

Mediation of Employ Satisfaction in The Influence of Employee Motivation on Organizational Excellence

Sony Kumariⁱ, Raghavendra Suresh Bendigeriⁱⁱ ✉ ,
Mukund Chandra Mehtaⁱⁱⁱ, and Lakshmi Narayan Bhagat^{iv}

Received: 22 December 2020

Final Revision: 05 March 2021

Accepted: 06 April 2021

 [10.52283/NSWRCA.AJBMR.20210601A03](https://doi.org/10.52283/NSWRCA.AJBMR.20210601A03)

Abstract

The aim of this study is to introduce the concept of organizational excellence, conceptualised only in 21st Century, in organizational studies and its relationship with employee motivation and employee satisfaction in the case of an Indian public sector organization in coal sector. The study is based on primary data collected from 50 sample respondents (i.e. executives) using well-structured questionnaire of Likert type. The cross – sectional Likert scale prepared for each of 50 respondents, as per the respondent's perceptions revealed towards employee motivation, employee satisfaction and organizational excellence, and used for further statistical analysis. The standard statistical methods like regression, t-test, F-test and Sobal test used for testing the inter – relationships between the variables and testing the presence & significance of mediation effect. Empirical findings confirming significantly positive association between employee motivation, employee satisfaction and organizational excellence and mediation effect of employee satisfaction in explaining the relationship between employee motivation and organizational excellence provides extension in the existing knowledge in the field of organizational studies and fulfils the research gap that existed in the coal sector. The validation of organizational excellence scale in the Indian context may also be considered as a noble attempt in this field. Limitations and suggestions for further researches also indicated.

Keywords: Employee Motivation, Employee Satisfaction, India, Mediation, Organizational Excellence, Validation.

Introduction

Human resources are utilised to the maximum possible extent, in order to achieve individual as well as organizational performance. The resulting increase in production, productivity and commitment depends on the quality of motivational activities and facilities made available to the employees by the organization (Malina & Selto, 2001; Carmeli, 2005; Mohsan et al., 2011) and is also proportional to the level of satisfaction (Judge & Hulin, 1993; Khanna, 2017). While examining the impact of motivational activities on the organizations Kumari has observed that motivational activities and facilities have resulted in overall achievements of the organization

ⁱ Ph.D. Scholar, University Department of Commerce and Business Management, Ranchi University, Ranchi, India,

ⁱⁱ Associate Professor, Oriental Institute of Management, Navi Mumbai, India.

✉ raghavendra.bendigeri@gmail.com (Corresponding Author)

 <https://orcid.org/0000-0002-1712-8604>

ⁱⁱⁱ Associate Professor, University Department of Commerce and Business Management, Ranchi University, Ranchi, India,

^{iv} L. N. Bhagat, Retd. Professor, University Department of Economics, Ranchi University, Ranchi & Former President, Association of Indian Management Schools (AIMS), India

(Kumari, 2018, p.40). Khalaf and others have noted that for the success of any organization, it is essential that the human resources of that organization are treated well and most importantly are satisfied. A satisfied and engaged employee is not only productive but serves to be a great asset for an organization (Khalaf et al., 2019, p.16).

This study is underpinned by the existing researches in this field. Ali and others examined the impact of motivation on employee performance job satisfaction in IT park sector and explored that motivation plays an important role toward the performance of employees and job satisfaction in the IT Park (software house) sector of Peshawar, Pakistan (Ali et al., 2016). Kumari has recently examined the role of motivational practices in determining employee motivation and its impact on job satisfaction in an Indian public sector organization. The Empirical results indicated that motivational activities directly affect employee motivation and indirectly affect job satisfaction through employee motivation and concluded that motivation is an important antecedent of job satisfaction (Kumari, 2021, p.500). Kumari and others have identified six factors determining employee satisfaction and examined their relative importance. The results revealed that all factors are important, however, pay & perks emerged as the most important factor. Group of factors consisting of 'pay & perk', 'career & development' and 'welfare facilities' is relatively more affective than the group of factors consisting of 'company', 'job' and 'work life & culture' (Kumari et al., 2020). Many such studies appeared on employee satisfaction and its correlates. But no attempt has so far been made in examining the relationship between employee satisfaction and organizational excellence- a new concept emerged in 21st century. Few researchers have, however, attempted to examine the impact of employee satisfaction on organizational performance, organizational effectiveness and overall success of the organization (Freeman, 2005; Sageer, 2012; Abdul et al., 2017; Barik & Nayak, 2018).

Kumari and Bhagat has, however, made an attempt to measure organizational excellence in Indian context (Kumari & Bhagat, 2020). Mangaraj and Patra (2017) have considered employee satisfaction as one of the variables in examining the relationship between employee satisfaction, organizational effectiveness and employee commitment and observed that employee commitment mediates the relationship between employee satisfaction and organisational effectiveness. But only causal relations examined; presence and significance of mediating effect remained unentertained. In a recent study Kumari and Bhagat (2020) have made an exploratory study of determining the relationship between employee motivation, employee satisfaction & organizational excellence.

They have identified employee motivation as mediator in influencing the relationship between employee motivation and organizational excellence. Direct and indirect effect of employee motivation in determining organizational excellence examined but the testing the presence and significance of indirect effect i.e. mediating effect has been left for future researches.

