

Equity Perception and Job Satisfaction of Civil Servants in the North-East of Nigeria: The Mediating Role of Self-efficacy

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Authors' contributions

This work was carried out in collaboration between all authors. Author HMK designed the study, performed the statistical analysis and wrote the first draft of the paper. Authors BSD and TA assisted in review of related literature. Author AYD assisted in data collection, coding and entry in IBM SPSS. All authors read and approved the final manuscript.

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ABSTRACT

The aim of this article is to examine the relationship between equity perception (distributive, procedural and informational justice) and employees' affective job satisfaction. This study tested the mediating role of individual self-efficacy on the direct relationship between perceived equity and affective job satisfaction based on the organisational justice theory and social cognitive theory. Data were collected using questionnaire from 450 workers across the six States of northeastern Nigeria, where Confirmatory Factor Analysis (CFA) and mediation analysis were used for testing the hypothesised model of the study using SEM-AMOS. Preliminary analyses revealed that there is an

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adequate fit between the data and the tested model. As expected, a positive and significant relationship was found between equity perception and employees' affective job satisfaction. It was also found that the individual self-efficacy has a significant and positive relationship with both equity perception and employees' affective job satisfaction. Besides, the analysis further showed that individual self-efficacy fully mediated the positive relationship between perceived equity and employees' affective job satisfaction. Study limitations and practical implications were also discussed.

Keywords: Equity perception; job satisfaction; individual self-efficacy; social cognitive theory and organisational justice theory.

1. INTRODUCTION

In a general note, researchers have shown that equity perception is a key concern to human beings [1,2,3], where they expect to be treated fairly and equally, they exhibit shock when they perceived this has not occurred [4]. For several decades research on equity perception has been of serious concern to organisational justice studies. This is not unconnected with the fact that employees' satisfaction with their job is attached to the perceive level of equality received in the allocation of resources, the level of fairness in the processes of allocating these resources, the level of impartial treatment by superiors during the allocation of such resources and the level of adequate and accurate explanations provided during the allocation of such resources. That is, distributive, procedural, interpersonal and informational justices.

Sometimes, in working places as superior, we tend to give priority to some subordinates to the detriment of others. In a developing nation such as Nigeria, organisational bosses tend to consider and give their allies more favour and overlook the remaining employees regardless of their genius, commitment and contribution to the overall goals of the organisation. These behaviours are of serious concern to employees in many organisational set-up which lead to various consequences, among which are; counter-productive attitude, conflicts, and low commitment by the employees until the treatments and rewards are seen as fair, this ultimately means job dissatisfaction. In essence, employees are not working in isolation in their workplace, but rather they are conscious of what others do and how? Thus, the manner in which, they are treated and rewarded have an effect on their job satisfaction.

Furthermore, subordinates compare how hard they work for the organisation, with the amount of work others put in. They also compare what they get with what others receive. In view of that,

when employees make comparisons and feel that they are at the receiving end, they perceive the situation as lacking in equity. With this situation, subordinates not only feel frustrated but their satisfaction is affected [5]. Thus, this attitude of some bosses, especially in the Nigerian context, is what we refer to as organisational injustice. For the purpose of this study, we refer to equity perception as the belief subordinates have on the level of treatment received from superiors as well as their adherence to the code of conducts of a given organisation.

It is worth noting by superiors that, employees' job satisfaction is the backbone of all positive organisational outcomes. Hence, understanding organisational justice is extremely important for organizations because of its direct and positive relationship with employees' job satisfaction [6,7]. For instance, when an employee is satisfied with the job, he would show more commitment to the organisation's goal and certainly, the overall performance would increase. Similarly, it is reported that equity perception and/or organisational justice have significant impact on organisational outcomes such as job satisfaction, organisational commitment, loyalty, work motivation among others [2,6,8,9,10,11]. However, despite the number of studies on equity perception and job satisfaction, there are inconsistent and mixed results. Hence, the need for a mediating variable in such relationship. The study introduces individual self-efficacy as a mediating variable considering the fact that, the construct has been regarded as an important resource for individual employees and organizations alike, as well as, the calls for further studies to use such construct in organisational studies [12,13].

For instance, it was found that procedural and interpersonal justices have a direct and positive effect on organisational outcomes such as job satisfaction, organisational commitment and

loyalty [2,9,11]. Also, distributive justice was found to have a significant relationship with job satisfaction [9,14]; while in another study, distributive justice construct and informational justice were found to be non-significant with job satisfaction [2].

Studies on equity perception/organisational justice on employees' job satisfaction has been on the rise among organisational studies, with most if not all, conducted in developed countries (e.g. Netherlands, Germany, Switzerland, Austria, India and Belgium). Furthermore, there are limited studies if any on this issue in the Nigerian context. Additionally, empirical studies that look at all the four dimensions (i.e. procedural, distributive, interpersonal and informational justice) of organisational justice remain scarce in Nigerian setting. Recent meta-analysis studies revealed that, the combination of all the organisational justice dimensions have stronger associations with outcomes such as job satisfaction, affective commitment to the organisation, and perceived organisational support, than the individual predictability of the various justice dimensions [15].

The aim of the study, therefore, is to determine the effect of perceived organisational equity on employees' job satisfaction. Other specific objectives are to examine the potential mediating role of individual self-efficacy in the context of perceived organisational equity on job satisfaction, and find answers to the following research questions: How does perceived organisational equity affects employees' job satisfaction? and how does individual self-efficacy mediate the relationship between perceived organisational equity and job satisfaction?

2. LITERATURE REVIEW

2.1 Conceptualization

For the purpose of this study, equity perception was used as synonymous with organisational justice and can stem from various sources in the organisation, such as from employer, superior and colleagues [16,17]. Additionally, it can also emanate from an event, such as a performance evaluation process, promotional exercises, appointment processes and sharing of responsibilities in an organisation. Organizational justice is used to describe the role of equity perception and fairness in the workplace as it affects employees [4]. Organizational justice focuses on the ways in which employees

determine if they have been treated fairly in their jobs and the ways in which those perceptions influence organizational outcomes such as job satisfaction, commitment and loyalty [18,19].

