ^2	Df	$\Delta\chi^2$	CFI>0.90	RMSEA<0.10
5 Factor Model	5923	1646	7444	.861	.089
4 Factor Model	8183	1650	1288	.620	.116
3 Factor Model	9472	1652	1018	.546	.127
2 Factor Model	10491	1653	2876	.486	.135
1 Factor Model	13368	1652	0	.319	.156

Note: n = 294. Model 1 contains all dimensions on same variable, Model 2 consist of two factors, DJ and INPJ-INFJ- PPJ- RJP were merged. Model 3 contains 3 factors, such as DJ, while (INPJ and INFJ) were merged for second factor, and (PPJ & RPJ) were merged for third factor. Model 4 consist of four factors, such as, DJ, PPJ, RPJ, and (INPJ & INFJ) were merged. Model 5 consist of five factors, namely, INPJ, DJ, PPJ, INFJ, and RPJ.

5.2.5.3 Mediation test

Kenny (2012) mediation methodology has been used to test the mediating effect of overall OJ. Overall OJ was regressed on predicted value of DJ, PPJ, RPJ, INPJ, INFJ and OJ. The results are provided in table (6).

Table 6: Impact of OJ Dimensions on Overall OJ

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.176	.216		.817	.415
DJ_HAT	.038	.035	.038	1.064	.288
PPJ_HAT	.038	.031	.058	1.239	.216
RPJ_HAT	.029	.029	.043	.991	.322
INPJ_HAT	.091	.039	.103	2.357	.019
INFJ_HAT	.767	.050	.691	15.249	.000

a. Dependent Variable: OJ

Note. Dependent variable= OJ, DJ=distributive justice, PPJ=process procedural justice, RPJ=rater procedural justice, INPJ=interpersonal justice, INFJ= informational justice, OJ=organizational justice.

F= 106.6 (p=0.000), R2= 0.649, R2 adjusted = 0. 643

With the exception of INPJ dimension; no improvement occurred in all other OJ dimensions, against our claim of missing theories.

Table 6 reports the impact of five predicted 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 64.3 percent changes in overall OJ ($R^2 = 0.643$). 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 impact; while, INPJ ($b_4 = 0.091$, $p < 0.05$) and INFJ ($b_5 = 0.767$, $p < 0.001$) have statistically significant impact on 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 institutional employees.

However, somewhat different results were reported by (Ambrose & Schminke, 2009); they presented two different studies to test their hypotheses. In their first study, they found that all three dimensions (distributive justice, procedural justice, and interactional justice) significantly contribute towards overall OJ; while, in their second study distributive justice was not contributing towards overall OJ. The possible explanation in differences of our results may be attributed to the context under which data was collected, which largely affects the results of the study.

Table 7 measures the mediating mechanism of overall OJ between OJ dimensions and employees' JS.

Table 3: Mediating Effect of Overall OJ

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.769	.357		7.763	.000
DJ_HAT	-.086	.057	-.084	-1.496	.136
PPJ_HAT	-.032	.050	-.046	-.631	.528
RPJ_HAT	.024	.047	.035	.501	.617
INPJ_HAT	.101	.067	.111	1.508	.133
OJ_HAT	.336	.101	.263	3.329	.001

a. Dependent Variable: JS

Note. Dependent variable= JS, DJ=distributive justice, PPJ=process procedural justice, RPJ=rater procedural justice, INPJ= interpersonal justice, JS= job satisfaction.

F= 8.12 ($p=0.000$), $R^2 = 0.124$, R^2 adjusted = 0.108

All OJ dimensions are insignificant; no improvement occurred as we removed the first person and wrote in third person. The expected improvement will take place after incorporating missing theories. Same results obtained as 100% effect is indirect/mediational effect; missing theories claim has not been substantiated.

The empirical results reflect that overall model is significant ($F = 8.12$, $p < 0.01$), and 12 percent changes in the dependent variable JS is collective contribution of DJ, PPJ, RPJ, INPJ and overall OJ ($R^2 = 0.124$). Further, the variable overall OJ is significant ($b_5 = 0.336$, $p = 0.001$), which fulfills the criteria set for mediation. In line with mediation condition, with the incorporation of 'overall OJ', the contributions of DJ, PPJ, RPJ, and INPJ variables have reduced from $b_1 = 0.038$, $b_2 = 0.038$, $b_3 = 0.029$, and $b_4 = 0.091$, (table 6) to $\beta_1 = -0.086$, $\beta_2 = -0.032$, $\beta_3 = 0.024$, and $\beta_4 = 0.101$, (table 7), respectively. However, the last variable (INFJ) was excluded from the later model due to high multicollinearity problem. Hence, overall OJ fulfills the criteria set for mediation analysis, and since all other variables are insignificant suggesting that the variable overall OJ is largely mediating. These results suggest that overall OJ dimensions have an impact on JS through mediating mechanism of overall OJ.

