A STRUCTURAL EQUATION MODEL ON THE JOB PERFORMANCE OF EMPLOYEES IN A NATIONAL GOVERNMENT AGENCY IN REGION XI

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ABSTRACT
This study used Structural Equation Modeling (SEM), a multivariate statistical technique that combined factor analysis and multiple regression in analyzing structural relationships, to establish the best-fit structural model for job performance. 400 DENR employees selected using proportionate stratified random sampling throughout Region XI participated in the survey. Data analyses yielded these results: the statistical mean was high in all the variables. Pearson r revealed a significant and positive relationship between organizational change, organizational culture, job satisfaction (exogenous variables), and job performance (endogenous variable). Multiple regression analysis uncovered the influence of the exogenous variables on job performance at 66.3%. Moreover, SEM revealed the direct effect of organizational culture on job performance. On the other hand, the mediating role of organizational culture resulted in the indirect effect of job satisfaction and organizational change on job performance. Also, the SEM model showed that the appropriate manifest variables for predicting job performance are mission (for organizational culture), contingent rewards and fringe benefits, nature of work, a climate of change (for job satisfaction), and readiness for change (for an organizational change). These findings have implications for leadership in government agencies vis-à-vis employees' outstanding job performance.
KEYWORDS: *public administration, organizational culture, organizational change, job satisfaction, job performance, structural equation model, DENR employees*

INTRODUCTION

Poor performance of some workers in the public sector has been an issue that occupied news headlines until now [1]. As a result, bribery and corruption became rampant as clients wanted fast and efficient public service [2], [3]. Unluckily, this concern is not remote in the Philippines but is happening worldwide. For example, in Singapore and South Korea, unsatisfactory public services were due to the absence of motivational factors in the performance management system [4]. In India, the identified aspects of poor public sector performance were corruption, lack of accountability, poor incentive mechanisms, and over-sized government [5].

The State expects excellent performance from its workers. For DENR, Executive Order 192 mandated this national agency to conserve correctly, manage, develop, and use the environment and natural resources of the country [6]. However, with the problem of

poor performance of employees, there is much doubt whether the agency could fulfill its mandate. Moreover, although other DENR offices in the country achieve much, others still need to do more, suggesting greater demand for employees to perform its directive [7].

There have been studies concerning job performance, but these studies use other variables. For example, Palma and Sepe (2017)[8] conducted a study using SEM to investigate whether public service motivation affects job satisfaction, individual outcomes, resigned satisfaction, and burnout. Likewise, Warr (2020)[9] investigated whether age predicts job performance and found that the two are unrelated. Although absenteeism and accidents are common among younger employees, older employees abandon the plan of leaving their employment. Despite the various studies on job performance [10], [11], [12], [13], [14], [15], poor performance is still a perennial problem that some companies and organizations face. Unfortunately, there is still a research gap on this topic, especially concerning DENR XI, a national government agency in the Philippines.

Therefore, this study proposed a public sector job performance model to help underperforming government agencies. Using structural equation modeling (SEM), it analyzed whether organizational change, organizational culture, and job satisfaction are predictors of job performance. Studies show that job performance improves with continuous incremental organizational change [16]. Moreover, organizational culture significantly correlates with and influences job performance [17]. Furthermore, job satisfaction predicts performance outcomes [18]. This study validates the previous individual results.

OBJECTIVES
Primarily, the purpose of this study was to establish the best-fit structural model for job performance in a national government agency using organizational change, organizational culture, and job satisfaction as exogenous variables in a structural equation modeling. Other objectives were the following:
1. To assess organizational change in a national government agency in Region XI regarding the climate of change, processes of change, and readiness for change.
2. To evaluate the organizational culture of a national government agency in Region XI regarding consistency, involvement, adaptability, and mission.
3. To appraise the job satisfaction of employees vis-à-vis supervision, pay and promotion, nature of work, contingent rewards and fringe benefits, and communication and operating conditions.
4. To ascertain the level of employees' job performance, re: output, job knowledge, work management, interpersonal relationship, and concern for the organization.
5. To determine the significant relationship between organizational change, organizational culture, job satisfaction, and performance.
6. To ascertain which among the variables significantly influence job performance.
7. To create the best-fit structural model for job performance.

