

Discriminant analysis on the level of role stressors between the public and private sector bank employees

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Abstract

Role stress has become an inevitable part of human life and it makes life more challenging, then the employees cannot concentrate on their work peacefully that creates an unpleasant situation between the employee and work environment which threatens them to deviate from the normal functioning. The present study compares the level of role stressors between the public and private sector bank employees with the help of Canonical Discriminant Analysis. For the purpose of the study, 438 Public sector bank employees and 324 Private sector bank employees were considered from the 6 Municipal Corporations in Kerala through disproportional stratified random sampling method and the researcher selected these samples from top 6 public sector banks and top 6 private sector banks on the basis of banks which is having more than 100 branches in Kerala as per RBI ranking with regards to total number of branches for each banks in Kerala. The study identified that the selected predictor variables of role stressors have direct effect in discriminating the level of role stressors between the public and private sector bank employees. Hence it is concluded from the discriminant analysis that there is a significant difference in the level of role stressors between the public and private sector bank employees.

Keywords: Discriminant Analysis, Role stressors, Public and Private sector bank employees

1. Introduction

Indian banking industry has been an important driving force behind the nation's economic development. Over 100 banks in the public sector, private sector (both old as well as the new generation) and foreign bank contribute to a large network of branches numbering over 50000 and a work force in excess of 1 million. According to Dr. Bimal Jalan former RBI Governor states that "Capital and technology are replicable but not human capital which needs to be viewed as valuable resources for the achievement of competitive advantage". The globalization of banking operations along with technological advancement and continuing deregulation have significantly altered the face and scope of banking. Thus banking industry transform from stereotype and static into dynamic, competitive, knowledge based banking business (Kakoli Sen, 2012) ^[1]. The emerging environment poses both opportunities and threats to human resource in the banking industry. Evidences from existing literature states that more than 75% of bank employees have one or other problems directly or indirectly related to the drastic changes in their working environment. Bank employees experience stress in their day to day life from the highly demanding interactions with the customers that are continuously assessed and monitored by the management and such condition produces repetitive and stressful work role among the employees (Tilottama Azad, 2014) ^[2].

The word Stress is defined as "A state of mental or emotional strain or tension resulting from the adverse and demanding circumstances". According to Beehr & Newman (1978) ^[3] Role Stressors is "A condition arising from the interaction of people and their jobs and characterized by changes within the people that force them to deviate from their normal functioning". It is the strain or the pressure that an employee faces while coping with the incessant and numerous demands or expectations arising from the workplace (Shilpa Sankpal *et al.*, 2010) ^[4]. It

is a harmful physical and emotional response that occurs when there is a mismatch between the job demands and the capabilities, resources or needs of the worker. Each employee will react differently to a given job condition depending upon the one's personality and coping skills. Although the importance of individual differences cannot be ignored but certain working conditions like increase in work intensity, working at high speeds, working against tight deadlines, working very long hours, layoffs, harassment, status in the workplace and finally greater competition and higher expectations creates work stress to most of the employees (Sreelatha, 1991) ^[5]. An article on Stress at Work states that "Every third executive at workplace reports a high level of stress and every fourth employee view his job as the principal cause of stress in his life" (NIOSH, 1999) ^[6].

Role expectation is a kind of stress generated by the conflicting demands from superior, subordinates, peers in the organization and from the customers. This may lead to depersonalization among the employees (Radha. R. Sharma, 2007) ^[7]. Role conflict has been found to be an antecedent of burnout that is being experienced by the employees due to gaps between their organizational needs and customer expectation and it also arises due to which an employee occupies more than one role in the organization (Brief & Aldag, 1976) ^[8]. Role ambiguity is a stressful condition caused by an employee's confusion concerning expectations from the roles and responsibilities in an organization (Low *et al.*, 2001) ^[9] and they will be conducive to the feeling of burnout. When an employee gets promotion, he enters into new role but he faces exhaustion and depersonalization due to lack of experience in new role and in turn causes role stagnation which led to severe role stress (Dov Zohar, 1997) ^[10]. High level of role overload is associated with higher levels of job burnout in which an employee experience an increased work load due to their highly demanding position (Schick *et al.*, 1990) ^[11] in the organization. Employees also