5.2.5.4 Comparison of study 1 & 2

The comparison of table 2 and 6 (for study 1 & 2) reflect that table 6 provides significantly better results in terms of F-statistics and R^2 ($F = 82$, $R^2 = 0.532$ and $F = 106$, $R^2 = 0.649$ for study 1 & 2 respectively). However, only two variables (INPJ & INFJ) out of five turn out to be significant (table 6), as compared to (table 2), where three variables are significant out of four variables (PJ, INPJ & INFJ).

The comparison of table 3 and 7 (for study 1 & 2) reflect that table 3 provides better results in terms of F-statistics ($F = 9.8$, and $F = 8.12$ for study 1 & 2 respectively), where ($R^2 = 0.12$) is same in both tables. The similarity in these two tables is that, the mediated effect of overall OJ is reflected in both tables, and INFJ is excluded from both tables due to high multicollinearity.

6. Discussion

The prime objective of this paper was to test the mediating mechanism of overall OJ using two data sets. Empirical results provide full support to mediating mechanism of overall OJ between OJ dimensions and employees JS. Study 1 and 2 both verified that overall OJ mediates the relationship between OJ dimensions and employees JS. Hence, both studies suggest that this relationship is best explained using overall OJ as a mediating variable.

Secondly, the hypothesis was that the inclusion of missing theories in their re-

spective OJ dimensions would yield better results. Empirical results did not support this hypothesis. Study 1 shows that three variables have significant impact on overall OJ in study 1; while, only two variables turnout to be significant in study 2. However, it is important to note that study 2 provide significantly better results in terms of F-statistics and R^2 ($F= 106$, $R^2 = 0.649$), as compared to study 1 ($F= 82$, $R^2 = 0.532$). Similarly, the mediating variable of overall OJ was significant in both studies; however, study 1 provide better results in terms of F-statistics ($F= 9.8$, and $F= 8.12$ for study 1 & 2 respectively). These results demonstrate that with the incorporation of relevant theories in existing OJ dimensions; overall, results slightly improved in terms of both F-statistics and R^2 . These results, therefore, substantiate that with the inclusion of missing theories in their respective OJ dimensions yield better results. However, as for as individual variables are concerned, all OJ dimensions are insignificant; no improvement occurred as we expected improvement will take place after incorporating missing theories; hence, the claim has not been substantiated.

The improvement in F-statistics and R^2 in table (6) support the assumption. As per the expectations, with the incorporation of relevant missing theories, overall model fitness improve from 82 to 106; while, the variance increases from 0.532 to 0.649. It is pertinent to mention that this increase is due to incorporation of relevant missing theories. Recently, researchers have observed that OJ dimensions generally explain less than half of the variance in overall OJ (Ambrose et al., 2015). It means that there are theoretical gaps in existing OJ dimensions, which should be considered to improve the variance and overall model fitness.

Likewise, significant variations in both F-statistics and R^2 further suggest that prior research might have presented misleading results. Borrowing the concept of “specification error” from HRM-Performance relationship and econometrics; missing a relevant variable from a model (in this case for example external equity, equality, and need etc.) not only create a specification error, but also provide misleading results (Gujrati, 2004; Becker & Gerhart, 1996; & Huselid & Becker, 1996). Therefore, just like existing well established theories, the relevant less prevalent theories (missing theories) are equally important, for both theory, and method in order to further develop the concept of OJ.

There is no doubt that, OJ has developed well over time in both theory and practice, and the measuring scales of its various dimensions have intensively substantiated to a great extent; however, it needs further exploration (Fischer, 2004; Rupp et al., 2017). A large number of researchers have identified challenges relating to entire focus on well-established theories, not considering the importance of less prevalent theories (Rupp et al., 2017). In this vein of research, Greenberg have conducted a series of reviews and called it a state of “intellectual adolescence” (Greenberg, 1993).

Similarly, in his later work, he stated that there exist theoretical gaps for conceptual development of OJ.

While, specifically working on the individual dimension of OJ, for example distributive justice, one may defined it as the level to which the suitable distribution criteria (equity theory) is adopted in a given decision-making context. However, it is highly relevant to mention that in such cases both sub-dimensions of equity theory, namely, internal equity, and external equity needs to be adopted; neglecting external equity at the expense of internal equity would create specification error (Fischer, 2004; Rupp et al., 2017). Consistent with these arguments, (Shapiro, 2001) has referred this alarming situation and asked the researchers to stop avoiding the existing theories.

