

Unlocking the Effect of Organizational Justice on Organizational Performance: Evidence from Public Hospitals in Ethiopia

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ABSTRACT

Organizational justice constitutes a cornerstone of strategic HRM and serves as a critical determinant of organizational effectiveness. In Ethiopian public hospitals, employees are continually complaining about organizational justice practices. Drawing on equity theory and social exchange theory as its theoretical foundation, this study investigates the effect of organizational justice on organizational performance of public hospitals in the Amhara region, Ethiopia. Organizational justice was conceptualized using four dimensions namely distributive, procedural, interpersonal and informational justice. Organizational performance was operationalized using the Balanced Scorecard (BSC) framework, encompassing four perspectives namely patient satisfaction, internal business processes, financial perspective, and learning and growth. The measurement instruments were adapted from previously validated studies. An explanatory research design was employed, and data were collected from 371 participants selected through a stratified random sampling using a five-point Likert scale questionnaire. The hypothesized relationships were analyzed using partial least squares structural equation modeling (PLS-SEM) with SMART-PLS software. Descriptive findings revealed relatively low levels of perceived organizational justice across its four dimensions and correspondingly low perceptions of hospital performance. The structural model demonstrated that distributive justice ($\beta = 0.323$, $p < 0.05$), procedural justice ($\beta = 0.200$, $p < 0.05$), interpersonal justice ($\beta = 0.191$, $p < 0.05$), and informational justice ($\beta = 0.363$, $p < 0.05$) each exert a positive and statistically significant effect on public hospital performance. These findings highlight the multidimensional role of organizational justice in shaping institutional performance and extend the application of equity theory within public healthcare systems in developing economies. The study provides evidence-based implications for policymakers, hospital executives, and human resource managers to promote equitable management practices that enhance employee trust and hospital effectiveness. It is recommended that public hospitals strengthen organizational justice through fair procedures, equitable resource allocation, respectful interactions, and transparent communication.

Keywords: Equity Theory, Organizational Justice, PLS-SEM, Public Hospital Performance, Social Exchange Theory

INTRODUCTION

In an increasingly dynamic and rapidly evolving organizational landscape, creating a fair work environment has become a strategic imperative rather than merely an ethical obligation. Employees increasingly seek equitable treatment, transparent decision-making, and respectful interpersonal interactions that recognize their contributions and uphold their dignity (Elamin, 2012; Kavitha, 2025). Organizational justice emphasizes employees' perceptions of the fairness of workplace activities and

encompasses four main aspects: fairness of outcomes (distributive justice), fairness of the decision-making process (procedural justice), fairness in treatment by supervisors (interpersonal justice), and honest, and clear explanations (informational justice) (Colquitt et al., 2001; Greenberg & Colquitt, 2013). Such perceptions of fairness strengthen employees' commitment and willingness to contribute beyond formal job requirements, ultimately enhancing organizational effectiveness (Das & Mohanty, 2023). Although organizational justice has attracted considerable scholarly interest over the past several decades, the literature has primarily focused on understanding the factors that shape justice perceptions rather than examining their implications for organizational effectiveness (Moon, 2017; Biljana et al., 2019). Besides, little consensus exists regarding which dimensions of organizational justice exert the strongest influence on performance, highlighting the need for further empirical investigation (Colquitt et al., 2001; Colquitt et al., 2006). Existing studies also show considerable inconsistency in the conceptualization and operationalization of organizational justice. While some investigations have treated it as a unidimensional construct, others have conceptualized it as a multidimensional construct comprising four distinct dimensions (Ha & Lee, 2022; Rahma et al., 2024). Among these dimensions, informational and interpersonal justice have received less attention than distributive and procedural justice (Cohen-Charash & Spector, 2001; Colquitt et al., 2001). This discrepancy persists despite repeated calls for scholars' detailed investigation of how the distinct dimensions of justice affect organizational outcomes (Ahmad, 2022; Pattnaik & Tripathy, 2022). Furthermore, empirical evidence from the public service sector remains relatively limited, particularly in developing countries such as Ethiopia, where institutional and contextual factors may shape employees' fairness perceptions differently than in developed economies (Mengstie, 2020). Consequently, the fragmented nature of existing literature and the scarcity of context-specific evidence underscore the need for further investigation to advance both theory and practice (Biljana et al., 2019; Swarts et al., 2019).

Equity theory posits that individuals assess fairness by comparing their contributions to those of others. When employees perceive inequity, they are likely to experience dissatisfaction and adjust their attitudes and behaviours to restore fairness. Although equitable reward systems aim to promote fairness, an excessive focus on equity can create a paradox: organizations that purport to distribute rewards justly may unintentionally foster perceptions of disparity, thereby reducing morale and teamwork between team members who feel undervalued (Bosch, 2024; Tanner, 2025). This theoretical perspective is particularly relevant in healthcare, where performance heavily depends on employee motivation, cooperation, and trust. Despite the increasing demand for healthcare services, health systems worldwide continue to face workforce shortages and concerns regarding organizational justice (Deressa et al., 2022). These challenges are especially pronounced in sub-Saharan Africa, particularly Ethiopia, where public hospitals continue to struggle with tenacious HR problems due to ineffective strategic HRM practices and unfair workplace environments (Girma, 2015; Gile et al., 2022). Previous studies show relatively low levels of organizational justice in Ethiopian public health organizations (Hailu et al., 2016), contributing to job dissatisfaction, high turnover intentions, and frequent complaints (Mengstie, 2020; Arage et al., 2022).