There was a need of integrated effort in examining such organisational issues. The present study has, therefore, been undertaken to examine systematically the relationship between employee motivation, employee satisfaction and organisational excellence and related matters including the test of presence and significance of mediation effect. This study shall be helpful for decision makers in organization in formulating the strategies for increasing employee motivation and employee satisfaction to achieve the desired level of organisational excellence.

The Concepts of Key Variables

Employee Motivation

The term motivation has been derived from the word 'motive'. A motive is an inner state that energizes, activates or moves and directs or channels behaviour towards goal (Berelson et al., 1964). Viteles (1953) has noted that motivation is a process that starts with a physiological or psychological deficiency or need that activates behaviour or a drive that is aimed at a goal or incentive. Motivation represents an unsatisfied need which creates a state of tension or disequilibrium, causing the individual to move in a directed pattern towards restoring a state of equilibrium by satisfying the need. Thus motivation is the act of stimulating someone or oneself to get desired course of action, to push right button to get desired reactions. It is the most essential part of the work life of an employee. It inspires individuals for putting in their efforts towards the attainment of the organizational goal.

Employee motivation is a critical aspect at the workplace which leads to the performance of the department in particular and the organization in general. It is the responsibility of the management to motivate the employees because it allows management to achieve the organization's goal. If the organization fails to motivate the employees at the workplace, it may lead to very risky position. Thus employee motivation provides the method of motivating employee and defined as an intrinsic and internal drive to put forth the necessary effort and action towards work related activities (Paul, 2017). Bhat (2018) defined employee motivation as 'the enthusiasm, energy level, commitment and the amount of creativity that an employee brings to the organization on a daily basis. Employee motivation is all about how engaged an employee feels in tandem to the organization's goals and how empowered he/she feels'.

Employee motivation is highly important for every organization due to the benefits that it brings to the organization namely increased employee commitment, improved efficiency and improved status of organizational excellence.

Employee Satisfaction

Employee satisfaction is a measure of how happy the workers are with their job and working environment. According to Nancy (1977) 'Satisfaction refers to the level of fulfilment of one's need, wants and desires'. Trombetta and Rogers (1988) have noted 'when employees were happy they wanted to be a part of their company inside and outside the work. They want to provide input, share concerns and give advice. Unhappy employees simply want to do their job and then go home and forget about work'. Schneider and Babby (1994) indicated that employee satisfaction refers to the positive emotion employees feel after evaluating their work situation. Jerald and Robert (1995) and Armstrong (2004) are of the view that employee satisfaction refers to the general attitude of the employees towards work and that it reflects a person's work cognition, emotions and evaluations. According to Moyes et al. (2008) the employee satisfaction may be described as how pleased an employee is with his or her position of employment. In fact, employee satisfaction is a comprehensive term that comprises job satisfaction of employees and their satisfaction overall with company's policies and company environment. Chalotra (2013) has, however, noted that employee satisfaction is now a day considered as a brand. Thus employee satisfaction includes treating employees' recognition, empowering employees, offering above industry average benefits and compensation, providing employees and company activities and positive management within a success framework of goals, measurement and expectation.

Employee satisfaction is of utmost importance in any organization be it small or large. It is important not only for the employee but is equally important for the organization for which the employee is working. Improved employee satisfaction reduces the cost of staff turnover, builds brand loyalty with staff and positions the company as an employer of choice that attracts talented people to the organization. All these may lead to achieving the goal of organizational excellence.

Organizational Excellence

Academic research and debate in the concept of organizational excellence dates back to Peters and Waterman (1982), but conceptualised only in the twenty-first century. Continuous excellence and evaluations have witnessed frequent changes in the definition of the term. Thawani (2004) has evolved the six-sigma strategy for organizational excellence. Six sigma links customer requirements and process improvements with financial results while simultaneously providing the desired need, accuracy and ability in today's e-age. But six-sigma can be used in a highly focused and limited manner in specific areas of the business or in a wholesale strategy corporate initiative like General Electrical's (GE).

While conceptualizing the term organizational excellence Harrington (2005) has viewed that organizational excellence is designed to permanently change the organization by focussing on managing the five key elements of the organization. Each of these five organizational elements is not new by itself. The key to organizational excellence is combining and managing them together. We call the methodology that provides a holistic approach to improving the organization's performance 'organizational excellence' which is supported by five pillars that must be managed: process management, project management, change management, knowledge management, resource management.

The most recent views on organizational excellence expressed by experts. For example, Bailey (2014) wrote 'the excellence is a culture journey'. Experts from American Society for Quality (ASQ, 2015) argued that 'organizational excellence refers to on-going efforts to establish an internal framework of standards and process intended to engage and motivate employees to deliver products and services that fulfil customer requirements within business expectations. Webster (2016) said that 'organizational excellence is delivering and sustaining the delivery of outstanding value to all key stakeholders'. The organizational excellence models have also been discussed and developed in more than 90 countries throughout the world. Nenadal et al. (2018, p. 51-52) have examined and listed the basic features of few selected excellence models, which are widely known and respected, taken from the group of models which are propounded by institutions and received national or internal awards and the group of models promoted by individuals, well known experts in the field.