Further, just like internal equity; external equity, equality, and need based distribution criteria are still highly relevant, irrespective of context, type of organization, industry or sector due to the reason that there exist different types of resources within organization. Some researchers have categorized these resources in the form of economic and non-economic resources; while, other have grouped them into tangible and intangible resources. Most recently, Foa and Foa (2012) grouped resources into six classes, namely, love, status, information, money, goods, and service. The diverse nature of these resources suggest that they could not be distributed through internal equity distribution criteria; rather a more comprehensive approach is required in the form of external equity, equality, and need. In this line of research, Fischer (2004) suggested that increasing the domain of distribution criteria would help researchers to better understand reward distribution in a human resource context.

Three aspects of these results need special attention. First, it is important to test further the contributions of missing theories in their respective dimensions. In study 1, three out of four variables turn out to be significant, however, only two variables were significant out of five variables in study 2. This study, therefore, provide basis for researchers to further validate the contributions of missing theories along with the well-established theories.

Second, from methodological perspective it is extremely important to include all relevant variables/theories in a model. Missing any relevant variable from OJ (for example, external equity, equality, and need etc.) would most likely provide misleading results.

Third, from theoretical perspective it is vital to identify the missing theories of OJ, and include it in their respective dimensions, to make it a better system of service capable of yielding desired outcome. Hence, like existing well-established theories of OJ, the missing theories are equally important to complete researchers understanding

regarding the concept of overall OJ.

7. Conclusion

The hypothesis that inclusion of relevant missing theories in their respective OJ dimensions would yield better results is partially accepted. This helps us to conclude that with the incorporation of relevant missing theories in their respective OJ dimensions improve overall results in terms of diagnostic statistics. More specifically, the inclusion of relevant theories provides better results in terms of t-statistics (p-values), F-statistics and R^2 ; however, missing theories claim has not been substantiated.

References

- Adams, J. S. (1965). Inequity in social exchange. *Advances in experimental social psychology*, 2: 267-299.
- Alzayed, M., Jauhar, J., & Mohaidin, Z. (2017). The Mediating Effect of Affective Organizational Commitment in the Relationship between Organizational Justice and Organizational Citizenship Behavior: A Conceptual Model. *Asian Social Science*, 13(5), 165. doi: 10.5539/ass.v13n5p165.
- Al-Zubi, H. A. (2010). A study of relationship between organizational justice and job satisfaction. *International Journal of Business and Management*, 6(12).
- Ambrose, J. L., Wo, D. X. H., & Griffith, M. D. (2015). *Overall justice: Past, present, and future*. In R. S. Cropanzano & M. L. Ambrose (Eds.). *The Oxford handbook of justice in the workplace* (Vol. 1, pp. 109-135). New York: Oxford University Press.
- Ambrose, M.L., & Schminke, M. (2009). The role of overall justice judgments in organizational justice research: A test of mediation. *Journal of applied psychology*, 94(2): 491-500. doi:10.1037/a0013203
- Anderson, J.C. & Gerbing, D.W. (1988). "Structural equation modelling in practice: a review and recommended two-step approach", *Psychological Bulletin*, Vol. 103 (3): 411-423.
- Baron, J.N. & Kreps, D. (1999). Consistent human resource practices. In *California Management Review*, 41(13): 29-31. Doi :10.2307/41165996
- Becker, B.E. & Gerhart, B. (1996). The impact of human resource management on organizational performance: Progress and prospects. *Academy of Management Journal*, 39: 779-801.
- Bies, R. J., & Moag, J. F. (1986). Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.). *Research on Negotiations in Organizations*, 1, 43-55.
- Boselie, P., Dietz, G. & Boon, C. (2005). Commonalities and contradictions in HRM and performance research. *Human Resource Management Journal*, 15(3), 67-94. doi:10.1111/j.1748-8583.2005.tb00154.x
- Bouazzaoui, M., Wu, H.-J., Roehrich, J. K., Squire, B., & Roath, A. S. (2020). Justice in inter-organizational relationships: A literature review and future research agenda. *Industrial Marketing Management*.