Although institutional justice is widely recognized as a determinant of hospital performance, research in African countries remains insufficient (Ghasi et al., 2020). Moreover, differences in cultural and institutional contexts shape employees' justice perceptions and their behavioural responses, limiting the generalizability of findings from developed countries to resource-constrained settings (Khan et al., 2015; Kebede & Wang, 2022; Moges et al., 2026). In Ethiopia, including the Amhara Regional State, public hospitals continue to face challenges such as service delivery, high absenteeism, and job strikes. Due to these issues, further study of the Ethiopian health sector is reasonable (Adugna et al., 2022). Previous studies conducted in Amhara Region public hospitals reported concerns related to healthcare workers' job satisfaction, work environment, recognition, rewards, organizational commitment, and

intention to leave, which are closely associated with employees' perceptions of fairness and organizational practices (Dellie et al., 2019). Furthermore, studies in Amhara referral hospitals have identified challenges related to employees' quality of work life and workplace conditions, which may influence healthcare service delivery and institutional effectiveness (Biresaw et al., 2020). Although these studies provide important insights into healthcare workforce challenges, they have mainly focused on employee-related outcomes and workplace conditions rather than examining organizational justice as a determinant of hospital performance. Therefore, this study aims to address this gap by investigating the effects of organizational justice dimensions on the performance of public hospitals in the Amhara Regional State, Ethiopia.

Research Question

Based on the problem statement, this study addresses the following overarching research question: What is the effect of organizational justice dimensions—distributive, procedural, interpersonal, and informational justice—on organizational performance in public hospitals in the Amhara region, Ethiopia?

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Organizational justice is a multidimensional construct comprising distributive, procedural, interpersonal, and informational justice (Colquitt et al., 2001). Prior studies have reported mixed findings regarding the effects of these dimensions on organizational performance, indicating the need for further investigation, particularly in public healthcare settings. Specifically, empirical studies suggest that distributive justice enhances employee and organizational performance across various contexts (Mohamed, 2014; Khosravizadeh et al., 2019; Faeq & Ismael, 2022). However, variations in contextual settings and measurement approaches indicate that its influence requires further validation in healthcare organizations in developing countries. Therefore, the following hypothesis is proposed: H1: Distributive justice has a significant effect on organizational performance. Procedural justice emphasises an employee's perception of transparency and fairness of the processes used to make decisions, allocate resources, and manage disputes (Dike et al., 2021; Faeq & Ismael, 2022). Many research has demonstrated fair procedures enhance organizational trust and improve both employee and organizational performance (Mohamed, 2014; Ismail et al., 2018; Hamidi et al., 2020). However, other researchers have reported insignificant or even negative relationships between procedural justice and performance (Ali, 2016; Biljana et al., 2019). Given these inconsistent findings, the following hypothesis is proposed: H2: Procedural justice has a significant effect on organizational performance.

Interpersonal justice reflects the extent to which employees are treated with honesty, courtesy, and respect by organizational authorities (Colquitt et al., 2013). Although several studies have reported significant effect of interpersonal justice on institutional performance (Akram et al., 2020; Ahmad & Jameel, 2021; Pattnaik & Tripathy, 2022), others have found no significant association between interpersonal justice and organizational performance (Biljana et al., 2019; Ahmad & Jameel, 2021). These conflicting findings warrant further examination, leading to the following hypothesis: H3: Interpersonal justice has a significant effect on organizational performance. Informational justice emphasises whether employers offer satisfactory clarifications to employees, focusing on specificity, timeliness, and openness (Greenberg & Colquitt, 2013). Prior research has confirmed informational justice's significant positive influence on institutional performance (Moazzezi et al., 2014; Mohamed, 2014; Ali, 2016). However, some studies have reported that informational justice does not significantly influence organizational effectiveness or task performance (Biljana et al., 2019; Ahmad & Jameel,

2021). Consequently, the following hypothesis is proposed: H4: Informational justice has a significant effect on organizational performance.

The conceptual framework (Figure 1) of this study outlines the key concepts and offers the hypothesized relationships and the theoretical foundation that support the research design, analysis, and interpretation of the results. The independent variables, which represent four organizational justice dimensions, are adapted from previously published work (Colquitt, 2001), and the dependent variable is operationalized using four perspectives of the balanced scorecard (Kaplan & Norton, 1996). By highlighting employees' assessments of the fairness of results in relation to their contributions, equity theory serves as the main theoretical framework for explaining how distributive justice affects organizational performance. Employee motivation and effort are more likely to grow when they believe that rewards and resources are distributed fairly, which improves organizational performance (Adams, 1965; Tanner, 2025). On the other hand, the connections between organizational performance and procedural, interpersonal, and informational fairness are based on Social Exchange Theory. This theory posits that employees reciprocate fair organizational procedures, courteous treatment, and open communication with positive attitudes and actions that contribute to organizational effectiveness (Colquitt, 2001; Cropanzano & Mitchell, 2005). Thus, a thorough framework for elucidating how various aspects of organizational justice affect organizational performance is provided by the integration of Equity Theory and Social Exchange Theory.

