

**THE EFFECT OF UNIVERSITY TRUST CULTURE ON THE PERCEPTION OF ORGANIZATIONAL FAIRNESS - THROUGH THE LEADERSHIP OF DEPARTMENT HEADS****Eun Joo Kim**

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<https://orcid.org/0000-0002-8786-3356>**ABSTRACT**

**Purpose:** *The main purpose of the study is to prepare a plan to promote organizational fairness.*

**Method:** *The study sample was chosen using random sampling technique. After arrangement of study population according to numerical order and small to large the samples were collected. Participants were 205 professors and 125 employees working at University. 118 responses were used for the study. The participants were provided with a consent form and the collected data was submitted electronically for conducting the online survey.*

**Result and Conclusion:** *The study showed that the trust culture had statistically significant relationship with the organizational fairness and the department head leadership. It was found that the level of perception of leadership of the departmental head had a significant relationship with organizational fairness. It was observed that higher the trust culture, the greater was the perception of organizational fairness. It was found that there is a lack of research on organizational fairness in universities. In order to foster a culture of trust at universities, formal regulations and procedures-based organizational management must be replaced with flexible, human-centered, organic procedures. Further it was concluded that the head of the department should induce the members of the organization to voluntarily and actively cooperate in achieving the organization's goals.*

**Research implications:** *If you are trapped in a growth-oriented frame, you may think that imposing a high standard of fairness acts as a brake on growth. However, fairness is a kind of 'condition' for growth and serves as a platform for fair competition and sustainable growth. In other words, redesigning the standards for fairness at the organizational level creates an environment where members can compete comfortably, and when it is well established, future growth engines can be built solidly.*

**Keywords:** *University, Trust culture, Organizational fairness, Department head leadership*

**1. INTRODUCTION**

Looking at columnist's article, 'A healthy organizational culture, fairness is the key', the essential issue of conflict in an organization is fairness. 'The compensation is not fair. Opportunities are not fair. The amount of information with the leader is not fair. Such a crisis of fairness not only lowers the motivation of the members but also causes them to express their feelings of anger (Song, 2019). Anger can be expressed in various ways, such as uncooperative attitude, gossip, and strife. The biggest problem in this aspect is not limited to the members who question fairness but negatively affects the culture of the whole organization. Organizational fairness is a topic of great interest in all social science fields. This is because the degree of organizational fairness perceived by members greatly affects the attitudes and behaviors of members in the organization. For the past 15 years, domestic research on organizational fairness has dealt with organizational fairness in various situations such as personnel appraisal, compensation, and organizational change. Research on organizational fairness in Korea has increased dramatically in terms of quantity, but research on organizational fairness in universities is somewhat insufficient. Recently, the university is not only recognized as a place for education, but the responsibility and fairness of the university are being emphasized. In particular, organizational fairness is emphasized in establishing and operating a university-level system that enables universities to autonomously manage the quality of university education through government financial support projects such as university basic competency diagnosis and university innovation support projects.

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Today's university organizations are fulfilling their assigned responsibilities to nurture competitive talent and motivate members for the development of education. In addition, university organizations strive to effectively achieve organizational goals by demonstrating creativity (Shin, 2010). However, due to the recent low birth rate and a decrease in the school-age population, the competition for survival among universities is intensifying. The universities are in danger of closing down when the admission quota is not met. So, the universities are drafting a strategy to overcome the crisis in accordance with the production of the "appropriate sizing plan" for each institution for the establishment of the autonomous innovation plan for the university innovation support project from 2022 to 2024. From the perspective that success and failure of organization depends on its members, the university highlights the significance of the role of academics and staff in charge of the operation of the university in the organization. Their role is important as they perform support functions in various management fields, such as academic management and personnel management, purchase, operation, and management of facilities in a large-scale organization called a university. In addition, a culture where students feel comfortable sharing their thoughts and can put their trust in one another is necessary from the perspective of organizational diversity. Active communication between faculty and staff is also crucial for organizational development.

The recent rapid social change is bringing about changes in university administration, including the university's functions. A university organization is made up of diverse and heterogeneous members, and it consists of not only interests between departments or university academic fields, but also external interests such as the local community. A university organization is an organization that has complex relationships beyond visible internal relationships. Therefore, it is necessary to have professionalism, autonomy, volunteerism, and publicness among professors and administrative staff of the university to achieve results based on the efficiency of departments or administrative tasks. As such, members of the university organization have unique education and research qualifications. To this end, the university organization's members must have the expertise to lead the university organization. Compared with other social organizations, organizations that carry out educational activities, such as universities, tend to emphasize the 'values' pursued by the organization and the 'process' of performing work (Han & Bae, 2019). The characteristics of these educational organizations are that trust culture among organizational members can affect organizational fairness when value and process are emphasized rather than profits and performance. Therefore, organizational fairness can be a predictor of organizational fairness by the behavior of organizational members, that is, the leadership of department heads.