Hypothesis
1. There is no significant relationship between organizational change, organizational culture, job satisfaction, and job performance.
2. Organizational change, organizational culture, and job satisfaction have no significant influence on job performance.
3. There is no best-fit structural model for job performance.

METHODS
This quantitative study examined the interrelationships of the variables, utilizing Structural Equation Modeling (SEM) to produce the best-fit model for employee satisfaction. Researchers use SEM to identify the relationships between observed and unobserved variables and provide valid results [19], [20], [21]. SEM can likewise determine causal factors between independent and dependent variables in varying scale levels via mathematical models and theories [22], [23], [24], [25]. Significantly, SEM provides consistency in research where the goodness of fit is necessary [26], [27]. Similar social sciences and public administration studies that built structural models use structural equation modeling [28], [29], [30], [31].

Furthermore, this study used mean statistics to describe the levels of the variables. Then, it also applied Pearson r to test the significance of the relationships between the variables. Finally, it employed regression analysis to determine which of the three independent variables (organizational change, organizational culture, and job satisfaction) best predicts performance. Structural equation modeling and regression analysis necessitate a standard outer loading greater than 0.70 [32], [33].

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RESULTS AND DISCUSSION

Table 1
Organizational Change in a National Government Agency in Region XI

Indicator	Mean	SD	Descriptive Level
Climate of Change	3.64	0.55	High
Processes of Change	3.82	0.62	High
Readiness of Change	3.87	0.67	High
Overall	**3.78**	**0.55**	**High**

Table 1 presents the organizational change in DENR XI as perceived by its employees. All three indicators got high-level mean scores: climate of change (M=3.64; SD=0.55), the process of change (M=3.82; SD=0.62), and readiness of change (M=3.87; SD=0.67). The overall mean score is 3.78, with a standard deviation of 0.55. The result suggests that the respondents frequently adapt to organizational change, as evidenced by their high ratings in all three indicators.

The result signifies that those employees were ready for changes in the organization. Usually, whenever a change occurs, some resist by voicing their concerns about the change that is taking place [34]. Unfortunately, that is a regular occurrence. Those who resist have two reasons: personal attitude or unreadiness toward organizational change and intrinsic or extrinsic factors [35]. Therefore, people in the organization would resist change, especially if they did not participate in the proposed changes. Thus, to avoid resistance, there should be consultation and participation in the change dynamics [36].

Research shows that communicating the proposed organizational changes to the stakeholders would somehow solve the resistance problem [37], [38]. Moreover, communicating the change is vital because employees should understand the "hows" and "whys" of organizational change [39].

Table 2
Organizational Culture in a National Government Agency in Region XI

Indicator	Mean	SD	Descriptive Level
Consistency	3.95	0.55	High
Involvement	4.10	0.59	High
Adaptability	3.97	0.55	High
Mission	4.18	0.62	High
Overall	**4.05**	**0.54**	**High**

Table 2 presents the perception of DENR XI employees vis-à-vis the organizational culture of their agency. The overall mean score is 4.05, with a standard deviation of 0.54 and a descriptive level of high.   The result denotes that respondents agree that their organization often manifests the actions/behaviors stipulated in the survey items under organizational culture. The *mission* indicator has the highest mean score of 4.18 and a standard deviation of 0.62. The standard deviation signifies that the responses were the expected ones and that they concentrated around the mean. Moreover, the other indicators of organizational culture, such as involvement (M=4.10; SD=0.59), adaptability
(M=3.97; SD=0.55), and consistency (M=3.95; SD=0.55) also have high mean scores. In other words, DENR XI employees frequently demonstrated these behaviors.

The result confirms that employees appreciated the culture within their organization, although not in all aspects. In other words, there are still some cultural aspects in the organization that leaders must revisit and improve for the good of all. Consequently, organizational culture is essential to sustainability [40] and job satisfaction [41], [42]. Simply put, employees' high rating of organizational culture conveys their job satisfaction, which can affect the organization's sustainability.

