

# Role of Analytics in a Communication and Data Driven World

Venkatasubramanian.T  
Amrita School of Business, Coimbatore  
Amrita Vishwa Vidyapeetham  
Amrita University  
India  
venki51mba@gmail.com

Priyadarshini R G  
Amrita School of Business, Coimbatore  
Amrita Vishwa Vidyapeetham  
Amrita University  
India  
rg\_priyadarshini@cb.amrita.edu

**Abstract**—Today we have a data driven and a world of extensive communication. The extent of data used in organizations to make decisions have grown exponentially. Business models are being changed and people dynamics have changed significantly due to high scale digital platforms and evidence based decision making. Organizations are hence using extensive linear and non-linear modelling to figure out what -if causes of organizations in a communication driven world. Human Resources form one of the most important assets of an organization. Indian retail sector has gone through lots of transformation. Managing workforce in retail sector is a huge challenge. When we analyze the work force of this retail sector we find that there is shortage of skilled labors and high attrition around 50-60%. Continuous recruitment and skill training is needed due to high attrition. Attrition also happens because of retirement, resignation and involuntary reasons. When well-trained employees leave the organization, it creates a vacuum and it takes huge cost to refill the same position. Multiple factors are affecting these issues and it is important for organizations to place adequate emphasize on the same. This study deals with identifying the factors that affect attrition in retail industry using Herzberg motivation theory in a retail chain catering too

**Index Terms**—*Analytics, Communication driven corporates, Data driven organizations, Evidence based decision making*

## I. INTRODUCTION

2016 data reveals that India ranks second in Retail potential. Retail industry is recognized to have high potential in the coming years (AT Kearney, Chicago). Retail sector in India are of two types: Organized and unorganized retail sector. Organized retail referred to trading done by licensed retailers

Eg: Pantaloons. Unorganized retailers referred to traditional low cost retailing Eg: Kirana stores. Organized retail has started very late in India. Retail companies today are facing a huge challenge in recruiting and retaining talent in organized retail stores. Attrition results mostly due to poor organizational policies or due to personal reasons. If the employees leave the organization, it creates a gap that requires huge effort for Human resources to recruit the new talent with skills as previously worked.

With attrition being the issue, companies are coining up with various business models to retain the resources. Attrition in retail may be due to Voluntary or involuntary reasons. Involuntary attrition happens due to lack of adequate business in the organization or disciplinary or performance issues of employees. Voluntary attrition happens when employees leave the organization on his own discretion. Attrition mostly caused due to a situation that employee gets detained or reduces his tie with the organization. Attrition varies from sector to sector. According to experts, Organized and Unorganized retail employs around 40 Million people, out of which nearly 85% are nearly front end sales people. Front end sales people plays a huge role in organization effectiveness and it is seen that it is at this level that attrition is high. The need of these employees varies and differs as per their age group and the tier of city they work. In retail sector, each and every employee has different impact on customers. Since they deal with customers directly their attitude, the way they respond to customers impact a lot on revenue to organization. The way these employees handles customers shows how loyal these employees are towards the particular retailer. Companies are spending a lot in training, giving good compensation and much more to increase company profit. The resultant of low

motivated employees lead to absenteeism, unmotivated handling of customers and finally leads to voluntary attrition.

## II. LITERATURE REVIEW

### A. Attrition

Work attrition is also called as employee turnover, where employee quits the jobs and they needs to be replaced by any other workers. Attrition in Retail industry is very high due to the following factors: Pay benefits, Opportunity for advancements, Age of workers and Personal fulfilment. Sneha Mankikar (2013) discusses Infant attrition which is another type prevalent in IT industry where employee quits within the 6 months of joining or probation period. There are many factors which contributed to infant attrition but some are Job description discrepancy, Organization culture, Stress, Employee discrimination, etc.[1]. According to Henry Ongori (2007) sources of turnover are based on 2 factors job related and organization related factors [2]. Job related factors are job related factors that affect attrition, one of which being Role ambiguity. Other factors include inadequate information on how to perform and uncertain performance evaluation methods.