feel emotionally and physically exhausted due to the repetitive nature of work (Stranks, 2005) ^[12] in the organization. Low personal accomplishment from the negative feeling of job performance ultimately creates work tension among the employees (Lusch *et al.*, 1990) ^[13]. Lack of information and resource inadequacy due to the ambiguity in performing the role effectively creates burnout among the employees (Ugur Yavas *et al.*, 2013) ^[14]. All these factors contribute to role stressors with which an unpleasant situation is arising in the process of interaction between employee and work environment that threatens the person to deviate from the normal functioning (Mulki *et al.*, 2007) ^[15].

1.1 Statement of the Problem

The banking industry in India has undergone tremendous changes with increased competition and deregulation and thus placed an enormous pressure which creates role stressors among the bank employees. The nature of job among bank employees is very tedious as it involves the direct customer interaction in all levels (Aswathy *et al.*, 2011) ^[16]. Bankers are facing high stress because of their job, long working hours, excessive work pressure, lack of job autonomy, organizational culture, role conflict, handling demanding customers in bank and due to the lack of management support (Ahmad *et al.*, 2007) ^[17]. Thus role stress has become an inevitable part of human life and it makes life more challenging. The life style of the employees has become very complex, due to which their mental health gets affected. Extreme stress and strain makes changes in the employee's behaviour, attitude, motivations and cognition that may create inevitable consequences with which they interact and can no longer fulfil the active roles that they were playing in the organization (Larson, 2011) ^[18]. Thus in an age of highly dynamic and competitive world, bank employees are exposed to all kinds of role stressors that ultimately creates an imbalance between work and their personal life. Hence the researcher made an attempt to compare the level of role stressors between the Public and Private Bank employees.

2. Objective of the Study

☞ To compare the level of role stressors between the public and private sector bank employees.

3. Methodology of the Study

The researcher conducted the study in Public and Private sector Banks in 6 municipal corporations of Kerala state namely Thiruvananthapuram, Kochi, Kozhikode, Kollam, Thrissur and Kannur. The area of the study consists of 21 public sector banks and 15 private sector banks. For the purpose of selecting the banks, researcher fixed the criteria that the bank which is having more than 100 branches in Kerala as per RBI ranking with regards to total number of branches for each banks in Kerala is considered. Since this study is related to bank employees, such type of ranking given by the RBI is considered to be more appropriate as it describes that top ranked banks have more number of branches and thus they recruit more number of employees. Thus 6 public sector banks and 6 private sector banks were selected for the purpose of the study that fulfils the criteria fixed by the researcher. These selected 12 banks have branches in all 6 municipal corporations in Kerala. The Selected banks are as follows:

3.1 Public Sector banks

State Bank of Travancore, State Bank of India, Canara Bank, Union Bank of India, Syndicate Bank and Indian Overseas Bank

3.2 Private sector banks

Federal bank, South Indian Bank, Catholic Syrian Bank, Dhanalakshmi Bank, HDFC Bank and ICICI bank

The study population of employees of selected banks from 6 municipal corporations in Kerala is 24655 and for the purpose of the study banks are divided into two strata which constitute 14301 bank employees from 6 selected public sector banks and 10354 bank employees from 6 selected private sector banks. The number of employees are large in number, hence the researcher decided to take the sample of 762 respondents from the study population by adopting the Krejcie and Morgan (1970) ^[19] table at a confidence level of 95 % and 3.5% margin of standard error. The sample size of each bank is determined on the basis of proportion of its population towards the predetermined sample size of 762 that includes 438 Public sector bank employees and 324 Private sector bank employees and the researcher considered these samples equally from 6 municipal corporations in Kerala which constitutes 127 bank employees as samples of the study from each municipal corporation. Thus the sampling technique adopted for the study is disproportional stratified random sampling method.

The researcher collected the primary data from the public and private sector bank employees with the help of structured questionnaire and the Cronbach's alpha for the role stressors scale is 0.87 that indicates an acceptable reliability of the questionnaire. Thus this study is descriptive as well as empirical in nature in the context of perception of bank employees towards role stressors. Hence the present study compares the level of role stressors between the public and private sector bank employees with the help of Canonical Discriminant Analysis.