Each element constituting a university organization does not function individually but rather influences each other in an interdependent relationship (Barnett, 2014; Strange & Banning, 2015). As such, when looking at a university organizations from an ecological systemic point of view, there may be multidimensional environments such as physical environment, organizational environment, and cultural environment acting as factors affecting university organization (Strange & Banning, 2015). In particular, the trust culture can affect the fairness of the university organization based on representative social exchange and mutual reciprocity (Mintzberg, 1979). The study on organizational fairness in school organization includes the study on the perception effect of organizational fairness on administrative service quality centered on the organization of elementary and secondary schools by Ham (2008), and the study on the association between organizational fairness and school organization effectiveness (Koh, 2009). There are studies which examined the association between the efficiency of the education system and primary school teachers' perceptions of organizational fairness (Shin, 2010), organizational commitment as well as job satisfaction according to the perception of fairness of school professional counselors (Park, 2017; Park and Wee 2020; Masnour and David 2021).

Therefore, there is a lack of research on organizational fairness in universities. With the university's trust culture serving as the independent variable in this study and the department head's leadership serving as the parameter, the influence of department head leadership on the university's organizational fairness was confirmed. As a result, the study's ultimate goal is to develop a strategy to encourage organizational fairness in universities.

The following research questions will help in achieving the research objectives;

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What is the level of trust culture, department head leadership, and organizational fairness awareness of the university?

What is the relationship between the university's trust culture, department head leadership, and organizational fairness?

Did department head leadership have a mediating effect as a parameter between the trust culture of the university and the perception of organizational fairness?

### **2. THEORETICAL BACKGROUND**

Previous researches done on organizational fairness shows that the distributive fairness of compensation, but as interest in modern society has grown, so too have concerns about procedural fairness related to opportunity, interaction fairness related to a leader's attitude (interpersonal fairness), and appropriateness of information (information fairness). Homans (1961), who focused on distributive fairness first, Adams (1965), who presented the idea of equity, and Stouffer et al. (1949), who presented the notion of relative deprivation, were the scholars who first applied fairness to organizations. Adams' fairness thesis serves as the foundation for organizational fairness (Homans, 1961; Adams, 1965; Stouffer et al., 1949).

During the later part of 20th century, fairness in the organization began to attract people's attention when social psychological procedures were applied to the organizational environment. Organizational justice is a member's perception of whether organizational compensation is fair, and is divided into compensation distribution, procedure, and interaction (Colquitt et al., 2005). "Distributive justice is the individual's perceived fairness of the organization's reward results" (Price & Mueller, 1986), "procedural justice is perceived fairness of rules and procedures applied to compensation distribution" and interactional justice can be referred as 'perception of fairness of superiors' treatment methods and contents in the course of the compensation process (Bies & Moag, 1986)', respectively. Fairness reflects the subjective perception of an individual or group rather than an objective measure.

Among organizational fairness, distributive fairness is referred as fairness perceived by the individual about the reward results of an organization (Folger & Konovsky, 1989). When a reward is delivered by a third party, the recipients should expect a reward commensurate with the level of effort they put out. This is known as distributive fairness. The fairness theory of Adams (1965) was the basis for the formation of the theory of distributive fairness. Distributive fairness refers to the feeling of fairness or unfairness depending on the perception of whether compensation for each individual's efforts in an exchange relationship is reasonable. Recognition of unfairness causes members of an organization to create tension in the work environment, and individuals change their input or change the object of comparison to resolve this tension in material and psychological responses (Walster et al., 1976). In distributive fairness, compensation means intrinsically having value. It is only when the individual satisfies a fair belief in what has intrinsic value, the fairness of the reward is recognized. If such distributive fairness is satisfied, members within the organization can take positive civic actions toward the organization in return for their compensation (Lee, 2011).

Procedural fairness is the individual's perceived fairness of the procedures and rules applied to the organization's reward distribution (Folger & Konovsky, 1989). It is an individual's perception of whether the formal procedure applied when making a decision is fair, and it refers to whether the reward distribution process and means are fair (Thibaut & Walker, 1975). In other words, procedural fairness refers to the process by which distribution decisions are made (Konovsky, 2000). For procedural fairness, Leventhal et al suggested six elements of procedural fairness, such as consistency, bias exclusion, accuracy, representativeness, correctability, and ethics. If the procedure is unfair, it can cause a decrease in achievement efforts (Leventhal., 1976; Leventhal et al., 1970; Leventhal., 1980). Therefore, since the 1990s, social psychology research that emphasizes distributive fairness and procedural fairness as a process of distribution has been activated (Kim, 2009).