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Table 3
Job Satisfaction of Employees in a National Government Agency in Region XI

Indicator	Mean	SD	Descriptive Level
Pay and Promotion	3.97	0.81	High
Communication and Operating Conditions	4.14	0.63	High
Supervision	4.18	0.85	High
Nature of Work	4.37	0.62	Very high
Contingent Rewards and Fringe Benefits	3.90	0.72	High
Overall	**4.11**	**0.54**	**High**

   Shown in Table 3 is the assessment of job satisfaction as perceived by the study's respondents, the DENR XI employees. Again, the overall high result (M=4.11; SD=0.54) suggested that respondents have frequently observed the statements given in the survey. Scrutinizing the data, only the nature of work got a very high mean score, signifying that respondents are always satisfied with their work. The result also shows that DENR XI employees are satisfied regarding pay and promotion, communication and operating conditions, supervision, contingent rewards, and fringe benefits.

   Research shows that job satisfaction results in life satisfaction. Therefore, the above results suggest that employees were satisfied with their job and life, thus, performing better in their jobs [43]. For example, employees are satisfied with their job if they receive fair pay and other fringe benefits from the agency [44], [45], [46]. On the contrary, employees unsatisfied with their jobs suffer from burnout, with a higher intention to leave [47] because they want to look for high-paying jobs with fringe benefits [48]. As a result, unsatisfied employees are less committed to their organization and look for greener pastures.

Table 4
Employees' Job Performance in a National Government Agency in Region XI

Indicator	Mean	SD	Descriptive Level
Output	4.08	0.67	High
Job Knowledge	4.20	0.64	Very High
Work Management	4.18	0.64	High
Interpersonal Relationship	4.29	0.63	Very high
Concern for the Organization	4.14	0.63	High
Overall	4.18	0.56	**High**

   Illustrated in Table 4 are the descriptive results of assessing the job performance of DENR XI employees. The overall job performance is high at a 4.18 mean score (SD=0.56). Although, the individual results showed two indicators with very high mean scores: job knowledge (M=4.20; SD=0.64) and interpersonal relationship (M=4.29; SD=0.63). The result for job knowledge suggests that respondent employees understand their job, know the organization's vision, mission, and objectives, are resourceful, creative, analytical, troubleshoot problems, and communicate well. Moreover, the interpersonal relationship result suggests that respondents are receptive to ideas and suggestions, manage teamwork, build linkages and networks, can lead and follow, and are motivated to work.

   Research shows that job performance can significantly impact the employee, the workforce, and the institution [49]. Thus, organizations have to keep it checked at all times. In addition, other factors affect job performance, for instance, technology [50], job stress [51], and organizational commitment [52], among others. However, the high-level job performance of the DENR employees conveys that they do not have much problem with technology, job stress, and organizational commitment.

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Table 5
Relationship between the Exogenous Latent and Endogenous Latent Variables

Exogenous Variables	Endogenous Variable (Job Performance)					
	Output	Job Knowledge	Work Management	Interpersonal Relationship	Concern for the Organization	**Overall**
Organizational Culture	.840[**] .000	.674[**] .000	.639[**] .000	.679[**] .000	.717[**] .000	**.812[**]** **.000**
Organizational Change	.631[**] .000	.576[**] .000	.507[**] .000	.536[**] .000	.586[**] .000	**.648[**]** **.000**
Job Satisfaction	.567[**] .000	.541[**] .000	.462[**] .000	.528[**] .000	.521[**] .000	**.598[**]** **.000**

The correlation tests yielded favorable results. The test showed a significant relationship between organizational culture and job performance (R=.812), organizational culture (R=.648), job satisfaction, and job performance (R.598). All coefficients of correlation (R) are significant at P ≤ 0.01 (**). Furthermore, the relationship between the exogenous variables and job performance was linear, positive, and significant. In other words, job performance also tends to increase whenever organizational change, organizational culture, and job satisfaction increase. This result affirmed some research findings on the significant relationship between these variables.

For example, [53] found that planned organizational change and high organizational culture drive employees toward job satisfaction and better performance. Although few challenges may occur during organizational changes, they cannot hamper employees from fulfilling their jobs because they understand the need for organizational change. Research also proves the importance of communicating possible organizational changes for employees to develop adaptive and proactive behaviors. In this way, employees can craft their job and develop change-oriented behaviors as they continue to engage in their work [54].

Moreover, job satisfaction increases the impact of organizational culture or values on employees' commitment to the organization. Employees become committed to their organization when satisfied, especially when they understand their culture [55]. Employees who understand their organization's culture tend to embrace and become attached to it.