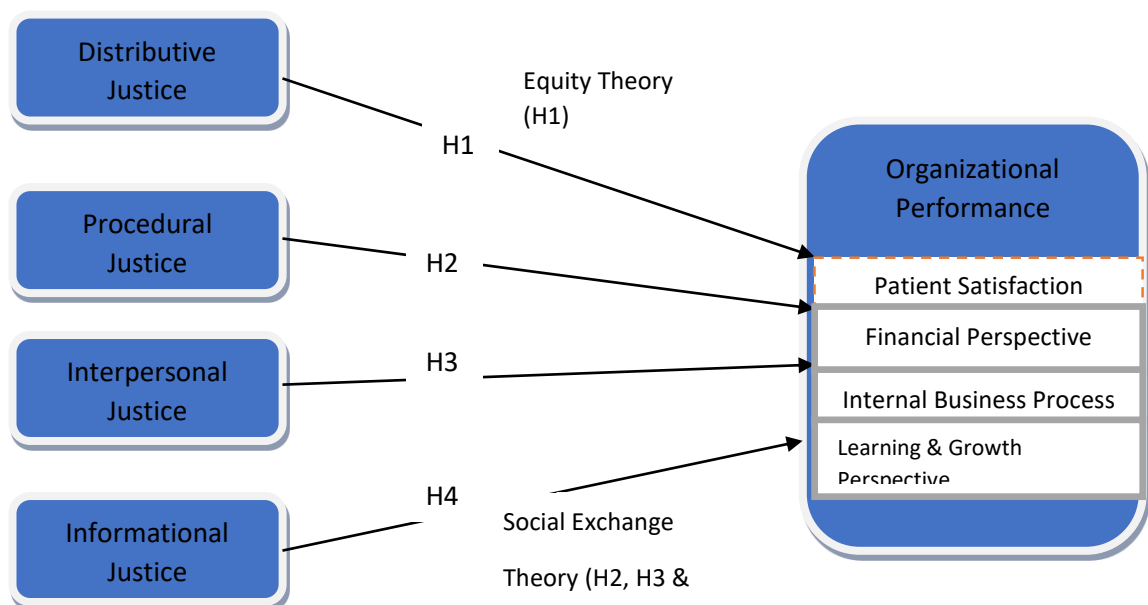


Figure 1: Conceptual framework

METHODOLOGY

Measures and Instruments

To ensure relevance to the healthcare setting and alignment to the study aims, the assessment items utilized to measure the dimensions of organizational justice were adapted from a widely validated and regularly used organizational justice scale, with minor contextual modifications (Colquitt, 2001). The Balanced Scorecard (BSC) framework, which offers a comprehensive approach to performance evaluation through four complementary perspectives—internal business, customer, financial, and

learning and growth—was used to operationalize hospital organizational performance adapted from previously validated studies (Kaplan & Norton, 1992, 1996). A summary of the study constructs, their operationalization, measurement indicator, number of items, and sources were adapted is presented in Table 1. Respondents expressed their level of with each statement by rating each item on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Table 1. Operationalization and Measurement of Study Variables

Variable	Dimension	No of Items	Measurement Indicators	Source
Independent Variable: Organizational Justice	Distributive Justice	4	Perceived fairness of outcomes, rewards reflect effort, contributions recognized, outcomes justified.	(Colquitt, 2001)
	Procedural Justice	6	Consistency, bias-free procedures, accuracy, employee voice, ethical standards.	(Colquitt, 2001)
	Interpersonal Justice	4	Perceived respect, dignity, politeness, and propriety.	(Colquitt, 2001)
	Informational Justice	5	Perceived openness, adequacy, reasonableness, timeliness, and responsiveness of communication.	(Colquitt et al., 2001)
Dependent Variable: Organizational Performance	Patient Satisfaction	3	Patients' perceived satisfaction, loyalty, and perceived value of healthcare services provided.	(Kaplan & Norton, 1992, 1996)
	Financial Perspective	3	Efficient budget utilization, sustained revenue growth, and continuous cost reduction.	(Kaplan & Norton, 1992)
	Internal Business Process Perspective	3	Continuous improvement of service delivery systems, timely delivery of services, and responsiveness to public needs.	(Kaplan & Norton, 1992)
	Learning & Growth Perspective	3	Continuous improvement in work environment, organizational culture, and technological capability for organizational learning and service delivery.	(Kaplan & Norton, 1996)

Study Setting, Sample, and Sampling Method

The study focused on the Ethiopian public health sector, specifically referral hospitals located in the Amhara region. Public healthcare serves as the primary source of medical services for the majority of the Ethiopian population and is the leading employer of healthcare professionals, featuring a diverse workforce in terms of educational background, field of specialization, and relevant experience (FMoH,

2021). At the time of the study, Amhara regional state had eight referral hospitals includes: Woldia, Dessie, Debrebirhan, Debre Markos, Debre Tabor, Tibebe Gion, Felege Hiwot, and Gondar. Rather than selecting a sample of hospitals, all eight comprehensive/referral specialized hospitals were included using an institutional census approach. These hospitals are likely well-represented and operate under the same national administrative structure, policies, and service delivery frameworks as other government health institutions established by the Ethiopian Ministry of Health. Consequently, they provide an appropriate context for examining organizational justice and hospital performance. The findings are expected to offer valuable insights into the broader institutional dynamics of Ethiopia's health system.

According to records obtained from the respective hospital human resource departments, the total population consisted of 5,312 permanent health professionals. Equation [1] is used to calculate the sample size, with a confidence level of 95% and a 5% margin of error (Yamane, 1967).

$$n = \frac{N}{1+N(e)^2} \quad [1]$$

Where n represents the sample size, N denotes the total population, and e is the desired level of precision (0.05). Substituting the study population into the formula yields:

$$n = \frac{5312}{1+5312(0.05)^2} = 371. \text{ Accordingly, the minimum required sample size was 371 participants.}$$

To achieve proportional representation of employees across the eight hospitals (see Table 2), Equation [2] was applied, and the total sample was allocated proportionally based on the number of permanent employees in each hospital (Kothari, 2004).

$$n_i = N_i * n/N \quad [2]$$

Where i = 1, 2, 3, ..., K; n denotes the total sample size; N represents the overall population; N_i is the population of a single district; and n_i is the sample drawn from each stratum. Respondents were selected using a multi stage proportionate stratified simple random sampling technique. Of these, 318 surveys were accurately completed, collected, and used.

