

Organizational Pyramid and Size as a Moderator Variable in Manufacturing Industries of Bhutan

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Abstract: Human social factors in an organization play a vital role in the manufacturing industries of Bhutan. The study shows that the 'Hierarchy of Organization' and 'Size of Organization' exist as a moderator variable in a wide range of industries. As it has been depicted in findings of the research 'Employee Satisfaction' and 'Organization Culture' varies with the type of employees Viz., Management level, supervisory level, and workman level. However, the impact of organizational culture is highly significant and strong on the Management level. Foremost findings indicate that management-employee relationships are less satisfactory in the large firms rather than in small firms.

Keywords: Human factors in small size organization, manufacturing industries in Bhutan, Industry size and 'Hierarchy of Employees' as a moderator in the organization. Levels of employee and job satisfaction, Levels of employee and Organizational Culture, Size as a moderator variable, Size of the organization as a determinant of organizational culture

I. INTRODUCTION

Human factors, human engineering, human factors engineering, engineering psychology, industrial ergonomics, applied ergonomics, human performance engineering, biotechnology, psychotechnology, human-factors psychology anthropotechnics, applied experimental psychology, and biomechanics all these streams of knowledge have come into existence with a notion of human effect on the industry beyond the machine. Abundant of studies on 'human-machine interaction' emphasizes that an organization performance even in manufacturing industries is imbued with the crucial role of human input and social set up of an organization.

In 1950 the work of Elton Mayo has pronounced with Hawthorne Studies that human factor (psychological and social) in the workplace plays an important role in work satisfaction and productivity in the organization. Later in between 1950 to 1970, the first development in the human relations impact on the organization was again established by Maslow, Herzberg, McGregor and another industrial psychologist and experimental psychologist with a wide spectrum of human life in the organization. Thus, human factors have been focused on human being and their interaction with the organization since long to present-day.

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II. PRESENT STUDY

The Perspective of Bhutan

Bhutan is a small country in the north east of Bhutan imbued with mainly Buddhist philosophy. The government policy of Bhutan is guided by Buddhist values of GNH (Gross National Happiness). As per the policy of GNH, it gives more importance to relatively flatten organizational culture with the small enterprise of industries. It is emphasized with the policy doctrine on the smallness of enterprise as for the maximum benefit of the society. The small-scale enterprise sectors have traditionally been able to provide a favourable environment. Thus, it is a major concern to study the employer-employee relationship and job satisfaction in small enterprises of Bhutan with Hierarchy of employees in small scale industries of Bhutan which are still largely unexplored.

Levels of Employees (Organization Structure)

The success of an organization depends upon its design of organizational structure which encompasses employees at different levels in hierarchical positions with particular accountability and responsibilities. An organization carries out functions to accomplish the desired goals of the organization at various level. The main managerial activities consist of supervision, coordination and task allocation in direction to obtain the objects of the organization. Designing organizational structure is a matter of high- quality decision making. Thus, the success of the organization depends on the appropriate organizational structure to carry out effective levels in hierarchical structures to achieve the goal of an organization effectively. In some organization's structures are vertical with an array of hierarchy or else flatten arrangement with a horizontal structure with little hierarchy or commands of the chain. It is mainly decided with the nature of the organization, size of organization and leadership style.

Size of the Organization

Research studies have shown the association between the organization size and satisfaction of employees at work. Scherer's (1976) research was one of the pioneering studies of organization size and job satisfaction. In 1973 he has used Quality of Employment Survey (QES) and found that low levels of job satisfaction were related to large firms.

From that time only other studies such as Stafford (1980), Kwoka (1980) and Idson (1990) have accepted and given credibility to this

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finding. Future Kwoka (1977) have used QES data and multivariate estimation techniques. Idson (1990) have fallowed QES survey and studied the association between the firm size, work structure, and job satisfaction. Finding shows that strict organizational and control in the work environment of the larger firms resulted in lower levels of job satisfaction.

III. OBJECTIVES OF THE STUDY

The objectives of the studies are as follows;

1. To understand how organization hierarchy and Size of organizations as a moderator effect on organizational climate and employee satisfaction.
2. To explore the psychological empowerment and organizational commitment of employee's satisfaction at different levels in organization hierarchy and size of the organization.
3. To explain the moderator role of Level of employees and size of an organization influencing or effecting organization climate and employee satisfaction in manufacturing industries of Bhutan.

IV. METHODOLOGY

Primary data collection is based on questionnaire methodology for the purpose of testing, explaining, comparing and finding the strength of the relationship between 'Hierarchy of Organization' and the 'size of organization' with the theoretical concepts of Industrial Relations (IR) Practices and Employee Satisfaction (ES) and

Organization Culture (OC). The study is grounded in theory and hypothesizes relationships between the variables.