Furthermore, [56] found a moderate relationship between job satisfaction and performance. Similarly, [57] found a significant correlation between work satisfaction and performance. In other words, employee satisfaction and job performance go together [58]. They are crucial drivers of work engagement [59].

Table 6
Influence of Organizational Culture, Organizational Change, and Job Satisfaction on Job Performance

Exogenous Variables		Endogenous Variable (Job Performance)			
		B	β	t	Sig.
Constant		.688		5.035	.000
Organizational Culture		.921	.880	16.603	.000
Organizational Change		-.156	-.153	-2.286	.023
Job Satisfaction		.085	.081	1.477	.141
	R	.814			
	R^2	.663			
	ΔR	.661			
	F	260.037			
	ρ	.000			

Table 6 shows the multiple linear regression analysis, illustrating the predictive value of exogenous variables on job performance. Based on the analysis, the computed R^2 of 0.663 and the adjusted R^2 value of 0.661 signifies that 66.1% to 66.3% of the variance can explain the change in job performance with the entry of organizational culture, organizational change, and job satisfaction. The significant result rejects the null hypothesis of no linear correlation between organizational culture, organizational change, and job satisfaction on the overall job performance of employees in a national government agency in Region XI.

The result of the regression analysis revealed the significant influence of organizational change, organizational culture, and job satisfaction on job performance by 66.1 to 66.3 percent. The result is congruent with some research findings that organizational

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change influences workers' behavior. On the one hand, those that do not appreciate the change resist it, affecting their job decisions. However, on the other hand, those that understand the change embrace it and perform well [53]. Therefore, researchers advised organizational leaders to communicate the planned change to avoid resistance. In this way, employees can craft their job and develop change-oriented behaviors as they continue to engage in their work [54].

Likewise, the result showed that organizational culture influences job performance by setting its values. It is the values or culture of the organization that becomes its foundation. Thus, shaping also the behaviors of every member of the organization. When the members embrace their organization's culture, they become more committed to it [55].

Significantly, job satisfaction influences job performance. There has been ample research on these topics. However, job satisfaction does not happen without underlying factors or motivations [60]. In this study, job satisfaction happened because of pay and promotion, communication and operating conditions, supervision, nature of work, and contingent rewards and fringe benefits. Others cite the work environment as a factor in job satisfaction that drives employees to perform well [61]. The results imply the significant roles of organizational change, organizational culture, and job satisfaction in employee performance.

Table 7
Values obtained for the Best-Fit Model

INDEX	CRITERION	MODEL FIT VALUE
Probability Value (P-value)	> 0.05	.055
Chi-Square/Degrees of Freedom (CMIN/DF)	0 < value < 2	1.667
Goodness of Fit Index (GFI)	> 0.95	.987
Comparative Fit Index (CFI)	> 0.95	.997
Normed Fit Index (NFI)	> 0.95	.993
Tucker-Lewis Index (TLI)	> 0.95	.992
Root Mean Square of Error Approximation (RMSEA)	< 0.05	.041
P of Close Fit (P-Close)	> 0.05	.667

In identifying the best-fitting model, all the indices included must consistently fall within the acceptable ranges. For example, the Chi-square/degrees of freedom value should be between 0 and 2, with its corresponding p-value greater or equal to 0.05. Likewise, the Root Mean Square of the Error Approximation (RMSEA) value must be less than 0.05, and its corresponding P-Close value must be greater or equal to 0.05. The other indices, such as the Normed Fit Index (NFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and Goodness of Fit Index (GFI), must all be more than 0.95.

Data in Table 7 show that all values qualify the criterion indices. The Chi-square/degrees of freedom was 1.667, with a P-value of 0.667. These values indicate an excellent fit model to the data. Significantly, the RMSEA index of 0.041, with its corresponding P-close value > 0.05, reinforced the result. Similarly, other indices like NFI, TLI, and CFI were consistent with the criterion, indicating a perfect fit model.

The Model (Figure 3) is the best-fit structural model of job performance. Again, Table 7 shows that all model fit values are consistent with the required criterion values of all indices. The model (Figure 3) shows a direct relationship between organizational culture (OC) and job performance (JP), represented by a single-headed arrow from OC to JP. On the other hand, organizational change and job satisfaction (JS) indirectly correlate with job performance, as organizational culture mediates these relationships.