The word excellence has widely been used by many organizations to describe some aspects of their activities. Organizational excellence may thus be defined as the ongoing efforts to establish an internal framework of standards and process intended to engage and motivate employees to deliver products and services that fulfil customer requirements within business expectations. It is the achievement by an organization of consistent superior performance for example, output that exceed meeting objectives, needs or expectations.

Review of Literature

Review of literature on the subject basically indicated that the researches have concentrated their attention in conceptualizing HRD and examining HRD practices in the organizational context till the end of twentieth century. The role of mentors in motivating the employees was first of all noted by Orpen. It was stated that better the relationship between mentors and mentees in the formal mentoring programme, the more mentees are motivated to work hard and committed to their organization (Orpen, 1997, p.53). Luthans and Stajkovic (1999) observed that advancement of human resource through rewards, monetary incentives and organizational behavior, the motivation has generated a large volume of debate in the human resources and sales performance field. Malina and Selto (2001) conducted a case study in one corporate setting by using balance score card method and found out that organizational output would be greater if employees are provided with positive motivation. Monetary rewards can be a very powerful determinant of employee motivation and achievement which in terms of firm level performance (Aguinis et al., 2013, p.241). Employee commitment has variously been found to be positive and significantly correlated to motivation (Carmeli, 2005; Mohsan et al., 2011). Employee motivation is also associated with employee satisfaction. Positive association between employee motivation and employee satisfaction has been observed by group of researchers and considered motivation as an antecedent of employee satisfaction such as Judge and Hulin (1993) and Khanna (2017, p.32). Sageer (2012) has, however, noted that employee satisfaction is a factor in employee motivation i.e. satisfaction is considered as an antecedent of motivation.

Large number of studies appeared on employee satisfaction and its correlates. The size effect of organization with satisfaction has been examined by Payne and observed that larger the organization the stronger the identification of individual participant's with it. The stronger the identification and individual participants in the organization, the higher the level of individual satisfaction (Payne, 1954, p.247). Venderberg and Lance (1992, p.166) have observed the proportional relationship between degree of job satisfaction and level of employee loyalty. The more satisfied an employee is, the less turnover and absenteeism occurs (Maloney & McFillen, 1986). The employees are more loyal and productive when they are satisfied and these satisfied employees affect the customer satisfaction and organizational productivity (Hunter & Tietyen, 1997). Research evidence also indicated that satisfaction may not necessarily lead to individual performance improvement but does lead to departmental and organizational level improvement (Luthans, 1998). Positive association between employee satisfaction and organization culture has been established (Bhatti & Qureshi, 2007). Employee commitment has variously been found to be positive and significantly correlated with satisfaction (Bateman & Strasser, 1984; Kuruuzum et al., 2008; Gulnu et al., 2010; Singh & Jaiswal, 2016).

Quite a few researchers have examined the inter-relationship between organizational variables and identified the mediator influencing the relationships. Yousef (2000) has examined the mediating effect of organizational commitment in explaining the relationship between job satisfaction and job performance and observed that those who are committed to their organization are more satisfied with their jobs and their performance is high. Totawar and Nambudiri (2014) examined the relationship between organizational justice, quality of work-life and job satisfaction and established the mediating effect of quality of worklife in explaining the relationship between organizational justice and job satisfaction. Mangaraj and Patra (2017) have studied the relationship between employee satisfaction, employee commitment and organizational effectiveness and observed that employee commitment mediates the relationship between employee satisfaction and organizational effectiveness. Saifi and Khuram (2017) have established the mediating role of job satisfaction in the relationship between organizational justice and organizational citizenship behavior. Kumar and Murugiah (2019) observed positive association between employee engagement, employee retention and job satisfaction and identified job satisfaction as mediator in explaining the relationship between employee engagement and employee retention.

Khalaf and others reviewed the literature regarding the mediating role of job satisfaction on the impact of employee engagement on organizational performance. Thus it focuses on understanding the concept of employee engagement, job satisfaction and organizational performance and relationship among these concepts. On the basis of review they concluded that 'It is necessary to engage and satisfy the employees so that with their commitment they can enhance not only their performance but also organizational performance' (Khalaf et al., 2019).

Tang and others investigated the effect of psychological capital on employees' innovative behavior through its relationship with job satisfaction and organizational commitment. The mediating effect of psychological capital in terms of job satisfaction and organizational commitment on employees' innovative behavior was verified by a mediation analysis; conducted the test of presence and significance of mediation effect. Empirical results indicated that companies should consider taking measures to increase employees' psychological capital so as to enhance their innovative behavior (Tang et al., 2019).

In an exploratory study, Kumari has recently examined the role of employee motivation in determining employee satisfaction and organizational excellence and noted the direct and indirect effect of employee motivation in determining organizational excellence ; employee motivation directly affects organizational

excellence and also affect indirectly through employee satisfaction as employee motivation affects employee satisfaction and employee satisfaction affects organizational excellence and testing the presence and significance of the mediation effect left for others (Kumari, 2020, p.1245).

Some empirical studies examined the cases of the organizations of different sectors of the economy mainly chemical sector (Abid et al., 2013), education sector (Singh & Rawat, 2010; Madan & Gupta, 2015; Khanna, 2017), pharmaceutical sector (Parvin & Kabir, 2011) service sector (Mahesha & Akash, 2011), and steel sector (Mangaraj & Patra, 2017). No such empirical studies appeared in the mining sector particularly the coal mine.