Table 2. Population size and proportional sample allocation

S. N.	Name of Comprehensive Specialized Hospital	Population (N)	Sample Proportion (n)	Sample Taken
1	Debre Birhan Hospital	652	652*371/5312	46
2	Debre Markos Hospital	480	480*371/5312	33
3	Gondar University Hospital	1151	1151*371/5312	81
4	Debre Tabor Hospital	534	534*371/5312	37
5	Felege Hiwot Hospital	712	712*371/5312	50
6	Dessie Hospital	548	548*371/5312	38
7	Tibebe Gion Hospital	745	745*371/5312	52

8	Woldia Hospital	490	490*371/5312	34
Total		5,312		3,71

Data Analysis Methods

Prior to statistical data analysis, the data were coded, cleaned, and checked for completeness. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were first computed to summarize respondents' demographic characteristics and describe the study variables. Subsequently, partial least squares structural equation modeling (PLS-SEM) was employed using SmartPLS software. PLS-SEM was selected because it is a variance-based structural equation modeling technique particularly suited for estimating complex research models. It is ideal for studying multidimensional structural models with various linkages, components, and indicators, as well as simultaneous structural relationships. PLS allows for the simultaneous evaluation of the measurement (outer) model and the structural (inner) model, effectively accommodates measurement models, and requires fewer distributional assumptions than covariance-based SEM (Hair & Alamer, 2022). Additionally, the adequacy of the sample size was assessed using the widely accepted rule of a minimum sample size equal to ten times the maximum number of paths directed to any single construct. In this study's conceptual model, the endogenous variable received four direct paths from organizational justice dimensions, resulting in a minimum required sample size of forty participants. The final analytical sample of 318 respondents well exceeded this minimum criterion, demonstrating that the study has robust statistical power for accurate parameter estimation and hypothesis testing.

RESULTS AND DISCUSSION

Descriptive analysis

According to the respondents' profiles, the majority are female (55%), married (63.8%), aged between 31 and 40, hold a first degree (54.1%), and have more than six years of professional experience, suggesting a relatively mature and experienced workforce. The descriptive statistics demonstrate that all dimensions of organizational justice and hospital performance exhibited low mean scores accompanied by moderate standard deviations, indicating generally unfavorable employee perceptions across these constructs (see Table 3). The consistently low mean values suggest a widespread perception of inadequate organizational justice and suboptimal hospital performance. Additionally, the relatively similar standard deviations across constructs suggest a moderate degree of dispersion, indicating a reasonable level of agreement among participants in their evaluations.

Table 3. Descriptive statistics of organizational justice and hospital performance dimensions

Construct	Dimension	Mean (M)	Standard Deviation (SD)
Organizational Justice	Distributive Justice	2.215	1.276
	Procedural Justice	2.287	1.332
	Interpersonal Justice	2.365	1.380

	Informational Justice	2.309	1.468
	Overall, Justice	2.294	1.364
Hospital Organizational Performance (BSC)	Patients Perspective	2.248	2.248
	Financial Performance	2.198	2.198
	Internal Business Process Perspective	2.277	2.277
	Learning & Growth Perspective	2.327	2.327
	Overall Performance	2.263	2.263

Outer model assessment

The PLS-SEM analysis was conducted using a two-stage analytical procedure. In the first stage, the outer (measurement) model was examined to verify the adequacy of the measurement instruments before testing the proposed structural relationships. This including exploratory factor analysis, to ascertain measurement reliability and validity. The assessment focused on examining the psychometric properties of the latent constructs, including their reliability and validity. Establishing a sound measurement model is essential to ensure that subsequent structural model estimates are accurate and meaningful (Preacher & Hayes, 2008). The established criteria (Hair & Alamer, 2022) were used to evaluate the indicator reliability and collinearity: (1) indicator (factor) loadings greater than 0.5, and (2) variance inflation factor (VIF) below 5.0. As shown in Table 4 and figure 2, all indicator loadings are higher than the suggested cutoff of 0.50, and all VIF values are below 5.0. These results indicate that the measurement model is devoid of multicollinearity issues and has adequate factor reliability. Nevertheless, PJ1, IFJ4, IPP2, and PP1 had low loading values, lowering Cronbach's alpha values and AVE; then, these items were not included from in the PLS-SEM analysis.

Table 4. Indicator reliability and collinearity assessment

Variables	Indicator	Outer Loading	VIF
Distributive Justice (DJ)	DJ1	0.756	1.319
	DJ2	0.617	1.586
	DJ3	0.838	1.410
	DJ4	0.607	1.657
Informational Justice (IFJ)	IFJ1	0.802	3.224
	IFJ2	0.788	3.347
	IFJ3	0.737	3.050
	IFJ5	0.755	3.243
Interpersonal Justice (IJ)	IJ1	0.710	1.468
	IJ2	0.796	1.659

	IJ3	0.819	2.383
	IJ4	0.783	2.147
Procedural Justice (PJ)	PJ2	0.782	1.895
	PJ3	0.661	1.283
	PJ4	0.797	1.389
	PJ5	0.744	1.980
	PJ6	0.655	1.558
Organizational Performance (OP)	FP1	0.749	2.411
	FP2	0.741	4.169
	FP3	0.605	1.431
	IPP1	0.743	1.858
	IPP3	0.729	4.312
	LGP1	0.692	2.353
	LGP2	0.713	2.326
	LGP3	0.719	2.989
	PP2	0.730	3.042
	PP3	0.774	2.687

Internal consistency reliability was assessed using Cronbach's alpha, which evaluates the extent to which the indicators of each construct consistently reflect the same underlying concept. Cronbach's alpha values of 0.70 or higher indicate satisfactory reliability (Henseler et al., 2015). In this study, all constructs had Cronbach's alpha coefficients exceeding the recommended cutoff value (Table 5), showing adequate internal consistency and suggesting that the measurement items reliably capture their intended constructs.