This leads to less involvement, less commitment and less satisfaction that ultimately leads to quitting the organization. Organization related factors may be related to organizational instability pay and career opportunities and the like. Organization should have good communication with its employees. Costly et al. (1987) point out that high turnover means organization has poor recruitment policies, poor supervisory policies, poor grievances, lack of motivation which makes employee to quit. Griffeth et al. (2000) says the pay and pay related variables have a huge effect on turnover. When an employee is not paid for what he has performed he will get frustrated and quit the organization [3]. Gayatri Negi. (2013) explain that Attrition is inevitable in any organization. Intrinsic factors are equally important than extrinsic factors while controlling attrition [4]. Hannay & Northan (2000) discuss that it has become a need for organization to retain employees. Retention policies has to be coined by organization incorporating attractive package, benefits to build loyalty and commitment and Developing future opportunities for employee career growth [5]. Firth et al (2003) says that Job stressors like huge workload, Job uncertainty lead to chain of psychological stress which lead to quitting the job. He says that the only way to solve this problem is to have good relationship with supervisors and subordinates. By doing this lead to not only decrease stress, but also increase job satisfaction and commitment to the organization [6]. Govaerts et al (2011) explains that retaining employees can be done by giving the learning opportunity to them. It reduces attrition. Age is also the principal factor behind employee retention [7]. Priya(2011) discusses that gender plays a huge role in retail attrition, since male employees are in dominant numbers compared to female employees. It is found that dissatisfaction among male employees is the dominant reason for high attrition [8]. Almas (2014) has expressed that Indian retail need creative HR practices to solve high attrition and retain

employees. The research suggested attractive compensation the form of salary, bonus, Vacations, and Insurance gives immense satisfaction to the employees [9]. Ravindra (2013) suggested that organizations need to have good relationship with employees both transactional and emotional. IqraSaeed (2014) said that job satisfaction and turnover intention have negative relationship, which means organization with high job satisfaction have less attrition [10]. Mathieu and Zajac (1990) suggested that Organizational commitment have negative relationship with Attrition. Organizational commitment is the way that employee has positive relationship with organization. Sudeer (2006) suggested that lack of job satisfaction and commitment leads to high attrition [11].

### B. Factors affecting Attrition

HaridasP.K (2016) has done an analysis with sample of 381 IT employees to find the factors that affects attrition. Based on the research it was found that attrition has significant and negative relationship with job satisfaction. Pay, supervision and nature of job are major contributors of Kerala IT employee's attrition. Employee who has less job satisfaction are likely to leave the organization [12].

Heather D. Ponsano (2013) has done an analysis with a sample of 11,000 retail employees in United States to find the relationship between commitment, attrition, Job satisfaction and Training methods. He found the following conclusions.

1. There is significant relation between Job satisfaction and attrition in retail organization.
2. There is weak relation between Training methods and Job satisfaction
3. There is weak relation between Training methods and attrition rates.
4. There is significant correlation between Job satisfaction and Commitment.

According to him, organizations have to identify the factors affects satisfied employed and commitment to decrease attrition [13].

Priya Gupta & Alamelupriya R (2013) studied a Retail firm in Bangalore to identify the factors that affect attrition. They have used Herzberg two factor theory to relate Job satisfaction with attrition and found it's significant. According to research, organizations have to concentrate to increase the satisfaction among the workers which in turn will decrease the attrition. If organizations concentrate on factors include trust on colleagues, staff support, optimistic boss and reward for achievements that can increase the satisfaction level of the employees [14].

### C. Job satisfaction

Manisera et al (2005) has done an analysis with on a sample of 2066 workers got from 220 Italian social service sectors. The data perfectly reveals that Job Satisfaction has two main factors Hygiene factors and Motivation factors. Research is based on Categorical Principal Component Analysis (CATPCA). This revealed that Herzberg's two factor theory

resulted in quantitatively divide hygiene and motivation factors[15].

Teck-Hong (2011) has used Herzberg's theory to identify the factors that related to job satisfaction in sales personnel at Malaysia. He found that Hygiene factors dominated motivation factors. Working conditions is the main predictor of job satisfaction. The questionnaire used by them was adopted in the current research for measuring Herzberg's Motivation and Hygiene factors [16].