The search for extant literature on organisational justice research shows that individual employees keep examining what make fairness judgments in their workplace. Consequently, two different approaches have been identified as the determinants of employees' fairness judgements in the workplace by organisational justice researchers: the event and the social entity paradigms. The event paradigm asserts that employees evaluate the fairness of a specific event that occurred in their workplace, such as performance evaluation, promotional activities, appointments to offices among others. In contrast, the social entity paradigm contends that employees judge the fairness process of the organisation as a whole, such as the fairness of the immediate superiors and the organisation at large. Furthermore, the social entity paradigm believed that employees develop ideas about the level of fairness they expect to receive from a boss or from an organisation as a whole, and these ideas guide future outcomes [20].

Albeit, there is no consensus among researchers on the exact types of organisational justice that are important in equity perceptions among employees in a workplace. However, there is little agreement by some scholars on the types. Some researchers believed on one type (i.e. an overall perception of fairness) [5,21]. Where, they argue for the use of one general justice construct, instead of two, three or four. Their views are that, an employee's overall justice perception may be more important in influencing subsequent organisational outcomes such as satisfaction, commitment and performance, than would any one of the two, three or four types of justice alone. According to [22], there are two types of justice; distributive and procedural justices. Some believed that there are three types by adding interactional justice [23], while, [24], made it four types by subdividing interactional justice into two; interpersonal and informational justices. Hence, this study considered the four dimensions of justice by [24].

Self-efficacy was drawn from Social Cognitive Theory (SCT) of [25], and which is regarded as an important indicator of workplace outcomes, such as job satisfaction and attitudes [26,27]. Self-efficacy is a person's felt confidence to perform a particular task and has been guided by

the assumption that self-efficacy affects choice behaviours, persistence of effort, perseverance in setbacks, and self-aiding and self-hindering thought patterns of employees [13]. Self-efficacy refers to belief in one's ability and capacity to successfully and effectively complete a given assignment in an organisation [25,26]. It is the confidence an individual employee has in his/her ability to cope with difficult jobs in their workplace. Self-efficacy refers to the competence that a person feels concerning the ability to successfully fulfill the tasks involved in his/her job [12]. Therefore, self-efficacy is regarded as a key predictor of job satisfaction [28]. For the purpose of this study, the term individual self-efficacy is used to refer to the ability and capability of an individual employee to accomplish a given task in a workplace amidst justice concern.

Job satisfaction is an important construct to organisational studies and subsequently to organisation's success [6]. Much research has been carried out into ways of improving job satisfaction of workers in various organisations of different sectors [6,29]. It was discovered that high levels of job satisfaction among employees are associated with reduced stress, greater empowerment, increased productivity, lowered absenteeism, and increased motivation and physical health. Likewise, low levels of job satisfaction are related to absenteeism, low morale, high turnover and frustration [6,30]. Job satisfaction is a pleasurable emotional state resulting from one's job and job related experiences. It is the fulfilment or gratification derived from one's workplace [29]. Job satisfaction refers to the degree to which employees are satisfied with such features of their job as the physical work conditions, the recognition they get for their good work, their immediate boss, their rate of pay, their opportunity to use their abilities, their chance of promotion and attention paid to their suggestions [13]. Thus, job satisfaction can be seen as a positive emotional state resulting from individual employees' workplace and job experience.

It is believed that individual employees take into account various aspects of their jobs when thinking about their levels of job satisfaction. An individual employee's overall job satisfaction is determined by summing his/her satisfaction with each of these aspects of the job. These factors include; organisational policies such as, job working conditions, room for initiatives, advancement and achievement, compensation package, moral values and many more. It is

equally important to note that, while considering employee's job satisfaction that some factors may be more important than others for any given employee at a time [31].

However, there are relatively few researches into the relationship between equity perception and job satisfaction among civil servant in Nigeria let alone the North-east geo-political zone, using organisational justice theory and social cognitive theory. Therefore, this paper seeks to address this gap in literature.

2.2 Theoretical Consideration and Hypotheses Development

In this study, the theoretical lenses of the Organisational Justice Theory (OJT) by [32] and the Social Cognitive Theory (SCT) [25], were employed to explain the relationship between equity perception and employees' job satisfaction as well as individual self-efficacy. Thus, the research model of this study is presented in Fig. 1.

2.3 Organisational Justice Theory

OJT can be traced to the work of [22,33], and [32]. The theory focuses and emphasizes on the need for fair treatment of people in an organisation, and how such people form judgments about such fair treatment and the way they react to perceived violations of fair treatment [15]. This theory examines individual employee's perceptions of equity in their working place, among them and superiors as well as co-workers [32]. According to [34], OJT provides a model through which perceptions of fairness and equity by those affected by processes, outcomes and treatment within the organisation can be understood. Thus, it is believed that, when the processes, outcomes and the nature of treatment given are seen as fair the individual employee would perceive the situation as just and fair. Likewise, when the outcomes and decision taken are seen as unfair within the organisation, employees would perceive the situation as unjust and lack equity. It asserts that employees monitor the fairness of processes, outcomes, and interpersonal treatment in their organizations. When employees feel that the treatment is being fair, then four important individual needs are met for them: the need for belonging, the need for meaning, the need for positive self-regard, and the need for control [35].

Hence, in this study we argued that if employees perceived that their superior act fairly in their

resource allocations, decision-making processes, treating them with dignity and respect, and providing them with details explanations on how and why important resource allocations were made, then their attitude in terms of job satisfaction may be affected positively.