The model shows the manifest or observed variables under each latent variable. For example, under organizational culture is *mission*. Under job satisfaction are *contingent rewards and fringe benefits* (CRF), *nature of work* (NOW), and *pay and promotion* (PAP). The *climate of change* (COC) and *readiness for change* (RFC) for organizational change. *Output* (OUT), *work management* (WOM), and *concern for the organization* (CFO) for job performance. Moreover, the model also shows residuals represented by the symbol e among all the indicators.
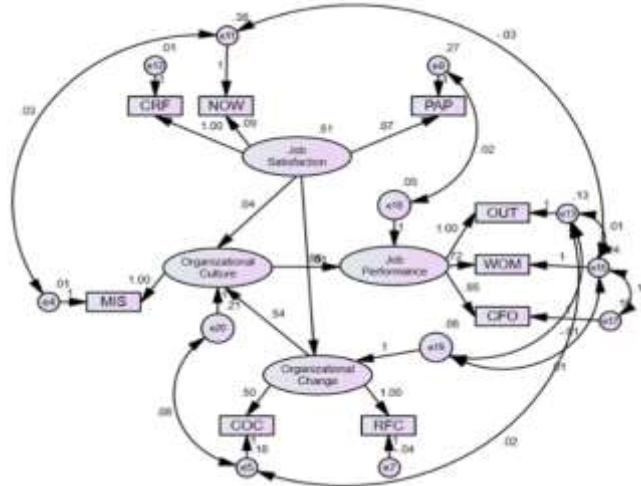
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Figure 1. The Best-Fit Structural Model for Job Performance

Legend:

MIS-mission	*PAP-pay and promotion*	*OUT-output*
COC-climate of change	*NOW-nature of work*	*WOM-work management*
RFC-readiness for change	*CRF-contingent rewards and fringe benefits*	*CFO-concern for the organization*

Table 8
Estimates of Variable Regression Weights in Generated Best Fit Model

			Estimate	SE.	Beta	CR.	P-value
Organizational_Change	<---	Job_Satisfaction	.937	.914	.013	72.082	***
Organizational_Culture	<---	Organizational_Change	.615	.537	.072	7.467	***
Organizational_Culture	<---	Job_Satisfaction	.052	.044	.069	.645	.519
Job_Performance	<---	Organizational_Culture	.915	.853	.048	17.641	***
MIS	<---	Organizational_Culture	.989	1.000			
RFC	<---	Organizational_Change	1.047	1.000			
COC	<---	Organizational_Change	.635	.500	.032	15.811	***
CRF	<---	Job_Satisfaction	.994	1.000			
NOW	<---	Job_Satisfaction	.106	.093	.043	2.138	.033
PAP	<---	Job_Satisfaction	.769	.872	.037	23.520	***
OUT	<---	Job_Performance	.848	1.000			
WOM	<---	Job_Performance	.641	.718	.053	13.563	***
CFO	<---	Job_Performance	.768	.846	.049	17.183	***

Furthermore, regression weights quantified the effect between measured and latent variables. For example, table 8 presents job satisfaction as the strong predictor of organizational change (Beta estimate=0.937; P= ≤ 0.001). In turn, organizational change is also a predictor of organizational culture (Beta estimate=0.615; P= ≤ 0.001), and organizational culture is a strong predictor of job performance (Beta estimate=0.915; P= ≤ 0.001).

The study's findings rejected the null hypothesis that there is no structural model of job performance, given the generated best-fit structural model (figure 3). Although, not all manifest variables in the hypothesized model came out as predictors because some did not meet the standard outer loading requirement of ≥ 0.70.

CONCLUSION

The study concludes that DENR XI (a national government agency in Region XI) employees are highly adaptive to the changes happening in their organization as they perceive them as part of the organizational culture, so these did not affect their satisfaction with their jobs, which remains high. In addition, there is a significant positive relationship between organizational culture, job satisfaction, organizational change, and job satisfaction. Furthermore, there is a model of job performance that shows the positive interrelatedness and interconnectedness of organizational culture, organizational change, job satisfaction, and job performance. The model suggests that organizations, not only national government agencies, must consider improving their culture by introducing positive incremental changes that would not diminish employees' job satisfaction so that they will continue to demonstrate peak performance on the job. This study's findings have implications for leadership in government agencies vis-à-vis employees' outstanding job performance.

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