4. Results and Discussion

Discriminant Analysis

Discriminant Analysis is a statistical technique that satisfies the difference between two or more groups with respect to several variables simultaneously and provides a means of classifying any object or individual into the group with which it is closely associated and to infer the relative importance of each variable used to discriminate between the different groups. A linear Discriminant function is the linear combination of predictor variables weighted in such a way that it discriminates among groups with least error (Gabriel Ogunmokun *et al.*, 2005) ^[20]. In this study it is used to compare the level of Role Stressors between the Public and Private sector bank employees. The predictor variables considered for the study are Role expectation (X_1), Role conflict (X_2), Role ambiguity (X_3), Role stagnation (X_4), Role overload (X_5), Repetitive work (X_6), Resource inadequacy (X_7) and Work tension (X_8). Thus this study formulates the hypothesis as:

H₀₁: *There is no difference in the level of role stressors between the public and private sector bank employees.*

Table 1: Box's M Test Results for suitability of data

Box's M		703.840
F	Approx.	19.328
	df1	36
	df2	1631730.685
	Sig.	.000

Tests null hypothesis of equal population covariance matrices.
 Source: Computed from the Primary Data

The table 1 shows the Box's M Test Results for suitability of data for the Discriminant analysis, the significant F value .000 indicates the suitability to proceed with the analysis.

Table 2: Tests of Equality of Group Means

Variables of Role Stressors	Wilks' Lambda	F	df1	df2	Sig.
Role Expectation	.360	31.785	1	760	.000
Role Conflict	.496	22.923	1	760	.002
Role Ambiguity	.399	12.487	1	760	.000
Role Stagnation	.619	16.390	1	760	.012
Role Overload	.427	10.056	1	760	.000
Repetitive Work	.530	23.382	1	760	.011
Resource Inadequacy	.489	13.109	1	760	.001
Work Tension	.478	17.118	1	760	.000

Source: Computed from the Primary Data

Wilks' lambda is the ratio of the within-groups sum of squares to the total sum of squares. Wilks' lambda is very small for role

expectation (.360) and role ambiguity (.399) which means that there is a strong group difference between the public and private sector bank employees. The mean values of role expectation and role ambiguity are significantly different between the two groups. Wilks' Lambda for role overload (.427), work tension (.478), resource inadequacy (.489), role conflict (.496), repetitive work (.530) and role stagnation (.619) is comparatively high because there is no much difference in their mean values between the public and private sector bank employees. The F statistic is a ratio of 'between-groups variability' to the 'within-groups variability'. The value of F ratio with respect to degrees of freedom is very significant which is indicated in the significance value. The significance value of all eight predictor variables of role stressors is less than 0.05 indicates that there exists a significant difference in the level of role stressors between the public and private sector bank employees. The above two facts explain that the present segmentation is right and there exists a significant group difference.

Table 3: Eigen value and Canonical Correlation Analysis

Eigen value	% of Variance	Cumulative %	Canonical Correlation	Wilks' Lambda	Chi-square	Sig.
2.315 ^a	100.0	100.0	.816	.352	122.184	.000

a. First 1 canonical discriminant functions were used in the analysis.

Source: Computed from the Primary Data

The Eigen value is the ratio of 'between-groups sum of squares' and 'within-groups sum of squares'. The largest Eigen value corresponds to the maximum spread of the groups' means. Small Eigen accounts for very little of the total dispersion. The Eigen value for the discriminant function is 2.315 that indicates an evidence for a strong function and explains maximum spread of role stressors between the public and private sector bank employees. For the two groups, one discriminant function is formed and there will be one canonical correlation. The canonical correlation is a tool used to measure the relationship between discriminant function and the two groups. The canonical correlation between the discriminant function and the two group is very high which is 0.816, indicates that the function have strong relationship with the role stressors and the two groups. Wilks' lambda for the overall discriminant function is 0.352 which indicates that the group means of role stressors are different between the public and private sector bank employees. A chi-square transformation of Wilks' lambda is used along with the degrees of freedom to determine the degree of significance. The significance value for the discriminant function is .000 which is less than 0.05 indicates that group means of role stressors differ significantly between the public and private sector bank employees.