Table 5. Construct reliability and convergent validity assessment

Variables	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Distributive Justice (DJ)	0.702	0.760	0.506
Informational Justice (IFJ)	0.772	0.781	0.594
Interpersonal Justice (IJ)	0.783	0.791	0.606
Procedural Justice (PJ)			

	0.791	0.842	0.533
Organizational Performance (OP)	0.897	0.899	0.520

Convergent validity was examined using the following criteria (Hair & Alamer, 2022): (1) AVE greater than 0.5; and (2) CR greater than 0.70. The model demonstrated convergent validity, as CR and AVE meet the threshold, indicating satisfactory convergent validity and confirming that the measurement items accurately reflect the corresponding latent variables (Table 5). Discriminant validity is established when a construct is unique from others. The HTMT (heterotrait-monotrait) ratio is a contemporary method of measuring discriminant validity in structural equation modeling (SEM), mainly in PLS-SEM (Shmueli et al., 2019). It confirms that each variable in the model is empirically unique from others by examining the relative variable's $\sqrt{AVE}$ and its association with other variables (see Table 6). Specifically, an HTMT value below 0.85 indicates strong discriminant validity; values between 0.85 and 0.90 are acceptable but require caution; and values above 0.90 suggest poor discriminant validity, indicating overlap among constructs (Henseler et al., 2015). In this model, HTMT values fall within acceptable limits (see Table 7).

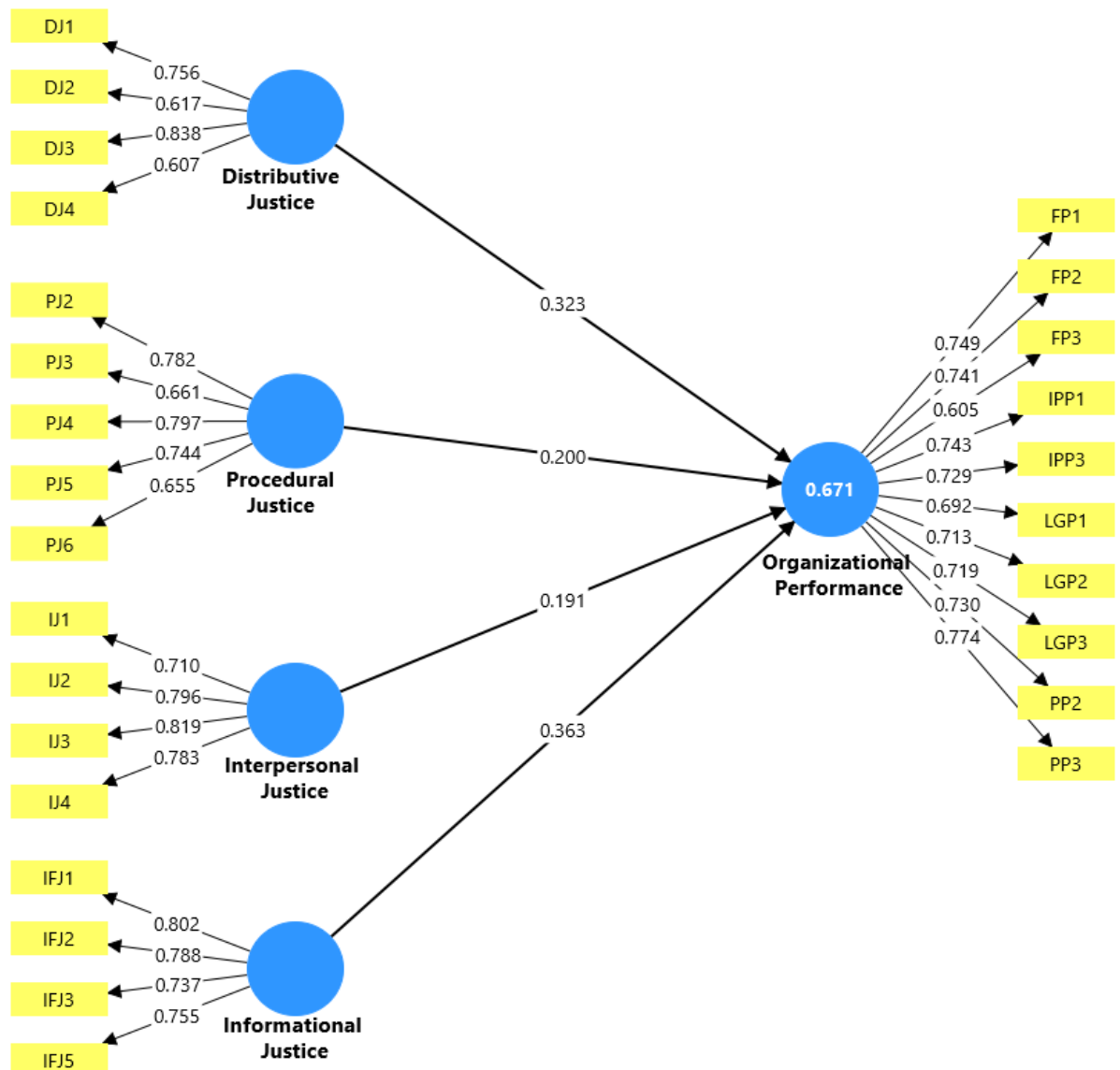


Figure 2. Measurement model of the study

Table 6. Fornell-Larcker Criterion

Constructs	DJ	OP	IFJ	IJ	PJ
DJ	0.711				
OP	0.681	0.721			
IFJ	0.376	0.610	0.771		
IJ	0.418	0.489	0.190	0.778	
PJ	0.703	0.679	0.446	0.468	0.730

Note: Diagonal bold values embody $\sqrt{\text{AVE}}$; values below the diagonal are correlations of constructs.