#### D. Herzberg Two factor theory

Herzberg theory is being used in this study to identify the factors that affect attrition with the help of job satisfaction. Herzberg (1960) coined this theory with a belief different from the approach to view Job satisfaction and Job Dissatisfaction as opposite end in the same continuous sequence. According to the researcher there are two factors hygiene and motivation factors. Hygiene factors prevent dissatisfaction and does not lead to satisfaction. Motivators are the real factors that motivate employees.

#### E. Three Component Model of commitment

John Meyer and Natalie Allen developed their Three Component Model of Commitment.in 1991.According to this publication there are three components.

- 1) Affective commitment: It occurs when the employee feels there is a strong attachment towards organization.
- 2) Continuance commitment: It occurs when the employee feels there is huge loss that he/she has to face after leaving the organization.
- 3) Normative commitment: It occurs when there are several other factors which make the employee to stay in organization. It may be Brand loyalty or someone have instructed.

### III. HYPOTHESIS DEVELOPMENT

H1o: Attrition factors doesn't differ with different age groups

H1a: Attrition factors differs with different age groups

H2o: There are no prominent motivation factors that affect attrition

H2a: There are prominent motivation factors that affect attrition

H3o: There are no prominent hygiene factors that affect attrition

H3a: There are prominent hygiene factors that affect attrition

H4o: There are significant relation between Affective commitment and attrition

H4a: There is significant relation between Affective commitment and attrition

H5o: There are significant relation between Continuance commitment and attrition

H5a: There is significant relation between Continuance commitment and attrition

H6o: There are significant relation between Normative commitment and attrition

H6a: There is significant relation between Normative commitment and attrition

### IV. CONCEPTUAL FRAMEWORK

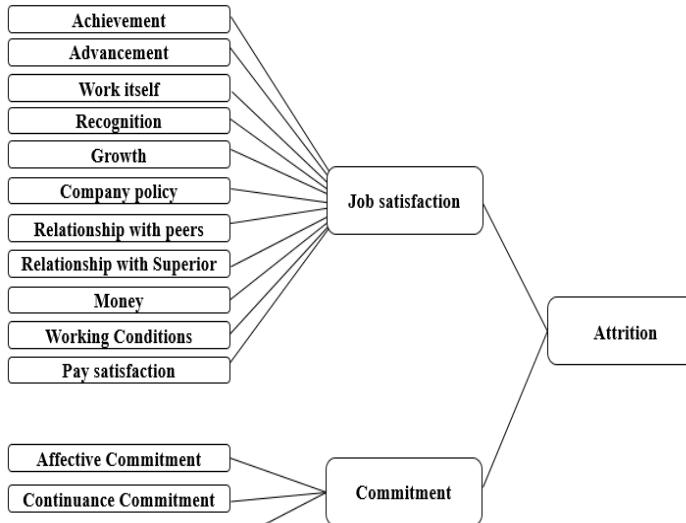
We have borrowed Theory of two factor theory often called Herzberg motivation theory to relate attrition and job satisfaction. Based on the above research we also have found that age is a principal factor that differentiates various factors that affect attrition.We have found that front end sales people has much more attrition as compared to other people in retail organization. This study concentrates much more on sales people. Since our study is precisely on motivation/hygiene factors and attrition we have enquired about satisfaction with works and other aspects that could be reason for attrition.

TABLE I

CLASSIFICATION OF INDICATORS

MOTIVATION FACTORS	HYGIENE FACTORS
Achievement	Company policy
Advancement	Relationship with peers
Work itself	Relationship with supervisor
Recognition	Money
Growth	Working conditions
	Job Satisfaction
	Love of Money
	Pay satisfaction

### V. CONCEPTUAL MODEL



FigI: Conceptual model

Job satisfaction factors	Number of Questions	Cronbach's Alpha
Achievement	3	.719
Advancement	2	.720
Work itself	3	.719
Recognition	3	.714
Growth	3	.716
Company policy	3	.717
Relationship with peers	6	.722
Relationship with Superior	3	.722
Money	2	.710
Working Conditions	2	.715
Job satisfaction	4	.719
Pay satisfaction	3	.713
Affective Commitment	8	.715
Continuance Commitment	8	.700
Normative Commitment	8	.704