- Cammann, C., Fichman, M., Jenkins, G. D., & Klesh, J. (1983). Michigan Organizational Assessment Questionnaire. In S. E. Seashore, E. E. Lawler, P. H. Mirvis, & C. Cammann (Eds.), *Assessing organizational change: A guide to methods, measures, and practices* (pp. 71-138). New York: Wiley-Interscience
- Chen, C. C. (1995). New trends in rewards allocation preferences: A Sino-U.S.comparison.
- Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes*, 86(2), 278-321. <https://doi.org/10.1006/obhd.2001.2958>
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86: 386-400.
- Colquitt, J. A. (2012). Organizational justice. *Oxford Handbook of Organizational Psychology*, 1:526-547.
- Colquitt, J. A., & Rodell, J.B. (2015). Measuring justice and fairness. In the *Oxford Handbook of Organizational Justice*, Vol. 1, ed. R Cropanzano, ML Ambrose. New York: Oxford Univ. Press. In press
- Colquitt, J. A., & Shaw, J. C. (2005). *How should organizational justice be measured?* In J. Greenberg & J. A. Colquitt (Eds.), *the handbook of organizational justice* (pp. 113- 152). Mahwah, NJ: Erlbaum.
- Colquitt, J. A., & Zipay, K. P. (2015). Justice, fairness, and employee reactions. *Annual Review of Organizational Psychology & Organizational Behavior*, 2, 1-25. doi:org/10.1146/annurev-orgpsych-032414-111457
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86: 425-445.
- Colquitt, J. A., Scott, B. A., Rodell, J. B., Long, D. M., Zapata, C. P., Conlon, D. E., & Wesson, M. J. (2013). Justice at the millennium, a decade later: A meta-analytic test of social exchange and affect-based perspectives. *Journal of Applied Psychology*, 98, 199-236.
- Colquitt, J. A., Greenberg, J., & Scott, B.A. (2005). *Organizational justice: where do we stand?* In J. Greenberg and J.A Colquitt (Eds.) *handbook of organizational*, Mahwah: NJ: Lawrence Erlbaum Associate. 589-619.
- Cropanzano, R., Byrne, Z. S., Bobocel, D. R., & Rupp, D. E. (2001). Moral virtues, fairness heuristics, social entities, and other denizens of organizational justice. *Journal of Vocational Behavior*, 58(2), 164-209. <https://doi.org/10.1006/jvbe.2001.1791>
- Cropanzano, R., Rupp, D. E., Thornton, M. A., & Shao, R. (2016). Organizational Justice and Organizational Citizenship. *The Oxford Handbook of Organizational Citizenship Behaviour*
- DeConick, J. B. (2010). The effect of organizational justice, perceived organizational support, and perceived supervisor support on marketing employees' level of trust. *Journal of Business Research*, 63, 1349-1355.

- Deutsch, M. (1975). Equity, equality and need: What determine which value will be used as the basis of distributive justice? *Journal of social issues*. 31: 137 - 150.
- Easterby-smith, M., Thorpe, R., & Lowe, A. (1991). The philosophy of research design. In *Management Research an Introduction*. London: Sage.
- Enoksen, E. (2015). Examining the dimensionality of Colquitt's organizational justice scale in a public health sector context. *Psychological reports*, 116 (3), 723-737.
- Erdogan, B. (2002). Antecedents and consequences of justice perceptions in performance appraisals. *Human Resource Management Review*, 12 (4), 555-578. doi.org/10.1016/S1053-4822(02)00070-0
- Erdogan, B., Kraimer, M. L., & Liden, R. C. (2001). Procedural Justice as a Two-Dimensional Construct: An Examination in the Performance Appraisal Context. *Journal of Applied Behavioral Science*. 37(2): 205-228. doi.org/10.1177/0021886301372004
- Fischer, R. (2004). Rewarding employee loyalty: an organizational justice approach. *International journal of organizational behavior*. 8(3): 486-503.
- Foa E.B., & Foa U.G. (2012) Resource Theory of Social Exchange. In: Törnblom K., Kazemi A. (eds) Handbook of Social Resource Theory. Critical Issues in Social Justice. Springer, New York, NY. https://doi.org/10.1007/978-1-4614-4175-5_2
- Folger, R., & Bies, R. J. (1989). Managerial responsibilities and procedural justice. *Employee Responsibilities and Rights Journal*. 2(2): 79-90.
- Folger, R., Konovsky, M. A., & Cropanzano, R. (1992). A due process metaphor for performance appraisal. *Research in Organizational Behavior*, 14: 129-177.
- Gerhart, B., Wright, P.M., McMahan, G.C. & Snell, S.A. (2000). Measurement error in research on human resources and firm performance: how much error is there and how does it influence effect size estimates. *Personnel Psychology*, 53(4), 803-834. doi:10.1111/J.1744-6570.2000.TB02418.X
- Gilliland, S. W. (2018). *Organizational justice*. In D. S. Ones, N. Anderson, C. Viswesvaran, H. K. Sinangil (Eds.), *The SAGE handbook of industrial work & organizational psychology: Organizational psychology* (p. 46-65). Sage reference.
- Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp.79-103). Hillsdale, NJ: Erlbaum.
- Greenberg, J. (2007). *Ten good reasons why everyone needs to know about and study organizational justice*. In I. Glendon, B. Myors, & B. Thompson (Eds.), *Advances in organizational psychology: An Asia-Pacific perspective* (pp. 181-297). Bowen Hills, Queensland, Australia: Australian Academic Press.
- Gujrati, D.N. (2004). *Basic Econometrics*. Int'l Ed. McGraw Hill Publishers, New York.
- Huselide, M.A., & Becker, B.E. (1996). Methodological issues in cross sectional and panel estimates of