2.4 Social Cognitive Theory

SCT was developed by [25] who was influenced by the social learning theory. The theory evolved under the umbrella of behaviorism, which is a subset of psychological theories intended to explain why people behave the way they do. The SCT model is widely used to understand and predict individual and group behavior [36]. Individual self-efficacy construct of the theory was adopted for the study, and it refers to the believe, ability and the capability of an individual employee about his/her ability to mobilize the courage, cognitive resources, and courses of action needed to execute a particular job in an organisation [27]. In this study, we argue that individual employees who feel able and confident concerning their ability to meet the demands of their job amidst equity perception, will be more satisfied with their job than those who feel that they cannot meet these job demands amongst injustice concern. This justifies the theoretical assumptions that individuals who have high belief of self-efficacy persist longer and seek more challenging jobs, which ultimately leads to job satisfaction [12,13]. Hence, individual employees with higher levels of self-efficacy may influence their own happiness at work by shaping their work environment to fit them better and satisfy their needs. In addition, as theorized by [28], individual employees with high self-efficacy will be more satisfied at work than those with low

efficacy, because they will be more proactive on the job.

2.5 Empirical Reviews

In this section, empirical studies that linked the constructs of the study are reviewed such as equity perception, job satisfaction and individual self-efficacy.

2.6 Equity Perception and Job Satisfaction

Employees' equity perception about organisational processes have been recognised as the most important aspect in determining the organisational outcomes such as employees' commitment, organisational citizen behaviour and job satisfaction [2,29,37]. It is believed that studies on equity perception and job satisfaction have significant importance to both individual employee and organisations at large. Also, literatures on organisational behaviour showed that there is positive and significant relationship between equity/justice perception and job satisfaction in an organisation [14,37,24,38]. However, studies that indicates which dimension of equity perception has strong effect on job satisfaction remain unknown. For example, [2,9], in their studies found that procedural and interpersonal justice dimensions of equity perception have positively and significantly predicted job satisfaction of employees in Ghana and India, while distributive and informational justice did not predict job satisfaction. Also, the perceptions of distributive justice and procedural justice have significant positive relationships with job satisfaction [29]. In view of all these mixed findings, and lack of such findings in the Nigerian

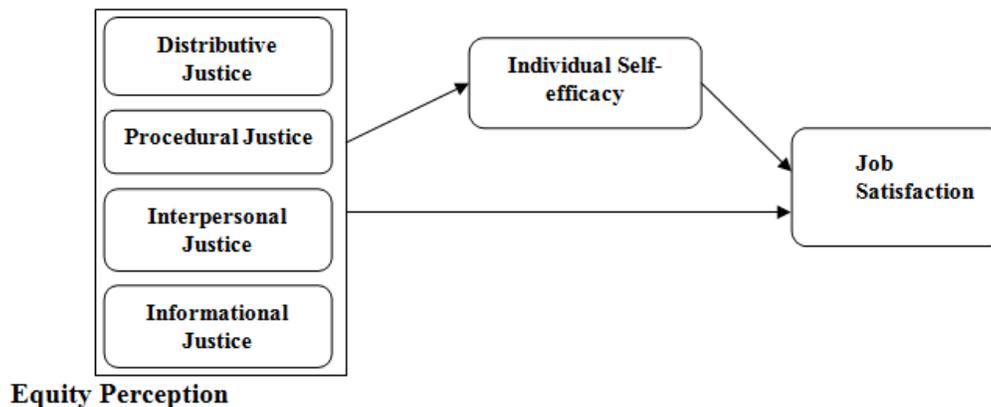


Fig. 1. Framework of the study

context to show that equity perception could positively predict job satisfaction, the study hypothesized that:

H₁: Equity perception has an effect on employees' job satisfaction.

2.7 Equity Perception and Individual Self-efficacy

Based on experience, it has become apparent that Nigerian employees are seriously affected on-the-job with injustice and nepotism by their superiors. It has gone to the level, where some employees do not apply for their rights like promotion, because the promotional exercise are unjust and full of bias. This often reduces the efforts, commitment and zeal of the employees and subsequently, affect their self-efficacy on the job. And, it is believed that, employees who have high self-efficacy show high task performance when compared to employees with lower self-efficacy [13,26,27]. Thus, it is expected that superiors in the workplace should show higher levels of justice among their subordinates, so as to boost the individual employee's self-efficacy and subsequently their job satisfaction. The paper predicts that there would be positive relationship between equity perception and self-efficacy of employees, because when employees perceived that there is justice in the organisation, then their self-efficacy would increase. Therefore, the study proposes that:

H₂: Equity perception has an effect on self-efficacy.

2.8 Individual Self-efficacy and Job Satisfaction

It is believing that individual employee's self-efficacy on the job will predict his/her job attitudes and behaviours such as job satisfaction. It was found that individual self-efficacy has positive effects on job satisfaction, task performance and citizenship behaviours in organisation [13,28,39]. Even though, self-efficacy has positive effect on job satisfaction, there are other studies indicating that self-efficacy has a negative effect on employee's job satisfaction [e.g. 40]. Based on the aforementioned mixed results and the theory postulation that individual self-efficacy would affect job satisfaction, and it is argued that individual self-efficacy is likely to increase employees' job satisfaction, because the greater

the employee's self-efficacy, the higher would be his/her effort and level of motivation, and, consequently, the higher would be his/her job satisfaction. In addition, only few studies were carried out in order to find out the effect of individual self-efficacy on employees' job satisfaction [13,39] and none is from Nigeria. Hence, the study hypothesized that:

H₃: Individual self-efficacy has an effect on job satisfaction.

2.9 Individual Self-efficacy as a Mediator of the Relationship between Equity Perception and Job Satisfaction

The current focus of the research on organizational justice perceptions and employees' work outcomes such as job satisfaction focus less on the direct effect. Furthermore, researchers on organizational justice have concluded that studies on direct relationships between organizational justice perceptions and job satisfaction is declining [41]. Hence, it becomes evident that there is need for mediating variable and therefore, individual self-efficacy serves as mediator in the relationship between equity perception and job satisfaction. Even though, there is positive and direct relationship between individual self-efficacy and job satisfaction [13], research has paid little attention if any, to the mediating effect of self-efficacy on the relationship of equity perception and job satisfaction. Furthermore, studies that integrate equity perception with self-efficacy and job satisfaction in one framework remain unknown in the literature, and according to extant literatures, the relationship between dimensions of equity perception and job satisfaction are not consistent. The study argued that where there is fairness in organisational processes, such as promotion, the individual employee's positive feelings about the job would increase and, certainly can increase their level of job satisfaction. Additionally, individual employees with high self-efficacy deals more effectively with difficulties and persists in the face of failure and certainly they are more likely to attain valued outcomes and thus derive satisfaction from their jobs [28]. Therefore, the study proposes that:

H₄: Self-efficacy mediate the relationship between equity perception and job satisfaction.