Interactional fairness is defined as “the quality of interpersonal treatment between superiors and employees that occurs in the process of executing the compensation distribution procedure” (Bies & Moag, 1986). Greenberg and Lind (2000) present interactive fairness as one of the most powerful recent discoveries of organizational fairness, with significant positive effects on the feeling of being treated with dignity and respect by superiors, whereas rude treatment points out that it has a strong potential to express a feeling of inequity (Ham, 2008). Interaction fairness was also investigated as an important influence of the role of superiors on organizational citizenship behavior (Yousif, 2017). Fair treatment of superiors helps employees overcome dissatisfaction with distribution and stress caused by work overload (Greenberg, 2006; Judge & Colquitt, 2004). In addition, the courteous attitude and sincere consideration expressed by the superior in the rewarding process create unity with organization and belonging sense, thereby allowing the individual's active contribution to be actively expressed (Tyler, 1999). Furthermore, by recognizing that they are respected in the organization, these members exhibit a higher level of organizational citizenship behavior (Kamdar et al., 2006; Tepper & Taylor, 2003; Wayne, 2003). The conceptualization of fairness, which started from the fairness theory, recognizes the conceptual independence of three fairness: distributional fairness, procedural fairness, and interactive fairness.

### 3. RESEARCH METHOD

#### 3.1 Participant Characteristics

The staffs and professors at a four-year E-University located in Gyeonggi-do are the study participants. The study sample was chosen using random sampling technique, where the staffs or professors were chosen as subjects at schools using attendance records, for example. Random sampling carried out systematically excludes deliberate activity. After arrangement of study population according to numerical order and small to large then the samples were collected. There were 118 responses used for the study. Table 1 lists the broad features of the study participants. This study's participants were all academic personnel and professors. 205 professors and 125 employees work at University E. Additionally, the research participants are provided with consent form and the collected data is submitted in electronic file format for conducting the online survey to adhere to the standards of research ethics prior permission and the personal information are kept confidential for the sake of individuals.

**Table 1:** General characteristic (N=118)

	Variables	Frequency	%
Gender	Female	46	39.0
	Male	72	61.0
Classification	Staff	42	35.6
	Professor	76	64.4
Employment period	>20 years	21	17.8
	15 years to 20 years	12	10.2
	10 years to 15 years	12	10.2
	5 years to 10 years	24	20.3
	< 5 years	49	41.5
Spot	Part-Time Employee	25	21.2
	Full-Time Employee	17	14.4
	Part-Time faculty	3	2.5
	Full-Time Faculty	73	61.9
Major field	liberal arts college	2	1.7
	humanities	2	1.7
	social	7	5.9

	education	5	4.2
	engineering	4	3.4
	natural science	33	28.0
	pharmaceutical	17	14.4
	Arts and Physical	5	4.2
With/without position experience	have position experience	55	46.6
	no position experience	63	53.4
Position title (If you have position experience)	Vice-Chancellor and above	1	0.8
	dean level	3	2.5
	director level	7	5.9
	Center director	16	13.6
	head of the department	25	21.2

### 3.2 Research Tool

The measurement tool used for the research is “University Innovation Capacity Assessment (UICA) tool, which has been implemented since 2019 by Sungkyunkwan University Education and Future Research Institute”. UICA is the survey tool nationwide used for diagnosing the university innovation capabilities to examine organizational climate and culture at the university level and the organizational behavior of members, and about 70 universities participate every year (Bae et al., 2021). The recent survey for data collection is conducted during 2021. The research study was conducted during October to November 2021 and it includes 118 responses. The survey is collected through online medium.

In this study, 4 questions were trust culture related, 5 questions were department head leadership related, and 12 were organizational fairness related questions. The variables were measured using 4-point Scale. The reliability co-efficient and measurement items for every factor is given in Table.2.

**Table 2:** Reliability coefficient and Questionnaire

Variable	Item	Question	Cronbach's alpha
Trust culture	TC1	I am confident that every student at our university perform well in assigned works	.932
	TC2	I can depend on my colleagues and give them major tasks.	
	TC3	My university members will help me when I am in need of it.	
	TC4	I believe the members of our university will take actions and decisions that contribute the university.	
Organizational justice	OJ1	Our university provides appropriate compensation for the efforts and achievements of its members.	.899
	OJ2	Considering the level of responsibility for my work, I am being compensated at an appropriate level (wages, promotions, performance evaluation).	
	OJ3	Considering the amount of my work, I am being compensated at an appropriate level (wages, promotions, performance evaluation).	