the human resource-firm performance link. *Industrial relations*, 35, 400-422. doi:10.1111/j.1468-232X.1996.tb00413.x

Kaur, S., & Bedi, A. (2017). Role of Perceived Organizational Support in the Relationship of Procedural Justice with Organizational Commitment. Prabandhan: *Indian Journal of Management*, 10(9), 28. doi: 10.17010/pijom/2017/v10i9/118240

Kenny, D. A. (2012). Mediation; available on: davidakenny.net, April 2012.

Khan, J. A., Sheraz, M., & Maher, S. (2018). Impact of organizational justice on organizational commitment: Evidence from KPK private sector Universities. *City university research journal*, 8 (2)- 236-246.

Khan, K., Abbas, M., Gul, A., & Raja, U. (2015). Organizational justice and job outcomes: Moderating role of Islamic work ethic. *Journal of Business Ethics*, 126(2), 235-246.

Konovsky, M. A. (2000). Understanding procedural justice and its impact on business organizations. *Journal of Management*, 26, 489-511. doi.org/10.1177/014920630002600306

Latham, G. P., & Pinder, C. C. (2005). Work Motivation Theory and Research at the Dawn of the Twenty-First Century. *Annual Review of Psychology*, 56, 485-516. https://doi.org/10.1146/annurev.psych.55.090902.142105

Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg, & R. Willis (Eds.). *Social exchange: Advances in theory and research* (pp. 27-55). New York: Plenum Press.

Leventhal, G. S., Karuza, J., & Fry, W. R. (1980). *Beyond fairness: A theory of allocation preferences*. In G. Mikula (Ed.). *Justice and social interaction*. New York: Springer-Verlag 167-218.

Lind, E. A. (2001). Fairness heuristic theory: Justice judgments as pivotal cognitions in organizational relations. In *Advances in organizational justice* (56-88) J. Greenberg, & R. Cropanzano (Eds.), CA: Stanford University Press.

Lind, E. A., & van den Bos, K. (2002). When fairness works: Toward a general theory of uncertainty management. In B. M. Staw & R. M. Kramer (Eds.), *Research in Organizational Behavior*. 24, pp. 181-223). Boston: Elsevier.

Loi, R., Yang, J., Diefendor, J. M. (2009). Four-factor justice and daily job satisfaction: A multilevel investigation. *Journal of Applied Psychology*, 94(3), 770-781. doi.org/10.1037/a0015714

Nabatchi, T., Bingham, L., & Good, D. (2007). Organizational justice and workplace mediation: a six-factor model. *International Journal of Conflict Management*. 18(2): 148-174. doi:10.1108/10444060710759354

Pakpahan, B. (2018). The Impact of Organizational Culture, Conflict Management, and Procedural Justice towards Normative Commitment of Human Resource at Stakpn Tarutung. *International Journal of English Literature and Social Sciences*, 3(2), 174-180. doi: 10.22161/ijels.3.2.

Raja, U., Sheikh, R. A., Abbas, M., & Bouckennooghe, D. (2018). Do procedures really matter when

rewards are more important? A Pakistani perspective on the effects of distributive and procedural justice on employee behaviors. *European Review of Applied Psychology*, 68(2), 79-88.