Table 7. Heterotrait-Monotrait (HTMT) Ratio

Constructs	DJ	OP	IFJ	IJ	PJ
DJ	—	0.753	0.437	0.508	0.801
OP		—	0.705	0.580	0.723
IFJ			—	0.240	0.532
IJ				—	0.564
PJ					—

Discriminant validity can also be examined through cross-loading values, ensuring that items are more tied to their intended latent variable than with others (Shmueli et al., 2019). An overview of cross-loading data is presented in Table 8.

Table 8. Cross loadings

Indicators	DJ	PJ	IFJ	IJ	OP
DJ1	0.756	0.699	0.280	0.362	0.523
DJ2	0.617	0.296	0.163	0.229	0.332
DJ3	0.838	0.595	0.390	0.364	0.671
DJ4	0.607	0.214	0.109	0.140	0.212
PJ2	0.557	0.782	0.323	0.330	0.462
PJ3	0.564	0.661	0.299	0.311	0.445
PJ4	0.601	0.797	0.421	0.437	0.724

PJ5	0.375	0.744	0.312	0.214	0.348
PJ6	0.377	0.655	0.193	0.360	0.301
IfJ1	0.330	0.386	0.802	0.113	0.525
IfJ2	0.307	0.376	0.788	0.164	0.506
IfJ3	0.249	0.270	0.737	0.132	0.413
IfJ5	0.261	0.331	0.755	0.183	0.422
IJ1	0.315	0.328	0.085	0.710	0.334
IJ2	0.343	0.422	0.210	0.796	0.444
IJ3	0.318	0.323	0.144	0.819	0.350
IJ4	0.321	0.369	0.135	0.783	0.379
FP1	0.446	0.400	0.554	0.276	0.749
FP2	0.484	0.444	0.267	0.392	0.741
FP3	0.541	0.486	0.256	0.475	0.605
IPP1	0.578	0.760	0.416	0.420	0.743
IPP3	0.500	0.447	0.320	0.415	0.729
LGP1	0.439	0.472	0.675	0.308	0.692
LGP2	0.456	0.444	0.360	0.288	0.713
LGP3	0.429	0.442	0.743	0.243	0.719
PP2	0.479	0.407	0.302	0.372	0.730
PP3	0.540	0.519	0.365	0.349	0.774

According to the measurement model evaluation, all constructs meet the standards for validity and reliability and are free from multicollinearity problems. This evidence supports the model's capacity to successfully represent theoretical concepts and demonstrates suitability for PLS-SEM analysis.

Structural Model Assessment

Following the measurement model evaluation, the structural (inner) model was measured. Nevertheless, before examining the structural relationships, inner multicollinearity among predictor constructs was evaluated. When the VIF value is above 10, multicollinearities can be an issue, and there is a more conservative threshold that needs VIF to be less than 3.3 (Mason & Perreault, 1991). As shown in Table 9, all VIF scores fall within the suggested limits, confirming the absence of multicollinearity issues.

The PLS-SEM analysis follows the three-stage procedures of Cepeda et al. (2019). The coefficient of determination (R^2) was first assessed to determine how well the model explains the variance in the endogenous variable. Then, the model predictive power (Q^2) was investigated, followed by an analysis of the path coefficients' significance and their effect size (f^2) (Hair & Alamer, 2022). To ensure the results' robustness, a bootstrapping technique was used, which is a vigorous resampling method using

5000 samples, each of which matched the observations of the original sample. According to author's R^2 values can be interpreted as considerable (0.67), moderate (0.33), and weak (0.19) for endogenous variables (Chin, 1998). As a result, the R^2 value (Table 9) is consistent with the significant threshold that the theoretical model gives for a robust explanation of variance in the endogenous variable.

Table 9. Structural Model Evaluation

Structural Model	Value	Predictors	Collinearity (VIF)	Effect Size (f^2)
R^2 (Organizational Performance)	0.671	DJ	2.038	0.156
Q^2 (Predictive Relevance)	0.651	PJ	1.263	0.317
		IJ	1.309	0.085
		IFJ	2.310	0.053

The effect size (f^2) investigation was employed to evaluate the role of each exogenous factor on the endogenous factor when the given predictor was omitted (Cepeda et al., 2019) as follows: "a big effect if $f^2 > 0.35$, a medium effect if $f^2 = 0.15$, and a weak effect if $f^2 = 0.02$ ". According to Table 9, informational justice ($f^2 = 0.053$) and interpersonal justice ($f^2 = 0.085$) had a small effect. But procedural justice displayed a large effect ($f^2 = 0.317$), while distributive justice ($f^2 = 0.156$) had a medium effect on hospital performance. The findings show that both procedural and distributive justice have a notable effect on performance in hospital settings. To assess the predictive power validity of Q^2 , the Stone-Geisser criterion was employed. The Q^2 value represents a measure of a model's prediction power for new data. According to the previous studies when $Q^2 > 0.35$, it indicates strong predictive ability; if $Q^2 > 0.15$, it points to moderate predictive power; and when $Q^2 > 0.02$, it indicates weak predictive power (Hair & Alamer, 2022). Consequently, this study's Q^2 value of 0.651 is higher than the stated criteria for strong predictive power (Table 9). These indicate that variables have significant predictive value.

Table 10. Hypothesis Testing

Hypothesis	β coefficients	Mean	SD Value	T Statistics	P Values
DJ -> OP	0.323	0.327	0.056	5.787	0.000***
PJ -> OP	0.200	0.199	0.056	3.593	0.000***
IJ -> OP	0.191	0.192	0.047	4.056	0.000***
IFJ -> OP	0.363	0.362	0.051	7.068	0.000***

The asterisk value *** represents a statically significant effect at the 0.001 level (two-tailed).