	OJ4	I am being compensated (wage, promotion, performance evaluation) at an appropriate level in light of my career.	
	OJ5	I am receiving compensation (wage, promotion, performance evaluation) at an appropriate level, considering the stress and burden I received from work.	
	OJ6	Welfare benefits for professors and staff are well provided at our university.	
	OJ7	Our university makes decisions on wages, promotions, and performance evaluation according to consistent standards.	
	OJ8	Our university makes decisions on wages, promotions, and performance evaluations based on accurate information.	
	OJ9	Our university makes it clear which departments contributed to the creation of specific outcomes.	
	OJ10	Our university guarantees an opportunity for members to raise objections on wages, promotions, and performance evaluation results.	
	OJ11	Our university actively reflects the opinions and suggestions of members regarding wages, promotions, and performance evaluation.	
	OJ12	Our university determines compensation for its members through an objective and transparent process.	
Department head leadership	HL1	Our university department head helps members find the meaning of work.	.900
	HL2	Our university department heads help members to approach problems in a new way.	
	HL3	The head of our university department helps members to develop themselves.	
	HL4	The department head of our university makes an appropriate evaluation according to the performance.	
	HL5	When faced with a problem, the head of our university department acts according to principles and standards.	

### 3.3 Statistical Analysis

The collected data for the research was statistically examined according to research questionnaire through IBM SPSS 26 version as follows.

First, Kurtosis, Skewness, Maximum, Minimum, Standard deviation, Mean, Percentage and frequency were identified by performing descriptive statistical analysis and frequency analysis for examining the general characteristics of study participants.

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Second, correlation analysis performed for examining the validity among the variables and for checking the multicollinearity, the tolerance limit, and VIF were examined.

Third, hierarchical regression analysis is conducted for validating significance of university trust culture and department head leadership on organizational fairness perception. In addition, the 4-step analysis method proposed by Baron & Kenny (1986) was performed to confirm the statistical significance between the trust culture of the university and the perception of organizational fairness, and to verify whether the leadership of the department head is mediated (Baron & Kenny, 1986). In general, the analysis method of Baron and Kenny (1986) is one of the most used methods in verifying the mediating effect, and Sobel test is used for validating whether the mediating effect appeared. When explaining the four-step analysis method of Baron and Kenny, independent variable must have positive effect on dependent variable. Then, independent variable must have positive effect on various parameters. Next, the parameters should have positive effect on independent variables.

Fourth, when predicting the dependent variable by inputting both parameters and independent variables, the case where the regression coefficients that the independent variable affecting dependent variable may not be significant is called a complete parameter. In addition, when the accounting coefficient of the independent variable is significant, but it is decreased than the regression coefficient of the first stage, it is considered that a partial mediating effect appears.

### 4. ANALYSIS AND FINDINGS

#### *4.1 Descriptive statistical analysis result of university trust culture, department head leadership, and organizational fairness perception variables*

Table 3 shows the standard deviation and average of key variables includes trust culture, department head leadership, and organizational fairness.

**Table 3:** Descriptive statistics values of university trust culture, department head leadership, and organizational fairness perception variables

Variables		Mini mum	Maxi mum	Mean	S.D	Skewness		Kurtosis	
						Mean	S.D	Mean	S.D
Trust culture	TC1	0	60	46.10	14.909	-0.816	0.223	0.129	0.442
	TC2	0	60	44.74	14.245	-0.670	0.223	0.277	0.442
	TC3	0	60	42.88	15.084	-0.489	0.223	-0.338	0.442
	TC4	0	60	42.88	15.309	-0.484	0.223	-0.437	0.442
Total Medium		0.00	60.00	44.15	14.89	-0.61	0.22	-0.09	0.44
Department head leadership	HL1	0	60	38.14	17.343	-0.537	0.223	-0.256	0.442
	HL2	0	60	38.47	16.775	-0.473	0.223	-0.273	0.442
	HL3	0	60	35.76	18.088	-0.341	0.223	-0.626	0.442
	HL4	0	60	37.97	18.001	-0.512	0.223	-0.438	0.442
	HL5	0	60	41.36	17.292	-0.859	0.223	0.317	0.442
Total Medium		0.00	60.00	38.34	17.50	-0.54	0.22	-0.26	0.44
Organizational justice	OJ1	0	60	25.59	18.835	0.160	0.223	-0.901	0.442
	OJ2	0	60	24.58	18.381	0.132	0.223	-0.924	0.442
	OJ3	0	60	25.76	18.136	0.163	0.223	-0.775	0.442
	OJ4	0	60	24.07	18.776	0.274	0.223	-0.843	0.442
	OJ5	0	60	23.05	17.468	0.166	0.223	-0.857	0.442
	OJ6	0	60	22.71	16.520	0.112	0.223	-0.813	0.442
	OJ7	0	60	27.12	19.485	0.076	0.223	-1.000	0.442
	OJ8	0	60	28.64	18.761	-0.084	0.223	-0.902	0.442
	OJ9	0	60	31.53	18.748	-0.320	0.223	-0.771	0.442