V. SAMPLE AND SETTING

The data have been taken from nine (09) manufacturing companies of Bhutan: Bhutan Board Products Ltd (BBPL), Bhutan Chemical and Carbide (BCCL), Bhutan Brewery Pvt. Ltd, Pelden Enterprise Ltd, Lhaki Steel Rolling Pvt. Limited, Tashi Beverage Ltd, Ugen Ferro Alloys Ltd., Bhutan Ferro Alloys Limited (BFAL), Bhutan Polythene Company Ltd. The target population consisted of employees representing a wide variety of manufacturing industries in Bhutan and positions typical of Pasaka (Industry Hub) and Phuentsholling city.

VI. TOOLS OF THE STUDY

The questionnaire was developed for the collection of data contains fifty (50) questions on a five (5) point Likert Scale is provided to the respondents at three (3) different levels of the employee such as Management, Supervisory and workmen levels. The questionnaire has been divided into three specific components such as organization Culture, Employee Satisfaction, and Industrial relation practices so as to elicit the opinions and views of the respondent.

VII. ANALYSIS OF DATA

Table. 1 Exploratory Factor Analysis: Rotated Component Matrix^aFactor Loading

Survey Questions	Component		
	1(IR)	2(OC)	3(ES)
HR/IR executives are delegated to look after the employee welfare administration.	.578		
The collective bargaining process is the method to safeguard, protect and improve the employer and employee relationship in the company.	.657 .714		
IR practices are influenced by GNH culture of Bhutan	.544		
Both the management and workers representatives /trade union always prefers amicable settlement of any company disputes/conflicts without conciliation proceedings/adjudication by labour	.748 .749		
Management believes in Win-Win situation in any negotiation/collective bargaining process			
Management is always active for communicating and discussing day to day operational problems/issues with the trade union or workers			
'association/workers' representatives			
You are satisfied with your fellow workers/peer group			
You are satisfied with the amount of variety of work			.726
You are satisfied with the amount of responsibility for work			.782
You are satisfied with your physical working conditions			.442
You are satisfied with the management and workers relation in the company			.437
This industry is considerate towards its employees		.695	

People usually obtain feedback on the quality of work done	.615	
Everything has to be done according to the book	.603	
People are prepared to make a special effort to do a good job.	.491	.417
There is a lot of support for innovative ideas here	.657	
People are highly encouraged to develop their skills	.587	

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations. Reliability of the scales crossed the threshold of .70 The Cronbach alpha of IR is .811 whereas the Cronbach coefficient of ES is .714 and that of OC is .723.

Table. 2

Scale	Cronbach alpha	Industrial Relations (IR) -	.811
		Employee Satisfactions (ES)	.714
		Organization Culture (OC) -	.723

As shown in Table 1, Exploratory Factor Analysis (EFA) was conducted on 50point responses for measuring three

components namely IR, Employee Satisfaction and Organization Culture using the principal component analysis method and varimax rotation in multi-phases. On the basis of Hair et al. (2006) study criterion, factors with Eigenvalues greater than 1.0 and factor loadings that are equal to or greater than 0.50 were retained. EFA gave three (3) factors which were named by the researcher as Industrial Relation practices, Employee satisfaction level, and organization Culture. Dimension IR consists of five (5) items related to IR practices. Similarly, both the Employee Satisfaction and Organization Culture comprise of six items each. Hereafter all the analysis has been carried out on three factors that have been emerged after running EFA

Table. 2 Results of the standardized Regression Analysis for the effects of IR practices.

Coefficients Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
I (Constant)	2.229	.179		12.440	.000
IR	.443	.048	.472	9.144	.000

a. Dependent Variable: OC

The value of OC = .443*IR + 2.229 Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
I (Constant)	1.630	.160		10.190	.000
IR	.530	.043	.583	12.259	.000

a. Dependent Variable: ES In the above table, we find,

P (<0.05)

OC= .443 x IR +2.229 P(<0.05)

ES= .530 x IR + 1.630

We used simple linear regression to test the hypothesis. Here, we have tested for the mediating role of IR on the relationship between Organizational Culture and Employee Satisfaction.