Research Gaps

The review of literature, presented above, indicated that research works have been conducted and also validated mainly on the motivation and satisfaction but the validation of organizational excellence is lacking very much in Indian context. Previous empirical studies examined the case of the organizations of different sectors of the economy mainly chemical sector, education sector, pharmaceutical sector, service sector and steel sector. But there is a dearth of systematic empirical study in the mining sector particularly the coal mines. All previous studies cited related to mediation studies have examined the relationship between different organizational variables and identified the mediator but no test of mediation effect conducted except two (Totawar & Nambudiri, 2014; Tang et al., 2019) who have undergone the process of testing the presence and significance of mediation effect.

The present study has, therefore, been undertaken to make a systematic attempt to examine the inter-relationship between employee motivation, employee satisfaction and organizational excellence and related issues, in the case of a public sector coal company namely Central Coalfields Limited, a subsidiary of Coal India Limited, located at Ranchi in Jharkhand state of India. Central Coalfield Limited has been declared as mini-ratna and Coal India Limited as maha-ratna Company by the Government of India.

Objectives

In view of the above, the major objectives of the present study are:

- To examine the inter - relationship between the three major organizational variables namely employee motivation, employee satisfaction and organizational excellence.
- To examine the mediation effect of employee satisfaction in the influence of employee motivation on organizational excellence.

Models, Materials and Methodology

Theoretical Framework Behind Models

The relationship between employee motivation, employee satisfaction and organizational excellence is based on the theory of social exchange. It suggests that all human relations are formed by the use of a subjective cost benefit analysis and the comparison of alternatives (Blau, 1964; Emerson, 1976). An organization offers the necessary motivational activities to the employees to stimulate them for doing good works for the organization and its goal. The employee then judge the action of the organization towards them by comparing the perceived output with comparable others in view of the fulfilment of their need, desire and future prospects and decide for responding to the offers. The involved process is purely psychological, individual – based and cognitive in nature. If the organizational action is perceived by the employee as very good or good, their perception translates into employee commitment, better performance and employee satisfaction (Judge & Hulin, 1993; Malina & Selto, 2001; Carmeli, 2005; Mohsan et al., 2011; Aguinis et al., 2013; Khanna, 2017).

Further once the employee feels satisfied with the nature of job and the company where working it will have positive impact on overall success of the organization (Freeman, 2005; Sageer et al., 2012; Abdul et al., 2017; Swaroopa & Sudhir, 2017; Barik & Nayak, 2018). If overall success of the organization is achieved it would pave the way for achieving organizational excellence. Thus according to the social exchange perspective, the motivational activities and facilities of the organization set up a social exchange process which leads to satisfaction of the employees and further impacting on overall success of the organization and achieving organizational excellence.

The proposed theory is that the employee motivation is considered as one of the major dimensions of performance. It is the act of stimulating someone or oneself to get desired reaction. If sufficient amount of motivational activities and facilities are made available by the organization, then the employee shall feel satisfied

and utilise their skills to the benefit of the organization, leading to improved organizational performance and consequently achieve organizational excellence.

Based on the above theoretical framework the structural model of the three organizational variables viz. employee motivation, employee satisfaction and organizational excellence is presented in Figure 1.