3. METHODOLOGY

The study employed cross-sectional survey design, where data was collected from civil servants across the six states of the north east geopolitical zone of Nigeria. A total of 450 workers were conveniently approached and asked to fill the questionnaires for the study. The adapted questionnaire was self-administered by the researchers as well as with the help of some undergraduates and postgraduate students of Abubakar Tafawa Balewa University Bauchi. Even though face-to-face questionnaire administration is expensive in terms of time, money, and efforts, it performs better than mail and telephone surveys [42,43]. Out of 450 questionnaires distributed, 404 (approximately 90% response rate) were retrieved and found valid for further analysis.

All scales used in this study had been validated in previous studies and adapted to suit the context of the study. All the constructs have been measured on five-point Likert-type scale from 1 = strongly disagree to 5 = strongly agree. For organizational justice construct, four dimensions were employed to assess organizational justice. The first, distributive justice where four items scale were used to measure the degree to which outcomes received by employees are perceived to be fair and related to efforts put. The second, procedural justice was measured using five items scale to measure the perceived fairness of the outcomes involved in these procedures. Third, interpersonal justice where four items scale were used to measure the degree of fairness in interaction received by the employees from their superior. Finally, informational justice was measured using four items scale measuring the degree of perceived fairness in communication received by employees. Furthermore, all items of the construct of organisational justice were extracted from [24]. Individual self-efficacy was measured using five items scales, all adapted from [12]. While, job satisfaction was measured using seven affective job satisfaction scale, three of the items were negatively worded and refers to as distracter items, (e.g. *My job is time consuming*) so as to help in reducing Common Method Bias (CMB) as suggested by Thompson and Phua [30]. However, all negatively worded items were reversed using SPSS before the analyses. All were adapted from [30].

The data collected were analysed using IBM SPSS and IBM AMOS version 25 and 22 respectively. IBM SPSS was used in data coding and entry, descriptive statistics analysis as well

as the data cleaning and management of the data set. While, IBM AMOS was used in testing the model fits of the instruments used and structural model in testing the relationships among the variables of the study as well as hypotheses testing.

4. RESULTS AND DISCUSSION

Data analysis was conducted on the data collected to test the four hypotheses stated. Three stages of data analysis were followed: (i) Preliminary analysis was conducted which include; outlier detection, a test of normality and general assumptions of regression analysis; (ii) Assessment of the measurement model to test for goodness fit of the items; and (iii) Assessment of the structural model to test the relationship among the variables of the study.

Table 1 shows the frequency as well as the percentage of the demographic data of the study. Out of the 404 respondents in the study, males were 314 (77.7%) while females were 90 (22.3%). This illustrates that majority of the organisational employees in northern Nigeria are males (77.7%). With regards to age, the respondents spread across different age groups; 31-40 years' bracket were the majority 218 (54%), while 51 years and above were the least 14 (3.5%). This result indicates that the organisational employees in northern Nigeria is dominated by youthful class (54%). With regards to level of educational qualification, Table 1 shows that respondents with Higher National Diploma/Degree qualifications were the highest with 224 (55.4%), followed by those with Master's degrees 148 (36.6%), while respondents with Ph.D degrees were the least which accounts for 07 (1.7%). This indicates that majority of the respondents are learned enough to respond appropriately to the questionnaire of the study. Among the 404 respondents, 348 (86.1%) were employees working in government institutions, 48 (11.9%) were of the private institutions, while, 08 (2.0%) were of the Non-governmental organisations. This indicates that majority of the northern Nigerian citizens are government workers (86.1%). Finally, working experience (years of service), those employees with less than or equal to 10 years in service were the majority 246 (60.9%), followed by less than or equal to 20 years with 105 (26.0%) while, those with 40 years or less were the least with 11 (2.7%). This further buttressed the earlier claimed of youthful class dominating the working class in northern Nigeria.

Table 1. Descriptive statistics of the respondents

Data		Frequency (404)	Percent(100)
Gender	Male	314	77.7
	Female	90	22.3
Age	20 – 30	70	17.3
	31 – 40	218	54.0
	41 – 50	102	25.2
	51 and above	14	3.5
	Undisclosed	6	1.5
Qualification	O level/Vocational certificate	19	4.7
	Certificate/Diploma/NCE	224	55.4
	HND/Degree	148	36.6
	Masters/PhD	7	1.7
	Undisclosed	6	1.5
Nature of your organisation	Government Institution	348	86.1
	Private Institution	48	11.4
	Non-governmental organisation	08	2.0
Work experience	Less 10 years	246	60.9
	Less 20 years	105	26.0
	Less 30 years	40	9.9
	Less 40 years	11	2.7
	Undisclosed	02	0.5

Source: Researchers' survey, 2018.

4.1 Preliminary Analysis

The data set was checked for missing values and it was found that there are few cases with missing values. After thorough examination, it was concluded that it is item missingness, hence, the recommendation by Newman [44], was followed and imputation with replacement value using mean substitution was used with the aid of SPSS transform command. Furthermore, outliers were checked, defined and handled from the data set based on the recommendation of [45]. As with most if not all social sciences data sets, it was found that there are outliers in the data set, therefore we screened it using multiple and influence techniques of Z-scores, Mahalanobis Distance (D^2/df), leverage ($> 2K/n$) and Cook's D_i ($> 4/n$); and they were of two types: (i) Error outliers and (ii) Interesting outliers. Error outliers are outliers that results from entry errors and they were corrected by referring back to the original filled questionnaires, while interesting outliers are outliers that contain valuable and unexpected knowledge from the respondents, and such outliers were handled using the aforementioned techniques. Using the Z-scores techniques none of the items is above ± 3.30 meaning there is no concern for outliers, while for Mahalanobis, leverage and Cook's D_i , twelve extreme outliers were detected and excluded from the final data set before further analysis as suggested by Hair et al. [46] and Kline [47].