- Robbins, S. P., & Judge, T. A. (2013). *Organizational behavior*. Pearson education, Inc.
- Rupp, D. E., Shao, R., Jones, K. S. and Liao, H. (2014). 'The utility of a multifoci approach to the study of organizational justice: A meta-analytic investigation into the consideration of normative rules, moral accountability, bandwidth-fidelity, and social exchange'. *Organizational Behavior and Human Decision Processes*, 123, 159-85.
- Rupp, D. E., Shapiro, D. L., Folger, R., Skarlicki, D. P., & Shao, R. (2017). A Critical analysis of the conceptualization and measurement of 'organizational justice': Is it Time for Reassessment?" *Academy of Management Annals*. 1-82. doi:10.5465/annals.2014.0051
- Sekaran, U. (2003) *Research Methods for Business: A Skill-Building Approach*. 4th Edition, John Wiley & Sons, New York.
- Shah, A, U., & Khan, M, I. (2019). HRM-Performance Perspectives: An overview of theoretical challenges and prospects. *Inzinerine Ekonomika-Engineering Economics*, 30(3), 382–393. doi.org/10.5755/j01.ee.30.3.9550
- Shah, A., U. & Khan, M., I. (2017). The mediating role of overall justice in justice-employees attitudes relationship: A test of five factors model. *Journal of managerial sciences*, 11 (3): 27 - 48.
- Shapiro, D.L. (2001). The death of justice theory: A guarantee if theorists neglect the "wheels" already invented and the voices of the injustice victims. *Journal of Vocational Behavior*. 58(2): 235-242. doi.org/10.1006/jvbe.2001.1795
- Sohail, M. S., & Nuhu, N. A. (2010). The influence of organizational justice and job satisfaction: evidence from emerging nation. *International Journal of Project Organization and Management*, 2(2), 193-207. doi: 10.1504/IJPOM.2010.033662
- Sweeney, P. D., & McFarlin, D. B. (1993). Workers' evaluations of the "ends" and the "means": An examination of four models of distributive and procedural justice. *Organizational Behavior and Human Decision Processes*, 55(1), 23-40. https://doi.org/10.1006/obhd.1993.1022
- Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.
- Virtanen, M., & Elovainio, M. (2018). Justice at the workplace. *Cambridge Quarterly of Healthcare Ethics*, 27, 306–315. doi: https://doi.org/10.1017/S0963180117000639.

Annexure 1:**Table 1:** Demographics of Experts/Eminent Researchers

Variables	N	%
Gender		
Male	31	83.8
Female	6	16.2
Total	37	100
Education		
MS	1	2.7
PhD	36	97.29
Years of service		
5-10 years	6	16.2
11-15 years	9	24.3
16-20 years	4	10.8
21-25 years	9	24.3
26-30 years	2	5.4
31 and above	7	18.9
Total	37	100
Job Title		
Lecturer	4	10.8
Senior Lecturer	2	5.4
Assistant Professor	7	18.9
Associate Professor	5	13.5
Professor	17	45.9
Training Consultant	1	2.7
Chair of Business Ethics	1	2.7
Total	37	100

Annexure 2: Questionnaire for experts

PART A: ORGANIZATIONAL JUSTICE SCALE

There are two type of questions (dimensions/sub dimensions): one without asterisk -approved questions from eminent scholars, which are being given here just for your information, so there is no need to give your opinion on such questions; questions and dimensions/sub dimensions with asterisk are the questions which this researcher has proposed to add, and are the questions on which your opinion is sought; so please express your views on additional proposed questions by ticking one the five options (1-2-3-4-5).

You have to select one of the following 5 choices, in all the incoming sections

1 2 3 4 5

Strongly disagree Disagree Neutral Agree Strongly Agree

Type of Justice	Criteria	Items	1	2	3	4	5
		Equity theory Gaps: Researchers in the field of organizational justice have contributed their efforts and time to develop and extend the scope of distributive justice from single HR practice (Pay) to multiple HR practices (salary, salary raises, fringe benefits, promotion, incentives, and recognition), but, they have largely measure these HR practices in terms of internal equity and called it distributive justice, while they have largely ignore its second dimension i.e. external equity. Note: In this scale we have included the aforementioned two dimensions (internal and external equity) to complete the concept of equity theory. As an eminent scholar of this field kindly review this scale and express your opinions, either it is relevant to include the items of both internal and external equity? Furthermore, either the items included in external equity are logical and measure the concept of equity theory? It may be mentioned that all items of external equity are self-prepared.					