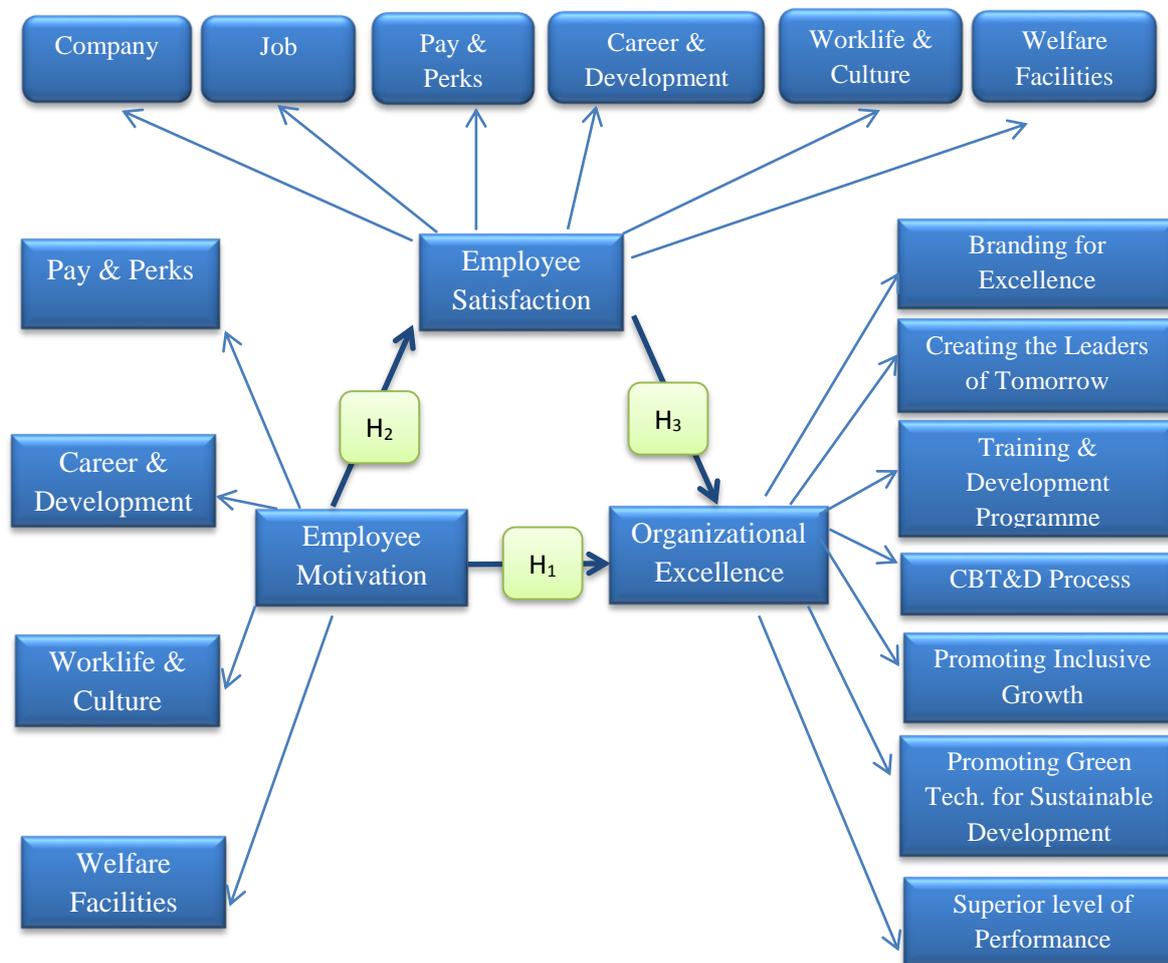


Figure – 1: Structural Model of Employee Motivation, Employee Satisfaction & Organizational Excellence

Figure 1 illustrates the structure of the three organizational variables. Four relevant items viz. pay & perk, career & development, worklife & culture and welfare facilities considered for measuring employee motivation (Kumari, 2021), six items like company, job, pay & perks, career & development, work life & culture, and welfare facilities for measuring employee satisfaction (Kumari et al., 2020), and seven items namely branding of organization, creating the leaders of tomorrow, creating environment for growth and business excellence, adoption of competency based recruitment & selection process, provision for inclusive growth, green technology for sustainable future and achieving superior level of performance for measuring organizational excellence (Kumari & Bhagat, 2020). The arrow indicates the direction of movement in the process. It is quite clear that employee motivation affects the organizational excellence. Employee motivation also affects employee satisfaction and employee satisfaction affects organizational excellence.

The implied hypotheses behind the above theoretical framework are the following:

- H₁: Employee motivation significantly affects organizational excellence.
- H₂: Employee motivation significantly affects employee satisfaction.
- H₃: Employee satisfaction significantly affects organizational excellence.
- H₄: Employee satisfaction mediates the relationship between employee motivation and organizational excellence.

H₁ measures the direct effect of employee motivation on organizational excellence. H₂ and H₃ taken together measures the indirect effect of employee motivation on organizational excellence through employee satisfaction i.e. mediation effect and is explicitly revealed through H₄.

For the purpose of testing these hypotheses the following individual structural response models have been formulated and parameters estimated using Ordinary Least Squares method.

$$\begin{aligned} \text{Response Model - I} & : OE_i = a + bEM_i + u_i \\ \text{Response Model - II} & : ES_i = a + bEM_i + u_i \\ \text{Response Model - III} & : OE_i = a + bES_i + u_i \\ \text{Response Model - IV} & : OE_i = a + bEM_i + ES_i \end{aligned}$$

Where,

OE_i = Value of the organizational excellence variable of the ith respondent as per the sample respondent's perception measured by Likert Scale (i = 1, 2, 3 - - - - n).

ES_i = Value of the employee satisfaction variable of the theith respondent as per the sample respondent's perception revealed towards employee satisfaction, measured by the Likert Scale (i = 1, 2, 3 - - - - n).

EM_i = Value of the employee motivation variable of the ith respondent's perception revealed towards employee motivation, measured by the Likert Scale (i = 1, 2, 3 - - - - n).

A = Constant term.

B = Regression coefficient.

u_i = Usual random error.

Materials

Out of many sampling techniques available for data collection the judgement sampling, one of the non - parametric sampling technique was preferred for this study. Judgement sampling is employed when the participants are selected as per the researcher's convenience, confidence and experience that they will conform to certain specific requirements / criteria / parameters of research (Hair et al., 2003). During the pilot enquiry it was noticed that the universe size of the executives in CCL is 507, spread over 24 functional disciplines; the number of executives varied from minimum of 01 to the maximum of 69 executives. But only five disciplines namely Mining, Electricals & Mechanical, Finance & Accounts, Personal & Administration and Medical comprises of 328 executives forming about 65 percent of the total executives. Therefore, decided to take a sample of 50 executives out of 328. The sample size of 50 comes to 15. 244 percent of the Universe size of 328. Therefore, proportionately selected 10, 07, 09, 11 & 13 executives from mining, electrical & mechanical, finance & accounts, personnel & administration and medical disciplines respectively.