Since mediation requires the existence of a direct effect to be mediated, the first step in the analysis here involved regressing Industrial Relations practices on Organization Culture and Employee Satisfaction. The results presented in the table no.8 shows that organizational Culture is significantly and positively related to Industrial Relations. For every .1 unit of IR, increases correspond with the .443 unit of Increasing of Organizational Culture. Again,



Table (Results)

Employee Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	58	19.7	19.7	19.7
	2	86	29.3	29.3	49.0
	3	150	51.0	51.0	100.0
	Total	294	100.0	100.0	

ANOVA OC

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.202	2	2.101	4.637	.010
Within Groups	131.825	291	.453		
Total	136.027	293			

Descriptive Statistics

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	58	3.9195	.61673	.08098	3.7574	4.0817	2.50	4.83
2	86	3.6492	.72085	.07773	3.4947	3.8038	1.83	4.83
3	150	3.9089	.66543	.05433	3.8015	4.0163	2.00	4.83
Total	294	3.8350	.68136	.03974	3.7568	3.9132	1.83	4.83

In table no.9. It has been found that Employee Satisfaction increases significantly more when IR is applied to OC. The table shows the impact of ES and OC on the type of employees Viz., Management level, supervisory level, and

the workmen level. The impact of OC is highly significant and strong on Management level (mean 3.9195) and also the workmen level (mean 3.9089). There is no significant impact on the supervisory levels of employees.

Analysis

One-Sample Statistics

Employee Type	N	Mean	Std. Deviation	Std. Error Mean
Management OC	58	3.9195	.61673	.08098
ES	58	3.6236	.65454	.08595
IR	58	3.5977	.77172	.10133
Supervisor OC	86	3.6492	.72085	.07773
ES	86	3.4651	.70438	.07596
IR	86	3.4671	.74921	.08079
Worker OC	150	3.9089	.66543	.05433
ES	150	3.5767	.63505	.05185
IR	150	3.7311	.67990	.05551

We ran T-test on the Employee group and found that Management and Workers are most influenced by Organizational culture. Industrial relations effect Workers

most among all the groups. Supervisors are least satisfied among all the groups whereas management is most satisfied. Workers are most influenced among the lot and supervisors are the least.

One-Sample Test

Employee Type	Test Value = 294						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference		
					Lower	Upper	
Management	OC	-	57	.000	-290.08046	-290.2426	-289.9183
	ES	3582.115	57	.000	-290.37644	-290.5485	-290.2043
	IR	3378.623	57	.000	-290.40230	-290.6052	-290.1994
		-					
Supervisor	OC	-	85	.000	-290.35078	-290.5053	-290.1962
	ES	3735.308	85	.000	-290.53488	-290.6859	-290.3839
	IR	3825.067	85	.000	-290.53295	-290.6936	-290.3723
		-					
Worker	OC	-	149	.000	-290.09111	-290.1985	-289.9837
	ES	5339.207	149	.000	-290.42333	-290.5258	-290.3209
	IR	5601.020	149	.000	-290.26889	-290.3786	-290.1592
		-					
		5228.800					

The variables OC, ES and IR are within the mean value and are not significantly different. From the significance value, it can be inferred that all the relationships are statistically significant.

One-Sample Statistics

Employee Type	Company Type	N	Mean	Std. Deviation	Std. Error	Mean
Management	Alloys OC	25	3.7800	.66095	.13219	
	ES	25	3.4667	.78025	.15605	
	IR	25	3.4067	.72342	.14468	
Beverage	OC	4	3.4167	.90779	.45389	
	ES	4	3.0000	.75768	.37884	
	IR	4	2.5000	1.14665	.57333	
Brewery	OC	6	4.4444	.27217	.11111	
	ES	6	3.7778	.31032	.12669	
	IR	6	4.5000	.38006	.15516	
Chemical	OC	8	4.3333	.28172	.09960	
	ES	8	4.0000	.54190	.19159	
	IR	8	3.9792	.37201	.13153	
Furniture	OC	6	3.4722	.34021	.13889	
	ES	6	3.5833	.17480	.07136	
	IR	6	3.2778	.22771	.09296	
Polythene	OC	4	4.1250	.28464	.14232	
	ES	4	3.9167	.55277	.27639	
	IR	4	4.2917	.15957	.07979	



	Steels	OC	5	4.1000	.48016	.21473
	ES	IR	5	3.9333	.22361	.10000
			5	3.5667	.52175	.23333
Supervisor	Alloys	OC ES	38	3.5395	.72331	.11734
	IR		38	3.2281	.68381	.11093
			38	3.1623	.69261	.11236
	Beverage		6	3.2500	.77280	.31549
	OC		6	3.0833	.87401	.35681
	ES	IR	6	3.0000	.67495	.27555
	Brewery	OC ES	9	4.5370	.27358	.09119
	IR		9	3.8519	.36747	.12249
			9	4.5000	.44096	.14699
	Chemical	OC	12	3.5000	.87905	.25376
	ES	IR	12	3.5694	.85416	.24657
			12	3.7083	.64794	.18704
	Furniture		8	3.4583	.47768	.16888
	OC		8	3.4792	.60708	.21464
	ES	IR	8	3.3958	.74502	.26341
	Polythene	OC	5	3.8000	.07454	.03333
	ES	IR	5	3.9000	.09129	.04082
			5	3.8000	.21731	.09718
	Steels	OC	8	3.7917	.50198	.17748
	ES	IR	8	4.0000	.47975	.16962
			8	3.6042	.47088	.16648
Workers	Alloys	OC	65	3.8513	.76042	.09432
	ES	IR	65	3.3538	.68687	.08520
			65	3.6410	.77741	.09643
	Beverage		10	3.4167	.60477	.19124
	OC		10	3.1333	.59732	.18889
	ES	IR	10	3.1167	.63367	.20039
	Brewery	OC ES	15	4.4333	.39741	.10261
	IR		15	3.7000	.45947	.11863
			15	4.2333	.54482	.14067
	Chemical	OC	20	4.0333	.47634	.10651
	ES	IR	20	3.8750	.40057	.08957
			20	4.0250	.51377	.11488
	Furniture		16	3.7604	.65254	.16314
	OC		16	3.7708	.34359	.08590
	ES	IR	16	3.7292	.53359	.13340
	Polythene	OC	8	4.0208	.44040	.15570
		ES	8	3.9792	.51515	.18213