Similarly, the normality of the data was tested using descriptive outputs such as 5% trimmed mean, and Skewness and Kurtosis with their Standard errors. However, as a rule values of skewness and kurtosis can help to estimate normality in a large sample data, average skewness and kurtosis have values of ± 1.13 and ± 1.61 respectively, while high skewness and kurtosis have ± 1.8 and ± 3.8 respectively [48]. Table 2 shows the test of normality of the data set, where all the skewness values are less than ± 1.96 and Kurtosis values are less ± 3.0 . Also, 5% trimmed mean and grand mean all indicates negligible difference. In addition, correlation coefficients (Table 3), Durbin-Watson (1.93), tolerance and Variance Inflation Factor (VIF) in Table 2 results showed that no violation was found of normality, linearity, auto-correlation and multicollinearity. Thus, indicates normality of the data set for further analysis.

In addition, since all data were collected at the same time, which may cause the Common Method Variance (CMV) issue. CMV deals with the possibility that there is some built-in bias due to the nature of the singular sample of self-reported data [49]. Hence, the Harman's single factor test conducted and the results confirmed that no CMV issue, because the recommended threshold is 50% and the result is 78%.

4.2 Correlational Analysis and Internal Consistency

Table 3 presents the inter-construct correlation analysis of the equity perception dimensions, individual self-efficacy and job satisfaction. The relationship between them was analyzed using Pearson product-moment correlation coefficient. It was found that all the equity perception dimensions (DISJ, PROJ, INTJ and INFJ) have a strong and positive correlation between them and with mediating variable (INSE) and the dependent (JSAT) variable of the study; distributive justice ($r = 0.491^{**}$), procedural justice ($r = 0.431^{**}$), interpersonal justice ($r = 0.314^{**}$), informational justice ($r = 0.521^{**}$), and individual self-efficacy ($r = 0.819^{**}$), were correlated in a statistically significant manner with job satisfaction at the 0.01 level (2-tailed). Finally, the shared variances, which is the coefficient of determination among the variables were quite good with majority having more than 45% and this indicates that job satisfaction helps to explain more than 35% of the variances in respondents' scores on all the independent

variables. With regards to items scale reliability of the constructs, all the six constructs have excellent Cronbach's alpha values ranging from (0.82 to 0.93) as recommended by Nunnally [50], as shown in Table 3.

4.3 Assessment of the Measurement Model

As stated earlier the data collected were analysed using SEM-AMOS version 22. As part of the measurement model assessment, the measurement items of each construct were subjected to iteration processes in SEM-AMOS using [51] AMOS plugin for model fit measures. In other to ensure goodness fit of the measurement items, two items each for job satisfaction and individual self-efficacy were dropped from the constructs. One dimension (interpersonal justice) of equity perception was dropped and also three items from procedural justice were removed, all due to high measurement errors and low factor loadings.

Table 2. Descriptive analysis and normality test of the constructs

Constructs	Mean	Std. deviation	5% trimmed mean	Skewness values	Kurtosis values	Tolerance	VIF
DISJ	3.747	.844	3.799	-1.013	.798	.805	1.242
PROJ	3.410	.637	3.428	-.397	-.024	.792	1.262
INTJ	3.799	.723	3.822	-.405	-.075	.799	1.252
INFJ	3.553	.697	3.568	-.368	.329	.685	1.459
INSE	3.983	.484	4.005	-.842	1.225	.749	1.336
JSAT	3.632	.790	3.663	-.665	.128	-	-

Source: Researchers' survey, 2018; DISJ = Distributive Justice; PROJ = Procedural Justice; INTJ= Interpersonal Justice; INFJ= Informational Justice; INSE= Individual Self-Efficacy; JSAT= Job Satisfaction.

Table 3. Inter-constructs correlation and internal consistency estimates

Constructs	Cronbach's alpha	1	2	3	4	5	6
JSAT	.87	1					
DISJ	.87	0.491**	1				
PROJ	.80	0.431**	0.729**	1			
INTJ	.80	0.314**	0.416**	0.678**	1		
INFJ	.93	0.521**	0.308**	0.304**	0.367**	1	
INSE	.82	0.819**	0.478**	0.439**	0.362**	0.642**	1

**Correlation is significant at the 0.01 ($p < .001$) level (2-tailed).

Source: Researchers' survey, 2018.

Table 4. Model fit indices

Measures	Absolute fits		Incremental fits		Parsimonious fits	
	RMSEA	SRMR	CFI	TLI	χ^2/df	PNFI
Model Estimate	0.062	0.056	0.956	0.937	2.506	0.655

Source: Researchers' survey, 2018.

As shown in Table 4, all the values of the fit indices supported a well-designed fit between the theories and the data collected for this research. As recommended by authors [52,53,54] the study reports the measurement model fit indices according to the three broad classifications, i.e. absolute fit, incremental fit and parsimonious fit. Where two most widely respected and reported fit indices were reported from each of the three aforementioned fits. Furthermore, for absolute fit; Root Mean Square Error of Approximation (RMSEA = 0.062) and Standardised Root Mean Square Residual (SRMR = 0.056) were reported, also for incremental fit; Comparative Fit Index (CFI = 0.956) and Tucker-Lewis Index (TLI = 0.937) were reported, while Model chi-square ($\chi^2/df = 2.506$) and Parsimonious Normed Fit Index (PNFI = 0.655) were reported for parsimonious fit.