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	OJ10	0	60	25.08	18.524	0.060	0.223	-0.988	0.442
	OJ11	0	60	24.58	19.110	0.361	0.223	-0.770	0.442
	OJ12	0	60	25.93	18.362	0.047	0.223	-0.912	0.442
Total Medium		0.00	60.00	28.15	18.20	-0.06	0.22	-0.73	0.44

Being an independent variable, trust culture's Standard deviation is 14.89 and overall average was 44.15 out of its other sub-categories, TR1 "I am confident that every student at our university perform well in assigned works" was 46.10 (SD=14.90). was found to be the highest. The overall average of the department head leadership as a parameter was 38.343 (SD=17.50), and out of all the sub-items in department head leadership, the average of HL5 'my university department heads act according to principles and standards when faced with problems' was 41.36 (SD=17.29) was the highest. The overall average of organizational fairness, which is the dependent variable, was 28.15 (SD=18.20), and among the sub-questions of organizational fairness, OJ9 'our university clarifies which department contributed to the creation of a specific performance' item had an average of 31.53 (SD= 18.74) was the highest.

According to the findings, Kurtosis is between -1.000 and 0.317 and the skewness was between -0.859 and 0.361 after examining the normality of mean variables. As a result of examining skewness and kurtosis for the main variables, trust culture, department head leadership, and organizational fairness, Kline., (2005) found if the kurtosis do not exceed absolute value '8 or 10' as well as standard of skewness do not exceed absolute value '3'. It was confirmed that most of them satisfied the criteria for normal distribution according to the standard that can be regarded as a normal distribution.

**4.2 Correlation and multicollinearity verification results between university trust culture, department head leadership, and organizational fairness perception variables**

The findings of examining the correlation between trust culture related questions – 4 questions, department head leadership related questions – 5, and organizational fairness related questions – 12, these are the main variables is shown in Table.4.

**Table 4:** Correlation between university trust culture, department head leadership, and organizational fairness perception variables (N=118)

	T C 1	T C 2	T C 3	T C 4	H L 1	H L 2	H L 3	H L 4	H L 5	O J 1	O J 2	O J 3	O J 4	O J 5	O J 6	O J 7	O J 8	O J 9	O J 10	O J 11	O J 12	
TC1	1																					
TC2	.587*	1																				
TC3	.636*	.540*	1																			
TC4	.731*	.627*	.719*	1																		



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HL1	.5 7 3 * *	.4 7 9 * *	.5 8 3 * *	.5 7 4 * *	1														
HL2	.5 0 2 * *	.3 4 5 * *	.5 9 8 * *	.5 2 3 * *	.8 4 8 * *	1													
HL3	.5 1 5 * *	.3 8 4 * *	.5 0 9 * *	.5 3 8 * *	.8 5 7 * *	.8 4 6 * *	1												
HL4	.4 8 0 * *	.2 3 8 * *	.5 2 5 * *	.5 6 7 * *	.7 5 4 * *	.7 7 1 * *	.7 8 2 * *	1											
HL5	.5 2 5 * *	.4 3 2 * *	.4 8 3 * *	.5 7 9 * *	.7 7 2 * *	.7 1 4 * *	.7 8 4 * *	.7 7 8 * *	1										
OJ1	.5 1 1 * *	.2 8 2 * *	.4 8 4 * *	.5 8 4 * *	.4 7 2 * *	.5 5 7 * *	.5 3 2 * *	.5 2 8 * *	.4 7 0 * *	1									
OJ2	.4 8 4 * *	.3 6 0 * *	.4 5 8 * *	.5 3 6 * *	.5 3 1 * *	.5 2 2 * *	.5 6 3 * *	.5 2 4 * *	.5 1 8 * *	.7 8 5 * *	1								
OJ3	.4 8 8 * *	.3 5 6 * *	.4 7 6 * *	.5 6 8 * *	.5 2 4 * *	.5 0 1 * *	.5 0 2 * *	.5 1 8 * *	.5 0 9 * *	.7 3 6 * *	.8 7 4 * *	1							
OJ4	.4 8 5 * *	.4 0 0 * *	.4 8 9 * *	.5 6 5 * *	.4 8 5 * *	.4 6 5 * *	.5 4 4 * *	.4 5 0 * *	.4 6 7 * *	.7 1 8 * *	.7 9 8 * *	.8 8 4 * *	1						
OJ5	.4 2 7	.3 2 6	.4 7 2	.5 2 9	.4 7 0	.5 0 6	.4 9 6	.5 0 9	.4 6 2	.8 0 0	.8 0 8	.8 4 0	.8 4 8	1					