VIII. DISCUSSION

Structure of the Organization

The results of the study have shown that the impact of 'Employee Satisfaction' and 'Organization Culture' varies with the type of employees Viz., Management level, supervisory level, and workman level. However, the impact of OC is highly significant and strong on Management level (mean 3.9195) and also at the workmen level (mean 3.9089). Contrary to this, no significant impact on employee satisfaction and organizational culture on the supervisory levels of employees.

The findings of the study reveal that (i) Levels of employees as a moderator variable is found directly related

with organizational culture and employee satisfaction in manufacturing industries of Bhutan (ii) Size of the organization as a moderator variable is found positively related to positive organization culture and employee satisfaction in manufacturing industries of Bhutan, and (ii) Organizational climate and culture is positively correlated with employee satisfaction at work. Foremost findings indicate that management-employee relationships are less satisfactory in the large firms rather than in small firms.

Among all the small-scale industries, it has been noticed that job satisfaction is very high across the hierarchy of employees. It seems good employee and employer relationship is also resulting in

high job satisfaction in all small-scale industries. Contrary to that, Dunn (1976, 1980) have noticed less worker satisfaction in larger firms. Lower levels of job satisfaction with larger firm sizes were also stated in Britain (Clark, 1996).

In consequence, management-employee relationships are less satisfactory in large organizations than in small organizations. Our observation corroborates the high levels of job satisfaction in small firms with trust relationship among the employer and employee. Undoubtedly, less satisfactory IR (employer-employee) relationships in the large size of organizations are seen due to an observed lower level of job satisfaction in them with distance in employer and employee relationship.

The strong society culture effects found in organizational policy design and competitive advantage of firms tend to be strongly influenced by their societal Buddhist culture (Vajpayee and Chakraborty, 2017) in Bhutan. The results have shown that employees at managerial level and workman level as moderator variables reflecting in a high level of commitment to work, low level of labor turnover and absenteeism, positive beliefs about work, positive work values, attitudes, and norms in all the across all the nine industries of Bhutan (Chakraborty and Vajpayee, 2017).

IX. CONCLUSION

Human factors play a significant role in the manufacturing industries of Bhutan. Across the different types of manufacturing industries (Bhutan Board Products Ltd (BBPL), Bhutan Chemical and Carbide (BCCL), Bhutan Brewery Pvt. Ltd, Pelden Enterprise Ltd, Lhaki Steel Rolling Pvt. Limited, Tashi Beverage Ltd, Ugen Ferro Alloys Ltd., Bhutan Ferro Alloys Limited (BFAL), the structure of organization play an imperative role to uphold positive organizational culture with the good employee and employee relationship.

The study reveals sustenance for the main effects of the associations between employees' (primarily managers) perceptions of organizational commitment, psychological empowerment, and job satisfaction, as well as how the association is moderated by employee's position level in the organizational hierarchy. In the eventual analysis of a successful organization, we have posited that employees of whatever positions they hold at three tier levels such as Management, Supervisor and workmen in any of these manufacturing industries have high satisfaction. Thus, 'organizational hierarchy' act as a moderator variable to create a strong influence on organizational culture and job satisfaction.

The findings of the study reveal that employer and employee's relationship (IR) under GNH culture creates a constructive and pleasant atmosphere in workplace surroundings which have a great impact of HRM/ IR practices in Bhutan. This may be coupled with high job satisfaction and harmonious organization culture and trust relationship among employers and employees which only indicate that Buddhist concept of "Happiness" as envisioned by GNH has been successful in achieving the objectives and purpose of policy doctrine and policy implementation and

declarations of GNH as a development framework in Bhutan (Vajpayee & Chakraborty, 2017 Chakraborty et al, 2017).

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