Distributive Justice	Equity theory (Adam, 1965)	Equity theory (Adam, 1965)	Internal Equity (Colquitt's 2001)	Does your pay reflect the effort you have put into your work?	X	X	X	X
				Do your incentives reflect what you have contributed to the organization?	X	X	X	X
	(*)External Equity	Total Equity	Distributive justice Gaps: A study of different questionnaire shows that researchers have largely focus on equity theory and called it distributive justice, but contemporary theories in the area of distributive justice indicate that there are other allocation rules for distribution of resources, such as, equity, equality and need. Similarly, reviews of different scales also indicate that distributive justice scales have not fully covered how roles and punishment should be distributed? Note: In this scale we have incorporated the rules of equality to improve the concept of distributive justice. As an expert of this field kindly review the subsequent two sections of equality and express your views, whether or not it is valid to include the items of aforementioned sub dimension. Likewise, the items included in equality are relevant and measure what it is supposed to measure. It is important to mention here that all items of equality are self-prepared.	Is your recognition appropriate for the work you have completed?	X	X	X	X
				Is your salary raise justified, given your performance?	X	X	X	X
				(*) Does this organization offer better salary relative to some other organizations?				
				(*) Does this organization offer better incentives relative to some other organizations?				
				(*) Does this organization offer salary beyond the market rate?				
				(*) Does this organization frequently raise salary relative to other organizations within the industry?				
				(*) This organization ensures that similar jobs are compensated almost similarly within the industry.				
				(*) This organization ensures that employees are better compensated relatively to other organization within the industry.				

	(*) Equality (Deutsch, 1975)	(*) External Equality	<p>1. (*) Does this organization provide equal health benefits across employees within the industry?</p> <p>2. (*) Does this organization provide equal health benefits across organizations within the industry?</p>				
		(*) Internal Equality	<p>1. (*) Does this organization distribute workload equally across employee's cadre wise?</p> <p>2. (*) Does this organization distribute punishment equally across employee's cadre wise?</p> <p>3. (*) Does this organization provide equal employment opportunities?</p>				
	Distributive justice		<p>1. (*) This organization has established decision criteria for distribution of resources, and it follows that criteria.</p> <p>2. (*) This organization has established decision criteria for distribution of resources, and it does not follow that criteria.</p>				
			<p>Procedural justice Gaps: A review of different scales also reflect that researchers by and large have used a single scale to measure overall procedural justice, however, some researchers (Erdogan, Kraimer, and Liden, 2001; Nabatchi, Bingham, and Good, 2007) believe that overall procedural justice can be divided into two types; namely, process procedural justice and neutrality of managers/supervisors.</p> <p>Note: As suggested by (Erdogan, Kraimer, & Liden, 2001; Nabatchi, Bingham, & Good, 2007), we have divided overall procedural justice into process procedural justice and neutrality of decision maker. As an expert of this field kindly review this scale and mentioned your views, whether or not it is justified to divide the items of procedural justice into two dimensions, such as; process procedural justice and neutrality of managers/supervisors. Similarly, kindly review the section of process procedural justice in first place and express your views, whether or not it is legitimate to include its different sub dimensions in process procedural justice. Furthermore, kindly mention either the items included in this scale measure process procedural justice.</p>				
	(*) Advance Notice/transparency		<p>1. (*) Does this organization ensure transparency in procedures?</p> <p>2. (*) Does this organization provide easy access to procedures?</p> <p>3. (*) Does this organization formally communicate these procedures?</p> <p>4. (*) Does this organization reasonably explain these procedures?</p>				

	Procedural justice Gaps: As already referred above that many researchers have used a single scale to measure overall procedural justice. The criteria used by majority of researchers include: consistency, bias suppression, accuracy, correctability, representativeness and ethicality. However, we believe that, among the existence measures consistency and bias suppression cover the neutrality of managers/supervisors; while, accuracy, correctability, representativeness and ethicality measures process procedural justice, so measuring two different things through a single scale may create validity problem.						
	Note: In the below mentioned scale of neutrality, we have included three sub dimensions, namely: selection of decision maker, bias suppression, and consistency. As an expert of this field kindly review this scale and mentioned your views, whether or not it is justified to include these three sub dimensions, and the items included in these three sub dimensions measures what they are supposed to measure.						
(*) Neutrality	(*) Selection	1. (*) This organization hires managers whose educational background is relevant to the job.					
		2. (*) This organization hires managers whose values are similar to organization values.					
		3. (*) This organization has an established process of selecting managers', and it follows that process.					
	Bias suppression	1. Have your supervisor decisions been free of bias? (Leventhal (1980) & Colquitt, 2001)	X	X	X	X	X
		2. Have your supervisor take decisions in an unbiased manner? (Niehoff & Moorman, 1993)	X	X	X	X	X
		3. (*) Have your manager promote self-interest at the stake of other employees?					
	Consistency	1. Have your supervisor decisions been consistent across the people? (Niehoff & Moorman, 1993)					
		2. Have your supervisor decisions been consistent over the time?					
		3. Have your supervisor applied procedures consistently? (Leventhal (1980) & Colquitt, 2001)					
	Neutrality (*)	1. (*) Has your supervisor been neutral in implementing procedures?					
		2. (*) Has your supervisor been neutral and take decision in un biased manner?					