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	*	*	*	*	*	*	*	*	*	*	*	*	*								
	*	*	*	*	*	*	*	*	*	*	*	*	*								
OJ6	.4	.2	.4	.5	.4	.4	.4	.4	.4	.7	.7	.6	.6	.7							
	4	9	6	3	0	5	3	4	3	4	1	6	9	5							
	6	3	2	7	0	9	9	4	0	2	3	6	2	3	1						
	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
	*	*	*	*	*	*	*	*	*	*	*	*	*	*							
OJ7	.4	.2	.4	.5	.3	.3	.4	.3	.4	.6	.7	.6	.7	.6	.7						
	2	9	0	1	9	7	0	9	3	5	2	4	0	8	1						
	6	6	7	5	4	9	6	3	8	4	0	7	5	9	5	1					
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*						
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*						
OJ8	.4	.3	.4	.5	.3	.4	.4	.4	.4	.7	.7	.6	.6	.7	.7	.9					
	3	0	1	4	8	2	1	2	5	0	1	5	9	2	2	0					
	3	6	9	3	6	2	1	7	9	4	7	6	5	2	9	6	1				
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*					
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*					
OJ9	.3	.3	.3	.4	.4	.4	.3	.3	.3	.6	.7	.7	.6	.6	.6	.6	.6				
	9	5	7	9	4	2	9	7	9	1	0	1	5	5	2	3	7				
	5	7	7	1	5	6	7	4	4	0	9	8	2	4	7	4	7	1			
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
OJ10	.4	.3	.5	.5	.4	.4	.4	.4	.4	.7	.7	.6	.7	.7	.7	.7	.7				
	6	4	1	7	4	4	6	2	5	2	3	8	0	2	3	4	5	0			
	9	8	0	5	5	3	3	1	9	1	4	5	7	3	7	2	8	6	1		
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
OJ11	.3	.3	.5	.5	.4	.4	.4	.4	.4	.7	.7	.7	.7	.7	.7	.7	.7	.8			
	9	8	2	6	4	1	5	2	6	2	5	3	4	5	8	4	5	1	5		
	3	4	3	2	9	7	2	5	7	6	7	2	8	7	3	7	6	0	1	1	
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
OJ12	.4	.3	.4	.5	.4	.4	.4	.4	.4	.7	.7	.6	.6	.7	.7	.7	.8	.7	.8	.8	
	1	1	9	7	2	1	2	2	4	1	0	5	7	1	3	9	1	2	4	6	
	6	0	3	1	2	8	6	0	8	4	9	6	3	1	5	8	3	3	5	7	
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1

\*\*\* $p < .001$

As a result of analyzing the correlation among the variables of trust culture, department head leadership, and organizational fairness perception variables, the correlation coefficient  $r = .238$  to  $r = .906$  showed a high positive correlation at the significance level of .01. “The variance inflation factor (VIF) of the independent variables was verified to determine its magnitude and tolerance limit in order to confirm the multicollinearity between each variable”. The tolerance limit was determined to be .591 and the VIF was 1.692. When the coefficient of variance expansion (VIF), a measure of multicollinearity in regression analysis, is larger than 10 and the tolerance limit, a measure of multicollinearity, is less than .1, it is determined that multicollinearity is an issue. As a result, the basic assumption of the study's regression analysis considered to be satisfied.

### 4.3 Analysis of the influence of trust culture on organizational fairness perception through the leadership of department heads of universities

The findings of hierarchical regression analysis for finding the significance of university trust culture and department head leadership on organizational fairness perception. It is shown in Table.5.

**Table 5:** Results of university hierarchical regression analysis on trust culture and organizational fairness of department head leadership (N=118)

variable	Organizational Fairness			Department head leadership			Organizational Fairness			Organizational Fairness		
	B	$\beta$	p	B	$\beta$	p	B	$\beta$	p	B	$\beta$	p
trust culture	.763	.606	.000	.802	.640	.000				.505	.401	.000
department head leadership							.579	.577	.000	.322	.320	.000
a constant	-7.952*			2.920*			3.522*			-8.892*		
R <sup>2</sup>	.367			.049			.333			.427		
F	67.169***			80.303***			57.786***			42.913***		

\*  $p < .05$ , \*\*\*  $p < .001$

Looking at the analysis of trust culture and organizational fairness in Model 1, it was confirmed that trust culture had a statistically significant relationship to organizational fairness. It was found to have explanatory power of 36.7%. This means that if the trust culture is higher, the organizational fairness will be higher ( $\beta=.606$ ,  $p<.001$ ).

Looking at the analysis of trust culture and department head leadership in Model 2, it was confirmed that trust culture had a statistically significant relationship with department head leadership. It was found to have explanatory power of 4.9%. So, higher the trust culture, so the department head leadership perception ( $\beta=.640$ ,  $p<.001$ ).

The analysis of the department head leadership and organizational fairness in Model 3, confirmed that the level of perception of the department head leadership had a statistically significant relationship with organizational fairness. The explanatory power was 33%. This means that the higher the recognition level of the department head's leadership, the higher the perception of organizational fairness ( $\beta=.577$ ,  $p<.001$ ).