The study is primarily based on the primary data collected form a sample of 50 respondents using the well-structured questionnaire prepared for this purpose. The data collection took about six weeks time during October – November 2019. Secondary data have also been used mainly Annual Reports, Magazines, printed matters and various other related documents available in the office of CCL Headquarters. Different websites related to Coal India Limited and Central Coalfields Limited have also been used.

The questionnaire was designed objectively. The questions were mostly close ended with multiple options. The questionnaire allows acquisition of information on all major aspect of work. It measures the different major aspects of employee motivation, employee satisfaction and organizational excellence. First section of the questionnaire elicits information about demographic characteristics of the respondents, especially gender, age – group, qualification, grade and work experience in CCL. The second section comprised of objective questions with multiple choices pertaining to motivational activities and facilities provided by the organization to the employees with respect to four underlying factors determining the employee motivation. The third section contains the objective questions with multiple choices pertaining to employee satisfaction with respect to six identified factions determining employee satisfaction. The fourth section deals with the questions with multiple choice related to seven components used to measure the organizational excellence.

Methodology

Instrumentation

Instrumentation consists of three organizational variables like Employee Motivation, Employee Satisfaction and Organizational excellence. Scale used in this study for measuring variables is that of five response category of Likert type (Likert, 1932). At the time of preparing the data, using SPSS, the Likert items which happen to be inclusive are amalgamated (Boone & Boone, 2012) and computed the composite score (arithmetic mean, Subedi, 2016, p.44) for three scales corresponding to three variables and for each of 50 respondents for use in statistical analysis and parametric tests. Hair and others have noted 'It minimizes measurement error and depicts complicated and convoluted ideas and parameters in the form of a single measure' (Hair et al., 2010).

Statistical Methods

Appropriate statistical methods have been used for testing the inter-relationship between the organizational variables and for testing of mediation effect. The inter-relationship between employee motivation, employee satisfaction and organizational excellence examined by regression analysis, t-test and F-test. The linear structural response models have been formulated and parameters estimated using OLS method. The IBM SPSS20 and Excel 07 have been employed for data analysis. The test of inter-dependency done by testing the significance of the regression co-efficient using t-test (two-tailed). The F-test has been used for testing the goodness of fit of the model.

The test of mediation effect conducted in two steps. First, causal step approach of Baron and Kenny (1986) has been used, which simply indicates the possibility of the mediation effect. Second, the significance of the mediation effect examined by using the Sobel test (Sobel, 1982). Two other versions of the Sobel test namely Aroian test (Aroian, 1944, 1947) and Goodman test (Goodman, 1960) have also been used and test statistics computed along with the Sobel test statistics.

Empirical Findings and Test of Hypotheses

This section has three parts. First, presentation of results related to the reliability and validity of scales. Second, discussion on the test of inter - relationship between employee motivation, employee satisfaction and organizational excellence (H_1 , H_2 & H_3). Third, presentation and analysis of the results related to the test of mediation effect of employee satisfaction in influencing the relationship between employee motivation and organizational excellence (H_4).

Reliability and Validity of Scales

It is very important to check the assurance of the study for different respondents. The Cronbach's alpha has been calculated for each of the three scales used in this study and presented in Table 1.

Table – 1: Scale - Wise Descriptive Statistics

Scale	No. of Items	Sample Size	Cronbach's Alpha Reliability Coefficient	Minimum Value	Maximum Value
Employee Motivation	04	50	0.853	2.74	4.53
Employee Satisfaction	06	50	0.957	2.20	4.37
Organizational Excellence	07	50	0.892	1.57	5.00

Note: Responses of all question / statement in the items have been measured on a 5 pint Likert Scale.

Table- 1 presents the scale-wise descriptive statistics. It exhibited that the range of minimum and maximum values of variables is greatest (3.43) in the case of organizational excellence followed by employee satisfaction (2.17) and employee motivation (1.79).

As Likert data has been considered as an interval data, the Cronbach's alpha has been used to measure the internal consistency of the scales (Subedi, 2016, p.39). The values of Cronbach alpha are more than 0.70 in all three scales

considered; 0.853 for employee motivation, 0.957 for employee satisfaction and 0.892 for organizational excellence, which indicates modest reliability (Nunnally & Bernstein, 1994 as cited in Warmbrod, J.R. 2014, p.35). This means that all three scales are accepted and their reliability is ideal for further investigation.

Test of Inter - Relationship

The test of inter-relationship conducted in the light of the theoretical framework explaining the relationship and implied hypotheses explained by individual structural response models. The regression results are presented in Table 2.

Table – 2: Regression Results

Items	Model – I: Dependent Variable OE _i	Model – II: Dependent Variable ES _i	Model – III: Dependent Variable OE _i	Model – IV: Dependent Variable OE _i
Standardized Coefficient of Independent Variable				
EM _i	0.491** (0.191)	0.786** (0.098)	...	- 0.181 (0.248)
ES _i	0.713** (0.141)	0.855** (0.227)
Constants	1.156	0.507	0.279	0.553
R ²	0.241	0.618	0.508	0.521
Adjusted R ²	0.225	0.610	0.498	0.500
F (ν ₁ ,ν ₂)	15.220* (1,48)	77.504* (1,48)	49.555* (1,48)	25.513* (2,47)

Note: Figures in parentheses below the regression co-efficients are their respective standard errors.