Procedural Justice	<p>1. (*) This organization has formal procedures in place and it usually follows it.</p> <p>2. (*) This organization has formal procedures in place but it does not follow it.</p>					
Interpersonal Justice	<p>Interpersonal justice Gaps: Review of literature reveals that interpersonal justice is limited to how employees are treated by their immediate supervisor and have ignored interpersonal interaction between employees and top management.</p> <p>Note: Keeping the above gaps in mind we have included two additional sub dimensions of interpersonal justice i.e. interaction with colleagues and interaction with top management. As an expert of this field kindly review this scale and mentioned your views, whether or not it is suitable to include these two additional sub dimensions under the heading of interpersonal justice. Kindly also express your views, regarding the items included in these sub dimensions, whether they measures overall interpersonal justice. It is relevant to mention that majority of items in interpersonal justice are adapted from Colquitt, 2001.</p>					
Interaction with supervisor (Colquitt's 2001)	<p>1. Has (your supervisor) treated you with respect?</p> <p>2. Has (your supervisor) treated you with dignity?</p> <p>3. Has (your supervisor) treated you in a polite manner?</p> <p>4. Has (your supervisor) refrained from improper remarks or comments?</p>	X	X	X	X	X
(*) Interaction with top management	<p>1. (*) Has (top management) treated you with respect?</p> <p>2. (*) Has (top management) treated you with dignity?</p> <p>3. (*) Has (top management) treated you in a polite manner?</p> <p>4. (*) Has (top management) refrained from improper remarks or comments?</p>	X	X	X	X	X

Annexure

Table 3: Computation for Direct and Indirect Effect (Colquitt, 2001)

Coefficients	DJ	PJ	INPJ	INFJ
A	0.043	0.148	0.131	0.439
B	0.486	0.486	0.486	0.486
c'	-0.062	-0.045	0.025	
Ab	0.020898	0.071928	0.063666	0.213354
c=(c'+ ab)	0.0411	0.026928	0.088666	0.213354
Direct Effect (c'/c)	1.5085	1.6716	0.281957	
Percentage	150	167	28	
Indirect Effect (ab/c)	0.50846	2.67	0.717975	
Percentage	50.84	267	71.79	

Annexure

Table 4: Sobel Test(Colquitt, 2001)

	DJ	PJ	INPJ	INFJ
a ²	0.001849	0.021904	0.017161	0.192721
b ²	0.236196	0.236196	0.236196	0.236196
S ^a	0.031	0.037	0.034	0.042
S ^b	0.133	0.133	0.133	0.133
S ^{2a}	0.000961	0.001369	0.001156	0.001764
S ^{2b}	0.017689	0.017689	0.017689	0.017689
a ² S ^{2b}	0.0000327	0.0003874	0.000303	0.0034090
b ² S ^{2a}	0.0002269	0.0003233	0.0002730	0.0004166
S ^{ab}	0.0161121	0.026658	0.024	0.06184
Z ^{ab}	1.29	2.69	2.65	3.45

Annexure

Table 5: Computation for Direct and Indirect Effect (Our Proposed additions)

Coefficients	DJ	PPJ	RPJ	INPJ	INFJ
a	0.038	0.038	0.029	0.091	0.767
b	0.336	0.336	0.336	0.336	
c'	-0.086	-0.032	0.024	0.101	
ab	0.012768	0.012768	0.009744	0.030576	
c=(c'+ ab)	-0.073232	-0.0193	0.033744	0.131576	
Direct Effect (c'/c)	1.1745	1.658	0.71123	0.76761	
Percentage	117	165	71.12	76.76	
Indirect Effect (ab/c)	-0.1742	-0.611	0.28876	0.232382	
Percentage	-17.44	-66.11	28.87	23.23	

Annexure

Table 6: Sobel Test (Our Proposed additions)

	DJ	PPJ	RPJ	INPJ
a ²	0.001444	0.001444	0.000841	0.008281
b ²	0.112896	0.112896	0.112896	0.112896
S ^a	0.035	0.031	0.029	0.039
S ^b	0.101	0.101	0.101	0.101
S ^{2a}	0.001225	0.000961	0.000841	0.001521
S ^{2b}	0.010201	0.010201	0.010201	0.010201
a ² S ^{2b}	0.00001473	0.00001473	0.00000857	0.0000844
b ² S ^{2a}	0.0001382	0.0001084	0.00009494	0.0001717
S ^{ab}	0.01236	0.011095	0.0101734	0.0160031
Z ^{ab}	1.033	1.1507	0.95779	1.9106