## VI. METHODOLOGY

In this study 191 responses were recorded from sales employees in a retail store at a tier-3 city. The questionnaire was generated by using Herzberg two factor theory scale and three model of commitment scale. Initially questionnaire was in English and it is converted to their native language and questionnaire is floated with hardcopy. The questionnaire includes series of statements and respondents were asked to rate their agreement from strongly disagree to strongly agree. For Herzberg two factor theory 5-point scale is being used. For three model of commitment scale 7-point scale is being used.

Linear regression analysis is being used to identify the factors that affect job satisfaction in retail and how it differs with age groups. We also have identified the level of employee's commitment towards the organization.

Anova is being used to identify how the factors differs with age groups. For each factor, certain number of questions were asked and their mean contribute to that factor. Job satisfaction was measures using four items from Klassen et al. (2010)

## VII. ANALYSIS

A reliability test was performed to check the consistency and the accuracy of the scale. TABLE-II shows Cronbach's coefficient which is in the range between 0.704 and 0.719. As suggested by Cronbach (1951) and normally the coefficient should be between 0.7 and 0.9. From this we found the data are internally consistent.

TABLE II  
CRONBACH'S COEFFICIENT ALPHA

Table-III give the profile of the respondents in terms of Gender, Age, Salary, Years of Work experience. Out of 190 respondents, Gender variation shows male contributes 58.9% and Female contributes 41.1%. In case of years of experience respondents who had worked more than 2 years contribute 79.5%. In case of age most of sales persons are in around 18-28 years of age who contribute 48.9% and next group is 29-39 years who contribute 33.2%. There were few people who contribute in the range of 40-50 years of age.

TABLE III  
CHARACTERISTICS OF RESPONDENTS

Respondents Characteristics	Respondents	Percentages
Gender		
Male	112	58.9
Female		
	78	41.1
Years of Working Experience		
0-6 months	12	6.3
6 months to 1 year	11	5.8
1 year to 2 year	16	8.4
>2 years	151	79.5
Salary range		
<5000	36	18.9
5001-6000	56	29.5
6001-7000	35	18.4
7001-8000	26	13.7
8001-9000	26	13.7
9001-10000	8	4.2
<10000	3	1.6
Age		
18-28	93	48.9
29-39	63	33.2
40-50	31	16.3
<50	3	1.6

Regression analysis was done to determine the relation between Herzberg two factor theory and Job satisfaction. To check whether regression analysis suffered from Multicollinearity we have checked the Variance inflation

factor. As shown in the Table-IV and Table-VVIF should be less than 5 which indicate that there is no multicollinearity in this problem.

TABLE IV

REGRESSION ANALYSIS (DEPENDENT VARIABLE: JOB SATISFACTION)

Based on Herzberg theory	B	Sig.	VIF
Achievement	.184	.011	1.770
Advancement	.006	.937	1.936
Work itself	.209	.017	2.033
Recognition	.073	.293	2.730
Growth	.127	.093	2.371
Company policy	.115	.169	2.187
Relationship with Superior	.050	.488	1.558
Money	.151	.006	2.360
Working Conditions	.404	.000	2.995
Pay satisfaction	.056	.344	2.433

TABLE V

REGRESSION ANALYSIS (WITH RESPECT TO TCM SCALE)

Factors	Coefficients(B)	Sig.	VIF
Affective Commitment	.007	.710	1.282
Continuance Commitment	.026	.001	1.291
Normative Commitment	.029	.004	1.357

The result based on Regression analysis (Shown in Table-VI) suggest that 58.6% of Job satisfaction can be explained by Herzberg's motivational and hygiene factors-ratio was 19.450 and P value is '000' which says the model is significant.