Bootstrapping analysis was used to assess the proposed hypotheses using standardized path coefficients (β), t-values, and p-values, as presented in Table 10. Hypothesis 1 (H1) assessed the effect of distributive justice on hospital performance. According to the results, distributive justice has a positive and statistically significant effect on hospital performance ($\beta = 0.323$, $t = 5.787$, and $p < 0.001$). These show that, keeping other factors constant, a one-standard deviation increase in distributive justice

practice of public hospitals will be linked to a 0.323 standard deviation rise in organizational performance. Therefore, H1 is supported. Hypothesis 2 (H2) examined the effect of procedural justice on hospital performance. The findings show that procedural justice exerts a positive and statistically substantial effect on hospital performance ($\beta = 0.200$, $t = 3.593$, and $p < 0.001$). Specifically, a one standard deviation increase in procedural justice practices in public hospitals will be associated with a 0.20 standard deviation increase in organizational performance. Accordingly, H2 is supported.

Hypothesis 3 (H3) investigated the effect of interpersonal justice on hospital performance. The analysis demonstrated a positive and significant relationship between interpersonal justice and hospital performance ($\beta = 0.191$, $t = 4.056$, $p < 0.001$). This displays that a one-standard deviation improvement in interpersonal justice will be associated with a 0.19 standard deviation increase in hospitals' performance. Thus, H3 is supported. The fourth hypothesis (H4) looked at the influence of informational justice on hospital performance. The analysis ($\beta = 0.363$, $t = 7.068$, $p < 0.001$) of informational justice statistically has a substantial positive effect on hospital performance. This indicates that a one-standard deviation increase in informational justice practice is associated with a 0.36 standard deviation increase in public hospital performance, holding other factors constant. Thus, H4 is supported.

Discussion

This research revealed that organizational justice practices have a considerable effect on public hospital performance. Specifically, how employees perceive distributive justice significantly determines hospitals' performance. This finding aligns with the previous studies that confirmed a positive and significant correlation between distributive justice and healthcare institutions' performance (Mohamed, 2014). The reasonableness of work outcomes, such as payment, promotion, and rewards, and other organizational benefits plays a critical role in shaping employee behavior and attitude, ultimately affecting organizational performance (Dike et al., 2021). Likewise, procedural justice was found to exert a positive and statistically substantial influence on hospital performance. This corroborates with previous research (Mohamed, 2014; Dike et al., 2021; Faeq & Ismael, 2022). In addition, procedural justice has been found as a significant determinant of organizational trust in the Pakistani banking sector, establishing it as a crucial basic element of organizational performance (Niazi & Hassan, 2016). Fair and transparent decision-making processes are likely to strengthen employees' confidence in management, encourage engagement, and improve work performance. However, previous empirical findings regarding procedural justice have not been entirely consistent. In Malaysia, Kota Kinabalu Polytechnic reported an insignificant impact of procedural justice on employee performance (Ali, 2016). Similarly, other studies found that the association between procedural justice and institutional performance was both negative and insignificant (Biljana et al., 2019; Muchemi, 2019).

This research further reveals interpersonal justice's positive and significant role in determining hospital performance, implying that staff's understanding of getting treatment with esteem, honor, and civility is critical in determining hospitals' achievement. This aligns with former findings that have reported a positive relationship between interpersonal fairness and institutional performance (Muchemi, 2019; Pattnaik & Tripathy, 2022). Likewise, researchers also found a strong positive effect of interpersonal justice on the PT Bank performance in

Pembangunan Kerici (Prananda et al., 2019). These findings support the view that respectful and considerate interactions between managers and employees are fundamental to achieving superior organizational performance. Nevertheless, contradictory findings exist in the literature. A study conducted in Serbia did not confirm a considerable bond among interpersonal justice and institutional performance (Biljana et al., 2019), while another study concluded that interpersonal justice does not significantly affect task performance (Kalay, 2016). This discrepancy might have happened because of cultural variations as well as sectoral and organizational factors.

Moreover, the present study also confirmed that informational justice plays a substantial role in determining hospital performance. The finding suggests that employees place considerable value on receiving information that is precise, open, timely, and transparently explained by their supervisors and institutional leaders. When management provides vivid explanations for decisions and openly shares relevant information, employees are likely to develop trust and improve their performance, thereby contributing to the success of hospitals. Line with these prior studies confirmed informational justice's importance in influencing employee performance (Mohamed, 2014; Ali, 2016). Its role in promoting innovative work behavior has been focused and has been recognized as having a substantial positive effect on organizational performance (Akram et al., 2020; Pattnaik & Tripathy, 2022). However, not all empirical findings are consistent. A study conducted in Serbian organizations found no significant correlation between informational justice and performance (Biljana et al., 2019), while another study confirmed informational justice's insignificant role in influencing task performance (Kalay, 2016). These differences may reflect variations in organizational contexts, leadership practices, and institutional environments. However, the current study provides evidence that informational justice is a significant predictor of hospital performance in the Ethiopian public healthcare context.

IMPLICATIONS

Managerial Implications

This study has a number of implications for hospital managers, policymakers, and healthcare sector administrators. First, the significant effect of distributive justice suggests that hospital managers should establish ethical leadership and institutionalize justice-based human resource practices for allocating salaries, incentives, promotions, training opportunities, and workload. When employees believe organizational benefits are equitably dispersed relative to their contributions, they are more inclined to contribute to organizational success. Second, the effect of procedural justice suggests that public hospitals should improve organizational procedures' fairness and transparency. When it comes to workload allocation, performance appraisal, and dispute resolution, administrators and stakeholders should implement consistent, unbiased, and participatory decision-making procedures that allow employees a voice and equal treatment. These actions eventually improve hospital performance across dimensions of internal processes, financial results, customer satisfaction, and learning and growth by reducing employees' sense of injustice and increasing their dedication.