Table 4: Canonical Discriminant Function Coefficients

Variables of Role Stressors	Function
	1
Role Expectation	.495
Role Conflict	.071
Role Ambiguity	.386
Role Stagnation	.013
Role Overload	.236
Repetitive Work	.049
Resource Inadequacy	.125
Work Tension	.184
(Constant)	4.813
Unstandardized coefficients	

Source: Computed from the Primary Data

Table 4 shows the Canonical Discriminant Function Coefficients which are estimated to discriminate the level of role stressors between the public and private sector bank employees and these unstandardized coefficients are used to create the discriminant function in the form of equation like,

$$D = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_8X_8$$

Where

D = Discriminant Function;

a = Constant;

b = Unstandardized beta coefficients of each variable and

X₁, X₂, X₃..... X₈ are the eight predictor variables of role stressors used in the study. Thus the discriminant function for the level of role stressors between the public and private sector bank employees is formulated as follows:

$$D = 4.813 + (.495 \times \text{Role Expectation}) + (.071 \times \text{Role Conflict}) + (.386 \times \text{Role Ambiguity}) + (.013 \times \text{Role Stagnation}) + (.236 \times \text{Role Overload}) + (.049 \times \text{Repetitive Work}) + (.125 \times \text{Resource Inadequacy}) + (.184 \times \text{Work Tension})$$

The discriminant function coefficient indicates the partial contribution of each variable to the discriminant function. It is used to assess the unique contribution of all eight predictor variables of role stressors to the discriminant function. It is identified that the unstandardized beta coefficients of each variables of role stressors are positive and which explains that all the eight predictor variables have direct effect in discriminating the level of role stressors between the public and private sector bank employees. It also revealed that the role expectation (.495) and role ambiguity (.386) are the highest factors that discriminate the level of role stressors between the public and private sector bank employees. The other variables such as role overload (.236), work tension (.184), resource inadequacy (.125), role conflict (.071) and repetitive work (0.049) are the other factors that discriminate the level of role stressors between the public and private sector bank employees. The least factor that discriminate the level of role stressors between the public and private sector bank employees is role stagnation (.013).

Table 5: Classification Result

		Type of Bank	Predicted Group Membership		Total
			Public	Private	
Original	Count	Public	399	39	438
		Private	22	302	324
	%	Public	91.1	8.9	100.0
		Private	6.8	93.2	100.0
a. 91.6% of original grouped cases correctly classified.					

Source: Computed from the Primary Data

The extent of correct classification table measures the degree of success of the classification on the basis of type of bank. The number and percentage of cases correctly classified and misclassified are displayed in the table 5. Among the public sector bank employees, 399 out of 438 cases or 91.1 percent of them are correctly classified and only 39 cases or 8.9 percent of them are misclassified. Among the private sector bank employees, 302 out of 324 cases or 93.2 percent of them are correctly classified and only 22 cases or 6.8 percent of them are misclassified. From this, it can be clearly identified that the segmentation of bank employees based on the type of bank is correct by 91.6 percent. Hence the hypothesis is rejected and it is inferred that there is a significant difference in the level of role stressors between the public and private sector bank employees.

5. Conclusion

The consequences of role stressors are unavoidable between the public and private sector bank employees. The study highlighted that role stress among bank employees occur mostly due to excess of work pressure and spending much time

directly with the customers creates an unpleasant situation between the employee and work environment that threatens them to deviate from the normal functioning. It is revealed that the role expectation and role ambiguity are the highest factors that discriminate the level of role stressors between the public and private sector bank employees. The other variables such as role overload, work tension, resource inadequacy, role conflict and repetitive work are the moderate factors that influence in contributing the discriminant level of role stressors between the public and private sector bank employees. The least factor that discriminate the level of role stressors between the public and private sector bank employees is role stagnation. It is also identified that all the eight predictor variables of role stressors have direct effect in discriminating the level of role stressors between the public and private sector bank employees. Hence it is concluded that there is a difference in the level of role stressors between the public and private sector bank employees.

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