** : Significant at 0.50 percent level of Significance.

* : Significant at 1.00 percent level of Significance.

Table 2 reveals significantly positive regression coefficient in all the three models (Model - I: relationship between employee motivation and organizational excellence, Model - II: relationship between employee motivation and employee satisfaction, and Model - III: relationship between employee satisfaction and organizational excellence) sufficiently indicated that the employee motivation directly affects the organizational excellence and also affects it indirectly through the employee satisfaction as employee motivation affects employee satisfaction and employee satisfaction affects organizational excellence. Thus direct as well as indirect affect of employee motivation on organizational excellence has been established as proposed in the theoretical framework. Model - IV has been used in examining the presence of mediation effect and tempted us for testing the strength of mediator.

First, the first three hypothesis implied in the theoretical framework examined in this section itself and then proceeded to examine the fourth hypothesis and conduct the test of mediation effect in subsequent section.

Hypothesis – 1: Employee motivation significantly affects organizational excellence.

This hypothesis is tested by the results of Model - I in Table 2. Model - I determines the relationship between employee motivation and organizational excellence. The regression co-efficient (0.491) is positive, very high and statistically significant at 0.50 percent level of significance [P (t > 2.66) = 0.005]. The adjusted R² value is 0.225 which indicates that 22.5 percent of variation in organizational excellence is explained by a simple variable - employee motivation. F-value for degree of freedom ν₁ = 1 and ν₂ = 48 is very high (15.22) and highly significant at 1.00 percent level of significance [P (F > 7.08) = 0.01]. Thus primary cross - sectional data supports the hypothesis and, therefore, the hypothesis 'employee motivation significantly affects organizational excellence is established.

Hypothesis – 2: Employee motivation significantly affects employee satisfaction.

Model - II in Table 2 has been used in testing this hypothesis. The regression co-efficient (0.786) is positive, and highly significant at 0.50 percent level of significance [$P(t > 2.66) = 0.005$]. The adjusted R^2 value is 0.610 and F-value for appropriate degree of freedom is very high (77.504) and highly significant at 1.00 percent level of significance [$P(F > 7.08) = 0.01$]. The data supports the hypothesis and, therefore, the hypothesis 'employee motivation significantly affects employee satisfaction' is established.

Hypothesis – 3: Employee satisfaction significantly affects organizational excellence.

This hypothesis is tested by using the results of Model - III in Table 2. The regression co-efficient (0.713) is positive and highly significant at 0.50 percent level of significance [$P(t > 3.460) = 0.005$]. The adjusted R^2 is 0.498 and F-value (49.555) is very high and highly significant at 1.00 percent level of significance [$P(F > 7.08) = 0.01$]. Thus the cross sectional primary data supports the hypothesis and the hypothesis 'employee satisfaction significantly affects organizational excellence' is accepted and established.

Thus acceptance of H_1 indicates the direct effect of employee motivation on organizational excellence. The acceptance of H_2 and H_3 jointly shows the indirect effect of employee motivation on organizational excellence through employee satisfaction as employee motivation affects employee satisfaction and employee satisfaction affects organizational excellence. This finding is quite consistent with the findings of Kumari (2020).

Test of Mediation Effect

As noted earlier the test of mediation effect has been completed in two steps. First examining the presence of mediation effect and second, examining the significance of the mediation effect. The path analysis model of mediation is presented in Figure 2.

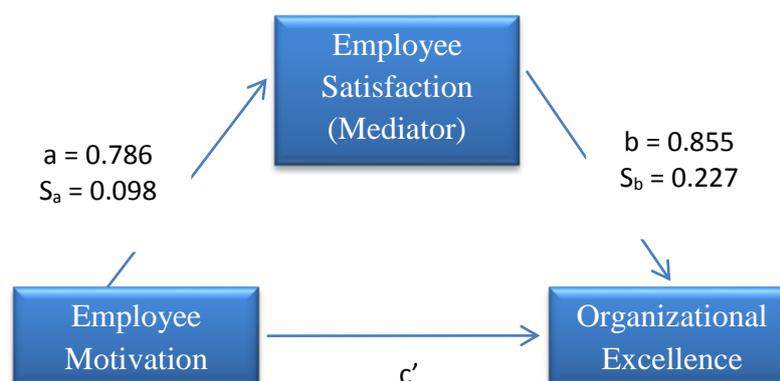


Figure – 2: Path Analysis Model of Mediation

Notes:

- a = Standardised regression coefficient for the association between employee motivation and employee satisfaction.
- S_a = Standard error of a.
- b = Standardised regression coefficient for the association between employee satisfaction (mediator) and organizational excellence (when employee motivation is also a predictor of the organizational excellence).
- S_b = Standard error of b.

The 'mediation requires the existence of direct effect to be mediated i.e. employee motivation must be significantly associated with organizational excellence. The results presented in Table 2 (Model - I) shows that the regression coefficient is positive (0.491) and highly significant. This provides supporting base for the direct effect of employee motivation on organizational excellence. The mediation effect implies that employee motivation should also be associated with the employee satisfaction (mediating variable). The results in Table 2 (Model - II) indicate significantly positive regression coefficient (0.786). The positive relationship between employee satisfaction and organizational excellence is presumed in the mediation hypothesis. The results depicted in Table 2 (Model - III) confirms the presumed relationship as the regression coefficient (0.713) is positive and

significant. The mediation hypothesis also requires to examine the strength of mediator. This needs superimposing the effects of mediating variable on the basic relationship. This is done by regressing organizational excellence variable on employee motivation and employee satisfaction both simultaneously.