In the case of Model 4, the trust culture and departmental leadership at the same time, 42% of explanatory power was observed. According to Cohen (1988), it is judged that there is some effect if the coefficient of determination is 13% or more in social science research such as surveys. Therefore, the explanatory power of 42% shown in this study is significant. In addition, it was found that if the trust culture will be higher, the perception of organizational fairness will be higher ( $\beta=.401$ ,  $p<.001$ ). In other words, trust culture has a direct effect on organizational fairness. In addition, it was found that the higher the department head leadership, the higher the perception of organizational fairness ( $\beta=.320$ ,  $p<.001$ ).

In addition, the results of verifying whether department head leadership mediates trust culture and organizational fairness are shown in Table 6.

**Table 6:** The mediating effect of department head leadership between trust culture and organizational fairness

Model	independent variable	parameter	dependent variable	$\beta$	SE	t	p	R <sup>2</sup>
1	trust culture	-	Organizational Fairness	.606	.093	8.196***	.000	.367
2	trust culture	department head leadership	-	.640	.090	8.961***	.000	.049

3	-	department head leadership	Organizational Fairness	.577	.076	7.602***	.000	.333
4	trust culture	department head leadership	Organizational Fairness	.401	.116	4.364***	.000	.427
				.320	.092	3.490***	.000	

\*\*\*  $p < .001$

In this study, the hierarchical analysis conducted to investigate the mediating effect of department head leadership between trust culture and organizational fairness showed that trust culture, an independent variable, was  $\beta=.606$ ,  $p<.001$  in Model 1 on organizational fairness, a dependent variable. ,  $\beta=.401$ ,  $p<.001$  in Model 4, which was statistically significant and decreased. This corresponds to a partial mediating effect as per Baron & Kenny (1986).

In present study, the mediating effect of department head leadership is investigated between trust culture and organizational fairness, the mediating effect can be validated with Baron & Kenny (1986) method. Table 7 shows the results of the Sobel-test as a method to verify the significance of mediating effects.

**Table 7:** Results of statistical significance verification of the leadership mediating effect of department heads (Sobel-test)

Path	Z	p
Trust culture → Department head leadership → Organizational Fairness	5.790***	.000

\*\*\*  $p < .001$

If the result of Sobel-test is lesser or greater than -1.96, the mediating effect is significant. The correlation between organizational fairness and trust culture, the leadership of the department head was  $Z=5.790$  ( $p<.001$ ), confirming that the mediating effect of the leadership of the department head was significant.

## 5. DISCUSSION

The major goal of the study is to validate the mediating effect of department head leadership between the trust culture of universities and the perception of organizational fairness. For this research purpose, 118 professors and staff's responses were analyzed using the results of the "University Innovation Capacity Assessment (UICA)".

First, consider the findings of research inquiry 1 regarding the degree of trust culture, department head leadership, and organizational fairness awareness of the university, the average of the questions "I believe that each member of our university will do their job well" out of all trust culture found to be highest. The sub-items included department head leadership, which is a parameter, the average of item 'The head of our university department acts according to principles and standards when faced with a problem' showed the highest average. Among all the sub-items of organizational fairness, which is the dependent variable, the item 'Our university makes it clear which department contributed to the creation of a specific performance' showed the highest average.

Second, the findings of research question 2, which examined the connection between the university's trust culture, the department head leadership, and organizational justice, revealed a strong positive correlation.

Third, taking a look at research question 3's findings on whether department head leadership had a mediating effect as a parameter between the trust culture of universities and the perception of organizational fairness, it was confirmed that trust culture had a statistically significant relationship with organizational fairness and department head leadership. Also, it was confirmed that the level of perception of the department head leadership had statistically significant relationship with organizational fairness. In other words, the higher the level of recognition of the department head's leadership, the higher the perception of organizational fairness. Finally, as a result of analyzing trust culture and department leader leadership simultaneously in the relationship between trust culture,

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department head leadership, and organizational fairness, the trust culture will be higher and higher the perception of organizational fairness was found to increase significantly.

We would like to address the following strategies for raising the degree of knowledge of organizational fairness and for improving the trust culture of universities and departmental leadership based on the findings of the this study.

First, in order to foster a culture of trust at universities, formal regulations and procedures-based organizational management must be replaced with flexible, human-centered, organic procedures. Organizational trust culture affects the desirable behaviors of employees for organizational development through the sense of unity and common awareness among members of the organization. It affects achievement desire and organizational attachment to improve performance. To achieve the goals and performance of individuals and organizations, they depend on each other, and interdependence must be based on trust (Mayer et al., 1995).