Third, the significance of treating employees with respect and dignity is highlighted by the important function of interpersonal justice. Hospital administrators should foster a culture of supportive leadership that is marked by courtesy, respect, empathy, and moral conduct. Therefore, interpersonal communication and people management skills should be emphasised in leadership development programs as crucial components of effective healthcare leadership. Finally, the positive and robust impact of informational justice highlights the significance of prompt and transparent communication in hospitals. Organizational decisions, policy changes, and performance expectations should be communicated promptly, clearly, and honestly by managers or stakeholders. Giving sufficient justifications for managerial decisions can lower uncertainty, boost employees' faith in management, and promote increased organizational trust and participation, all of which ultimately improve hospital performance.

Theoretical Implications

This study adds to the body of knowledge on organizational justice by providing empirical proof that all four dimensions of organizational justice are important determinants of hospital performance in the Ethiopian public healthcare setting. Despite earlier studies that have shown conflicting results across countries and sectors, this study shows that distributive, procedural, interpersonal, and informational justice play a significant role in determining organizational performance in public hospitals.

The findings also broaden the application of equity theory to the public healthcare sector. The results show that distributive justice greatly improves public hospital performance, which is consistent with the tenets of Equity Theory. According to this framework employees who perceive that organizational rewards and resources are allocated fairly are more likely to exhibit higher levels of commitment and discretionary effort toward organizational success.

The findings further corroborates support Social Exchange Theory by showing that procedural, interpersonal, and informational justice each significantly and positively influence public hospital performance. Fair procedures, respectful treatment, and transparent communication foster reciprocal employee behaviors that enhance organizational effectiveness, extending the theory's application to the Ethiopian public healthcare context. Additionally, this study expands the theoretical understanding of the relationship between organizational justice and performance by operationalizing organizational performance through the balanced scorecard (BSC) framework. Rather than concentrating only on financial results or individual worker performance, the study shows multiple dimensions of hospital performance, such as financial, customer, internal process, and learning and growth perspectives. This offers a more thorough explanation of how perceptions of fairness affect organizational effectiveness.

CONCLUSION AND RECOMMENDATIONS

This study reveals that organizational justice has a crucial role in determining how well public hospitals perform. The findings show that organizational justice and hospital performance are perceived relatively low by employees, indicating that fairness-related practices are not yet sufficiently institutionalized and that there is work needed to increase organizational effectiveness. The study demonstrates that four dimensions of organizational justice positively and significantly affect public hospital performance. Particularly, distributive justice significantly influence hospital performance by ensuring that resource allocation, like salary, promotion, opportunity, and rewards among employees, is fairly allocated according to employees contributions and performance, particularly internal processes, customer satisfaction, financial matters, and learning and growth. Employees are more likely

to show greater desire, dedication, and readiness to contribute to company goals when they believe that organizational outcomes are equitable. Additionally, procedural justice has a significant effect, showing that employees' perceptions of decision-making processes as being bias-free, consistent, and inclusive of their voice (right to appeal and freedom to express their feelings) raise employee acceptance of organizational decisions, strengthen employee faith in management, and eventually boost organizational effectiveness.

Further, the effect of interpersonal justice on hospitals' performance is substantial, indicating that treating workers with dignity, civility, and high regard and free from improper remarks, significantly shapes the achievements of the public health sector. Positive workplace connections, increased employee morale and organizational dedication, and cooperative behaviors that promote service delivery are all fostered by such courteous treatment. Of the four organizational justice dimensions, informational justice has the stronger impact. It emphasizes how crucial prompt, accurate, transparent, and thorough communication—along with sufficient explanations of organizational decisions—is to foster employee trust, lower uncertainty, and enhance hospital performance. Overall, the study shows that employees' attitudes and work actions are shaped by their perceptions of fairness, which in turn affect organizational performance. This empirical evidence supports equity theory. The results imply that organizational justice should be acknowledged as a strategic organizational resource for improving public hospital performance, going beyond an ethical duty. Therefore, hospital administrators and policymakers should prioritize fairness in resource allocation, decision making procedures, interpersonal interactions, and institutional communication in order to enhance internal procedures, service quality, patient satisfaction, financial performance, learning and growth, and long term sustainability of public hospitals.

Limitations and future research directions

Despite its valuable contributions, this study has some limitations. First, it only looked at public specialized hospitals in the Amhara region, which would limit how broadly the findings can be applied to other healthcare environments and areas. To increase external validity, future research better considers both public and private healthcare institutions from various regions. Second, a cross-sectional explanatory design was used, which limits the analysis of changes over time and causal inference. To produce more solid data, future studies are advised using mixed-methods and longitudinal research designs. Lastly, although the hospital performance dimensions were separately examined in the descriptive analysis, the SEM analysis modeled them as a single-order construct. Therefore, to provide more nuanced insights, future research should look at how each organizational justice dimension impacts different hospital performance dimensions.

Abbreviations and acronyms

Each acronym and abbreviated terms are spelled out when they first appear in the text.

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Author Contributions

The study was designed and carried out by Adisu Moges. Adisu Moges and Chalchissa Amentie developed the methodology, acquired resources, and conducted formal data analysis. Adisu Moges

wrote the first draft of the manuscript, and Gemechu Nemera and Adisu Moges worked together to examine and modify it.

Dispute of Interest

The authors stated that they have no disagreements of interest.

Availability of Data

The data will be provided by the corresponding author upon a legal request.

Declaration of Artificial Intelligence (AI) Usage

The AI support tool was only utilized for correcting grammar.

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