In details, based on the results of the model fits in Table 4, the two residual estimates (RMSEA = 0.062 & SRMR = 0.056) were also found to be excellent and acceptable in terms of the small magnitude of the error of the fit between the measurement structure and data collected. As recommended, RMSEA value should be in the range of 0.06 to 0.10 while, SRMR value should be less than 0.08 or range from 0 to 1.0 [52,54]. Furthermore, the closer the SRMR value to zero, the better and it indicates perfect fit (Hooper et al., 2008). Incremental fit indices in terms of Comparative Fit Index (CFI = 0.956) and Tucker-Lewis Index (TLI = 0.937) which means approximately 95% of the variance and covariance of the research measurement was explained by the data collected in this study. More importantly, the values of the two indices indicated an excellent fit as suggested by [52], [53,54,47], that the values of CFI and TLI should be greater than 0.90 (>0.90). With regards to parsimonious fits, chi-square model supports the measurement model with the adjusted chi-square value ($\chi^2/df = 2.506$) was excellent at p -value < 0.05 as recommended by [52,54], that the relative chi-square value (χ^2/df) should be <5.0. And also, Parsimonious Normed Fit Index (PNFI = 0.655) was acceptable, even though there is no specific threshold to it. However, it is suggested that when the index is within the region of 0.50 and above, it should be considered accepted [53]. Thus, the overall model fits of the six constructs are excellent. Table 4 provides the model fits of all the six constructs.

4.4 Validating the Measurement Models

Following the three-step approach recommended by [52], we first evaluated a measurement model to assess constructs unidimensionality using Confirmatory Factor Analysis (CFA) (Table 4); secondly the validity were evaluated (convergent, construct and discriminant validities) of all the latent variables, through the use of SEM-AMOS master validity plugin by [55] (Table 5) and finally, the reliability of the measurement model was assessed using the three approaches recommended by [52]; first internal reliability was assessed based on Cronbach's alpha value (Table 3) using IBM SPSS, second and thirdly, Composite Reliability (CR) and Average Variance Explained (AVE) were determined using master validity plugin by [55], (Table 5).

Convergent validity was evaluated based on recommendations by [52], first, where all items in the measurement models must be statistical significance. Second, CR of a construct must be greater than or equal to 0.60. Third, AVE of all constructs must be greater than or equal to 0.50 [52,56]. However, on the first condition, all items of the latent constructs were found to be significant at $p < 0.001$. The results also show that CR of all construct ranges between 0.831 – 0.937; while AVE of all constructs ranges between 0.552 – 0.740. Thus, AVE greater than 0.50 of all the variables indicates that all the six variables have items total variance explained of more than 50 per cent (Table 5). Also, since the regression weight of all items from the unstandardized AMOS output are significant, it can be concluded that the convergent validity is achieved which is, an evidence that convergent validity exists [52,57].

Discriminant validity was assessed based on the criteria recommended by Awang, Fornell and Larcker [52,56]. The first criterion states that to achieve discriminant validity of the latent variables, the correlational coefficients between them should not be greater than 0.85 and the second criterion states that discriminant validity is achieved when a diagonal value in bold is greater than its correlations with all other constructs in its row and column. In order words, "AVE should exceed the squared correlation with any other construct" [58]. The bolded values represented on diagonal in Table 5 show that the square root of AVE for each construct is greater than its correlation with all other constructs [56]. Furthermore, values below the bolded diagonal are the squared correlations of all construct and

are smaller than AVE [58]. The values in Table 5 indicate that each construct is empirically and statistically distinct from other constructs in the study [59]. Therefore, it can be concluded that evidence of discriminant validity exist [57].

4.5 Assessment and Validation of the Structural Model

Here, the relationships among the variables of the study, the direct and indirect effects to prove the mediating effect of individual self-efficacy as well as all hypothesized relational paths were examined.

Fig. 2 presents the direct effect of equity perception and job satisfaction. As illustrated in

Fig. 2, the direct path (equity perception on job satisfaction) showed significant and positive effect of the exogenous variable (equity perception) on the endogenous variable (job satisfaction) with standardized estimate coefficient and p-value of (0.69, $p < 0.001$) respectively. Hence, the first hypothesis (H_1), which states that ‘Equity perception has effect on employees’ job satisfaction’ is supported.

The structural model was assessed based on how the latent constructs were conceptualised. The structural model of the study showing the relationship among equity perception, individual self-efficacy, and job satisfaction is presented in Fig. 3. Overall, the validation of the structural model indicates good fitness indices (Fig. 3):

Table 5. Discriminant validity and correlation

Constructs	CR	AVE	1	2	3	4	5
Distributive Justice	0.898	0.689	0.830				
Job Satisfaction	0.937	0.680	0.555***	0.825			
Procedural Justice	0.911	0.596	0.280***	0.368***	0.772		
Informational Justice	0.934	0.740	0.236***	0.247***	0.547***	0.860	
Individual Self-efficacy	0.831	0.552	0.713***	0.596***	0.233***	0.411***	0.743

Source: Researchers’ survey, 2018; Note: CR = Composite Reliability; AVE = Average Variance Extracted. Bolded diagonal values are the squared root of average variance extracted (AVE). Values below the diagonal are the squared correlation of variables ***significant at the 0.001 level ($p < 0.001$) (two-tailed).

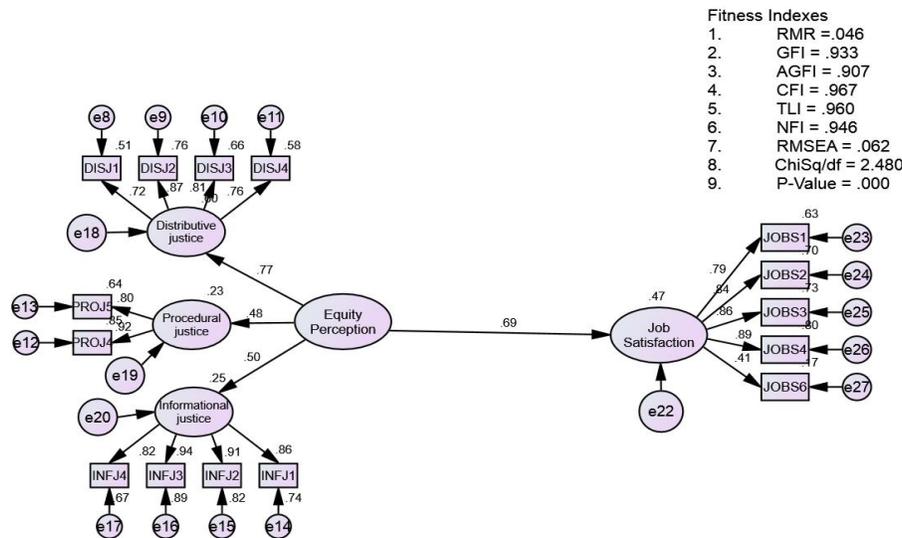


Fig. 2. Structural model of direct effect of equity perception on affective job satisfaction