Organizational trust activity refers to the actions that members take for the organization based on the organizational trust culture. To achieve a trust culture, trust can be divided into cognitive, emotional, and behavioral basis (Mishra, 1996). Cognitive-based trust refers to making judgments about whether or not to believe or trust a reliable source based on information or assumptions about the reliable source. Affective-based trust refers to trust in which positive attitudes lead to expectations based on subjective perceptions such as liking or dislike of trustworthy objects rather than based on information and knowledge. Behavioral-based trust is an expression of the readiness to accept chances in regard to the trustee's high expectations and includes the willingness to take active actions. Therefore, motivation to satisfy self-realization by sharing the vision of the organization and providing appropriate compensation and fair personnel management should be presented to the members of the organization. In addition, mutual communication among members of the university organization should be actively promoted to improve the organizational trust culture.

Second, the department head of the university is a middle manager, connecting the top and the bottom of the organization, and is direct to the department members who are in charge of the work. It can be seen that there is an indirect effect. Therefore, the head of the department should induce the members of the organization to voluntarily and actively cooperate in achieving the organization's goals. In addition, the members should be encouraged to actively respond to and cooperate with the organization to achieve the organization's goals. Kang (2013) reports that when a boss shows inspirational motivation, such as helping each member find the meaning of work or presenting an attractive vision, employees become more active and passionate about their work. In this way, the successful leadership of the department head in the organization improves the abilities of the members and makes them move voluntarily. The leadership of the department head is very important in the university organization because the members can faithfully carry out the organizational goals and increase the students' satisfaction with university education. Unlike for-profit corporate organizations, the behavior of university leaders is more clearly biased toward a win-win process of mutual coexistence.

Third, to raise the level of recognition of organizational fairness in universities, first, to resolve the unfairness caused by the feedback process, the evaluator continuously provides feedback to the evaluator. If, in the process of evaluation, the result of the feedback is given a low grade without any feedback, it will be difficult for the evaluator to accept it. However, if the point to be supplemented is informed from time to time, but there is no improvement, the examinee naturally expects a low evaluation, and the backlash against unfairness can be lowered. The feedback process can be expanded at the organizational level as well as the evaluator and the evaluator. Planning and preparing for various changes, such as people appointments and personnel systems, ensures that the best decision is made. However, it may feel unfair to most accepted positions because it is perceived as a sudden result. Not all processes can be communicated one by one, but it is also necessary to give a kind of 'sign' to accept change and to give room for psychological preparation.

Additionally, while distributive fairness activities are crucial for promoting justice at the organizational level, establishing a procedural environment should take precedence. In the communication process to increase

procedural fairness, there are big and small obstacles to overcome depending on the health of the organizational culture. Pursuing the value of high 'fairness' is definitely 'right'. Also, fairness is not something that can be discussed in the frame of 'distribution' or 'growth'. If you are trapped in a growth-oriented frame, you may think that imposing a high standard of fairness acts as a brake on growth. However, fairness is a kind of 'condition' for growth and serves as a platform for fair competition and sustainable growth. In other words, redesigning the standards for fairness at the organizational level creates an environment where members can compete comfortably, and when it is well established, future growth engines can be built solidly.

## **6. CONCLUSION**

The data was collected through an online survey for almost a month during the duration of October 2021 to November 2021. For this study, a population of staff and professors in four-year Gyeonggi-do E-university were selected and 118 responses obtained from them were used to carry out this research. The study showed that the trust culture had statistically significant relationship with the organizational fairness and the department head leadership. It was also found that the level of perception of leadership of the departmental head had a statistically significant relationship with organizational fairness.

The relationship between trust culture, departmental head leadership and organizational fairness were also examined, and it was observed that the higher the trust culture, the greater was the perception of organizational fairness. It was found that there is a lack of research on organizational fairness in universities. In order to foster a culture of trust at universities, formal regulations and procedures-based organizational management must be replaced with flexible, human-centered, organic procedures.

Further it was concluded that the head of the department should induce the members of the organization to voluntarily and actively cooperate in achieving the organization's goals. It was observed that to raise the level of recognition of organizational fairness in universities, it has to resolve the unfairness caused by the feedback process. The feedback process can be expanded at the organizational level as well as the evaluator level.

## **7. LIMITATION**

The limitations of the present study are given below;

First, in the process where a university's trust culture affects organizational fairness, it is necessary to investigate additional mediating effect factors additionally to leadership of the department head.

Second, this study's survey response rate was underwhelming. In order to undertake an empirical analysis later on by raising the questionnaire response rate, it was not able to verify everything with 118 questions.

The issue of generalization in light of the restrictions of the research subjects comes in third. The sample target was limited to the staff and professor of 4-year university due to regional restrictions, therefore it was unable to accurately reflect the characteristics of the organization that includes whole university. Future research should concentrate on colleges across the country.

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### **Data Availability Statement**

Due to privacy concerns, the database created or analyzed during the current work is not publicly accessible, however it is available from the corresponding author upon valid request.

### **Declaration**

Author declares that the research works are original and this manuscript has not been published in any journal.

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