TABLE VI

REGRESSION ANALYSIS MODEL

Model Summary for Job Satisfaction					
Model	R	R Square	F Change	Sig.	
Job satisfaction	.766	.586	16.148	.000	
Dependent Variable: Job satisfaction					

### VIII. RESULTS AND DISCUSSION

#### A. Results

Based on the analysis we could see in Table-VII that Achievement and Work itself in Motivation factor are significant with Job satisfaction. Money, working conditions

are Hygiene factors significant with Job satisfaction. So, we reject Null hypothesis and say that there are prominent hygiene factors and motivation factors which affect Job satisfaction

TABLE VII

REGRESSION ANALYSIS RESULT (BASED ON HERZBERG THEORY)

Factors	Coefficients(B)	Sig.
(Constant)	.910	.002
Achievement	.194	.004
Work itself	.201	.010
Money	-.130	.005
Working Conditions	.515	.000
Dependent Variable: Job satisfaction		

Table-VIII shows how commitment scale factors are in relation with Job satisfaction. Based on regression analysis we could see that Continuance and Normative commitment are in relation with job satisfaction.

Based on analysis using ANNOVA we could check whether attrition factors differ with different age groups. We found that attrition factors are not differing with different age factors (since P value is greater than 0.05). From the analysis, we can reject alternate hypothesis and accept null hypothesis which says there is no difference in factors that affect attrition with age groups.

TABLE VIII

REGRESSION ANALYSIS RESULT (WITH RESPECT TO TCM SCALE)

Factors	Coefficients(B)	Sig.
(Constant)	1.657	.000
Continuance Commitment	.026	.001
Normative Commitment	.029	.004
Dependent Variable: Job satisfaction		

#### B. Discussion

This paper examines what are the factors that affect attrition in retail with respect to Herzberg two factor theory and TCM scale. The results reveal that four out of eleven determinants had significant relationship with job satisfaction. As per commitment, Normative and Continuance are significant with job satisfaction. The reasons for four determinants are as follows

- 1) Working Conditions: Employees in the retail organization experience comfortable working conditions since retail outlets in organized sector are fully air-conditioned, have music playing and sales people make entire location deemed to be comfortable

- 2) Work itself: Employees in the retail organization, especially sales employees experience a vibrant atmosphere to deliver their service to customers
- 3) Money: Employees in the retail organization, especially sales employees have their performance linked with distinct monetary rewards and incentives
- 4) Achievement: Employees in the retail organization, especially sales employees experience their service delivery recognized by higher authorities. Since they show their positive attitude directly with customers while selling

With respect to the relationship of Organizational commitment with job satisfaction, the factor Affective commitment is not significant since sales employees perhaps do not have true personal commitment with the organization. Human resources have to build a good relation with them in order to bring service to next level. Normative commitment is very significant with job satisfaction since they show Brand loyalty towards the retail organization. Continuance commitment is very significant since their earning capacity is very low and they may be single earning person in the family. Opportunities outside are very less since retail outlets in India are getting organized very late.

## IX. CONCLUSION

In tier 3-cities the sales people in retail stores faces attrition which is analyzed using Herzberg's two factor theory and Job satisfaction. Sales people emphasize much more on Hygiene factors as compared to motivation factors. Retail stores in tier-3 cities while designing the reward system, they have to consider four factors Achievement, Money, Working Conditions and Work itself. As far as retail organization in Tier-3 cities we found Normative and Continuance commitment are the commitment factors that organization has to concentrate in order to reduce attrition. There 4 factors help organization in improving productivity, Job satisfaction and performance of sales people. We also found that which of their Hygiene or motivational factors differs with different age groups. Every retail organization have to be very careful about attrition.

Job satisfaction surveys has to be run and hygiene and motivation factors are found. Immediate remedies are found to curb the attrition. The supervisors have to identify the internal factors in that are looked through hygiene theory and factors that help in satisfaction.

## X. LIMITATION

Questionnaire that is used are available in English and due to native language people, who work as sales people in retail stores, we have converted all the questions their native language. It is being assumed that everyone had answered the questionnaire with honest and accurate. The findings apply only to Tier-3 city retail store. In future if time permits we have planned to extend the research by increasing factors to employee confidence, feedback, and leadership styles.

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