RMR = .044, SRMR = .065, GFI = .908, AGFI = .878, CFI = .955, TLI = .947, NFI = .931, RMSEA = .067, Chi Sq/df. = 2.756 and P-Value = .***.

From Table 6 it is clear that the overall predictive power of the model toward explaining the employees' job satisfaction in organization is 0.89. This means that combined effects of equity perception (distributive, procedural and informational justices) and individual self-efficacy explained employees' affective job satisfaction by 89%. In other words, the error variance of employees' affective job satisfaction is approximately 11% of its variance for all constructs in the model.

However, on individual basis, the standardized estimate (beta) of equity perception to individual self-efficacy is 0.77, this shows that when equity perception goes up by 1-unit, individual self-efficacy goes up by 0.77 standard deviation. With a standard error of about 0.159, and the level of significance for regression weight of equity perception in the prediction of individual self-efficacy is significantly different from zero at the 0.001 level with a critical ratio of 7.560 (two-tailed test). Similarly, individual self-efficacy standardized estimate to job satisfaction is 0.94, which means when individual self-efficacy goes up by 1 unit, job satisfaction goes up by 0.94 standard deviation, but with a standard error of 0.083 and significant value of 0.000 which is significantly different from zero at the $p < 0.001$ level (two-tailed test) with a critical ratio as large as 11.093. Finally, equity perception to job satisfaction (even though it is least because of the indirect effect of the mediating variable introduced to the relationship) with standardized estimate of 0.01, which means when equity perception goes up by 1 unit, job satisfaction goes up by 0.01 and has a standard error of about 0.120 and significant value of 0.920 which

is non-significant and different from zero at the $p > 0.05$ level (two-tailed test).

4.6 Test of Mediation

To test for the mediating effect of individual self-efficacy in explaining the relationship between equity perception and employees' job satisfaction, the causal chain approach as well as the mediation argument of [60,61] were followed. Furthermore, information available in Figs. 2 & 3 and Tables 6 & 7 were used to compute and describe the nature of the mediating effects in the model and subsequently to test the hypotheses stated.

Based on the analysis in Tables 6 & 7, the direct effect of equity perception on the employees' job satisfaction is 0.69 (see Fig. 2); while the indirect effect of equity perception on the employees' job satisfaction through the individual self-efficacy is 0.01 (see Fig. 3); and the total effect of equity perception on the employees' job satisfaction through the individual self-efficacy is 0.89, which is stronger than the direct effect of equity perception on the employees' job satisfaction. This suggested that the mediating effect of individual self-efficacy is full. Also, as shown in Tables 6 & Fig. 3, with the introduction of the mediating variable (individual self-efficacy) to the model, the relationship between equity perception and employees' job satisfaction becomes weak and statistically insignificant ($\beta = 0.01$, p -value = 0.920) when compared to the model before the introduction of the mediating variable as shown in Fig. 2. Similarly, a full mediating effect of individual self-efficacy on the relationship between equity perception and job satisfaction is supported by (β for equity perception \rightarrow individual self-efficacy = 0.77; individual self-efficacy \rightarrow job satisfaction = 0.94; and equity perception \rightarrow job satisfaction = 0.01) see Table 6. These results provide evidence that

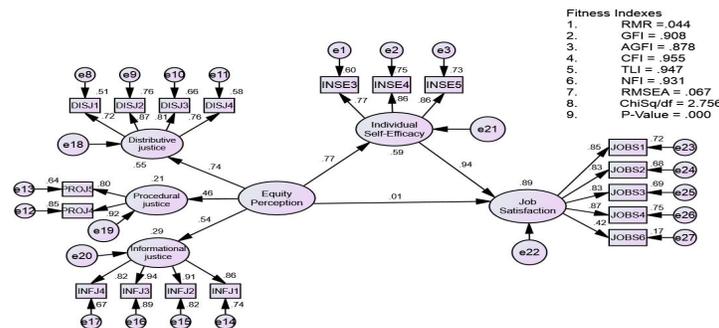


Fig. 3. Structural Model of equity perception, individual self-efficacy and affective job satisfaction

Table 6. Result of standardized regression estimates

Relationships between the constructs	R ²	Std. estimate(β)	S.E.	C.R.	P-Value	Results
Equity perception <--- Job satisfaction	0.89	0.01	0.120	0.101	0.920	Not significant
Equity perception <--- Individual Self-efficacy		0.77	0.159	7.560	***	Significant
Individual self-efficacy <--- Job satisfaction	0.94	0.083	11.093	***	***	Significant

Source: Researchers' survey, 2018.

Table 7. Decomposition of effects

Relationship	Standardised estimates		
	Direct effect	indirect effect	Total effect
Equity perception → Job satisfaction	0.69	-	0.47
Equity perception → Individual self-efficacy	0.77	-	-
Individual self-efficacy → Job satisfaction	0.94	-	-
Equity perception → Job satisfaction through individual self-efficacy	-	0.01	0.89

Source: Researchers' survey, 2018.

support the full mediating effect of individual self-efficacy to explain the relationship between equity perception and employees' job satisfaction. Thus, the second, third and fourth hypotheses (H₂, H₃ & H₄), were supported.

4.7 Discussion of Findings

The main aim of the study was to examine the potential mediating effect of individual self-efficacy on the relationship between equity perception and employees' job satisfaction. The study found that equity perception has a positive and significant effect on employees' job satisfaction. This shows that all of the three dimensions of equity perception (distributive, procedural and informational justices) are important predictors of employees' job satisfaction. This finding revealed that perceived equity among organisational employees in northern Nigeria, is accorded by job satisfaction and this is much in line with previous research findings [9,10,14,37,38].

The study also found positive and significant relationship between equity perception and individual self-efficacy as well as employees' job satisfaction. These findings are consistent with previous research findings [13,26,27,28,39] which discovered that individual self-efficacy has positive effects on employees' job satisfaction. However, this finding contradicts that of [40], where they found a negative effect on the

relationship between self-efficacy and employees' job satisfaction.

Lastly, the study found that individual self-efficacy mediated the relationship between equity perception and employees' job satisfaction. The mediation effect was full, this confirmed the earlier assertion that, where there is fairness in the organisational processes, individual employee's positive attitudes towards the job would increase and certainly his/her job satisfaction will increase. This finding is partially related with the findings of a recent study by Maggiori et al. [39], conducted on employed adults living in Switzerland, which confirmed the mediating role of occupational self-efficacy between personality traits (neuroticism, conscientiousness, and extraversion) and job satisfaction.

5. CONCLUSION AND IMPLICATIONS

The results confirmed the mediating effect of individual self-efficacy in the relationship between equity perception (distributive, procedural and informational justice) and employees' job satisfaction. It was found that the positive relationship between equity perception and employees' job satisfaction becomes weaker and non-significant when individual self-efficacy was introduced to the model. This indicates that perceived equity among organisational employees would lead to higher job satisfaction when individual self-efficacy is present.

Additionally, when individual employees possess self-efficacy, they are more likely to take on full personal responsibility, take/make decisions proactively, and have a deeper dedication toward organisational goals and objectives with enthusiasm and sense of belonging. In view of that, favourable policies and practices of organisational justice into an organisational culture is believed to result in high employees' job satisfaction and subsequently organisational performance [62]. Furthermore, it could be concluded that equity perception using the three dimensions of organisational justice theory improves employees' job satisfaction in organisations. Thus, the need for organisational employers and superiors to apply the pluses of distributive, procedural and informational justice among the organizational employees' so as to achieve employees' job satisfaction. Moreover, empirical evidences have shown that when employees feel that their organisations deviate from justice and fair play, their reciprocal behaviors turn to be negative and in worst cases, counterproductive work behaviors such as vandalism, absenteeism, sabotage, arson, theft, retaliation and aggression [33,63].

The study has both theoretical and managerial implications as well as some limitations and suggestion for future studies.

5.1 Theoretical Implications

The study makes a unique contribution by integrating the OJ and SC theories to explain the relationship between equity perception, individual self-efficacy and employees' affective job satisfaction. The findings suggest that the effect of equity perception on employees' job satisfaction depends largely on employees' self-belief, confidence and initiative in the workplace. This statement is consistent with the organisational behaviour literatures which suggest that the perception of equity and fairness among organisations' workers have direct implications for employees' job satisfaction and consequently lead to organisational performance. In addition, the study adds to the body of literature on equity perception and employees' job satisfaction, by adding individual self-efficacy that is previously unconnected to equity perception.

5.2 Managerial Implications

Meta-analysis, conceptual and empirical studies have shown that employees' job satisfaction has

been the major source of all positive outcomes in organisations. It is believed that when employee feel satisfied with the organisational processes such as promotional and rewards activities, these could be translated into workplace productive behaviours such as higher job commitment, loyalty and even stability of tenure in organisations. Thus, based on the findings of the study and that of recent and previous studies as shown in the extant literatures, equity perception (distributive, procedural and informational justice) has a direct positive and significant effect on the employees' job satisfaction. Organizational employers and superiors alike must provide employees with a working environment that thrive in fairness in all it ramifications. Using academic institution where we come from as example, the allocation of responsibilities and offices must be on equity basis and free from nepotism, the processes of allocating such responsibilities must be free from bias and also, the information about such offices and responsibilities must be freely available and communicated to all with respect and dignity. Additionally, the study found that the individual self-efficacy mediates the relationship between equity perception and employees' job satisfaction. This finding suggests that organisations' employers and superior should set a mechanism to ensure that employees' self-confidence, zeal and morale are boost regularly, since the individual self-efficacy was found to be a strong predictor of the employees' job satisfaction in organisations.

5.3 Limitations and Suggestion for Future Studies

There are some limitations associated with this study which deserved to be mentioned here. First, the study restricts itself to only equity perception at the workplace from employees' perspective which may limit the scope of this study. Hence, the need for future studies to measure the perception of equity from both the workers and the employers. Second, the study also restrict itself to only job satisfaction as an organisational outcome, without for example, considering other outcomes like organisational citizen behaviour, organizational commitment, turnover intentions, task performance, intrinsic motivation, the willingness to report problems and organisational performance in the organizations, which may broaden the scope of the study. Future researchers are encouraged to consider these organisational outcomes variables in their studies, even as an intervening

variable. Third, there is a need for future studies to consider introducing a moderating variable into the model, especially leadership style and more precisely servant leadership style. As it was found by Divya and Suganthi [64] where employees working under servant leaders have a positive perception of organisational justice in their workplace. Fourth, the study was cross-sectional in nature, thus one may rule out the alternative causal relationships of the study variables. Because, the perception of equity is situational and temporal, so there is no assurance that an employee's equity perception of today would be the same as tomorrow or next week. Thus, the need for longitudinal research design for future researchers in order to keep track of perceived equity among workers in the organisation. Finally, the fact that this study used convenient sampling, the generalizability of the results to the entire region could be limited. Hence, to lessen the possible doubts concerning the generalizability of the results, it is recommended that future studies should consider the applicability of this model using a sample that covers a broader percentage of civil servants in the region as well as to use probability sampling technique if possible.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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