The results in Table 2 (model - IV) clearly indicate that the significant coefficient of employee motivation, found earlier, has become insignificant (-0.181). At the same time the regression coefficient of employee satisfaction (mediating variable) remained significant with greater magnitude (0.855 > 0.713). Thus the presence of the mediation effect of employee satisfaction in the relationship between employee motivation and organizational excellence is established.

The Sobel test was then conducted to determine the significance of the mediation effect of employee satisfaction in influencing the relationship between employee motivation and organizational excellence. Sobel test determines the significance of the indirect effect on the mediator by testing the hypothesis of no difference between the total effect (path c) and the direct effect (path c - c'). The indirect effect of the mediator is the product of path a.b (Figure 2) which is equivalent to c - c' (Sobel, 1982). The computed Sobel test statistics is 3.4044 which is significant at 1.00 percent level of significance (Z - test). The value of Sobel test along with other two versions are presented in Table 3.

Table 3: Different Test Statistics for Mediation Testing

Test	Test Statistics	Standard Error
Sobel Test	3.4044*	0.1974
Aroian Test	3.3838*	0.1986
Goodman Test	3.4269*	0.1961

*: Significant at 1.00 percent level of significant [P (Z > 2.57) =0.005].

Table-3 exhibits the test statistics and respective standard errors. The Sobel test statistic is 3.4044 and standard error is 0.1974. Since the computed z value is greater than the critical value of z for level of significance 0.01 it has been decided that sobel test statistic is significant at 1 percent level of significance [P (z > 2.57) = 0.01]. Other alternative test like Aroian test and Goodman test statistics are also significant at 1 percent level of significance.

Thus considering all the four measures viz. Baron and Kenny method, the Sobel, the Aroian and the Goodman tests, the mediation effect of employee satisfaction in the influence of employee motivation on organizational excellence is established and the mediation hypothesis (H₄) is accepted and confirmed.

Conclusion

The regression results are in conformity with the theoretical framework of inter-relationship between employee motivation, employee satisfaction and organizational excellence. The regression co-efficient of model - I, Model-II and Model-III are positive, very high in magnitude and statistically significant. This means that employee motivation significantly affects organizational excellence. Employee motivation also affects employee satisfaction and employee satisfaction significantly affects organizational excellence. Alternatively, employee motivation directly affects organizational excellence and also affect indirectly through employee satisfaction as employee motivation affects employee satisfaction and employee satisfaction affects organizational excellence. The mediating effect of employee satisfaction on the relationship between employee motivation and organizational excellence has also been established. The conclusion is that 'motivation and satisfaction are the two major components of organizational excellence'.

The empirical analysis confirming the significantly positive association between employee motivation, employee satisfaction and organizational excellence and mediation effect of employee satisfaction in explaining the relationship between employee motivation and organizational excellence in the case of mini-ratna coal company in India provides extension in the existing knowledge in the field of organizational studies and fulfils the gap that existed in the coal sector. An attempt has been made in this study to validate the scale of organizational excellence in the Indian context. This may also be considered as a noble attempt in this field.

The results of the study have many theoretical and practical implications for academicians, scholars and decision makers in the business organization. It gives insights to the senior executive particularly HR managers and experts of public sector organization to understand the interplay of employee motivation and employee satisfaction toward organizational excellence. This study may also be of great use in managerial decisions for achieving the desired goal of organizational excellence through appropriate and effective strategy for improving motivational activities and facilities and formulating employee friendly policies and programmes for higher level of employee satisfaction in the organizations.

Limitations and Future Directions

The present study is subject to some limitations as with all studies. Few limitations identified are: First, the sample was confined to only 50 respondents owing to difficulties in getting the questionnaire filled in from among the executives. Greater sample size could have provided more robust view to the findings of the study. Second, this study is based on the respondent's responses which are subject to the respondent's bias. The Likert scales used in quantitative analysis are a direct measure of fairness, wherein the respondents might have experienced a confirmatory - bias in attempting 75 questions / statements considered in the questionnaire.

The suggestions for further researches are: First, a cross – sectional design and data collection method has been used in this study. This is a single method and a single respondent study which as a limitation can be addressed in future researches as an extension of this work. Second, the validation process of organizational excellence scale has been initiated in the Indian context. The same can be extended further to establish the scale as a robust measure of organizational excellence. Third, studies may also be carried out, as the present one in coal sector using cross – sectional response data, in other sectors like steel sector, chemical sector, service sector, education sector etc. for inter – sectorial analysis within the public sector or between public and private sector in India and cross – cultural analysis for international comparison.

Acknowledgement

The authors would like to acknowledge the anonymous referee of this article for thought provoking comments and meaningful suggestions which proved very helpful in finalising the manuscript.

References

- Abdul, K. A., Ayesha, J., Anam, A., & Sumaria, K. (2017). Impact of organizational culture and employee satisfaction on organizational performance in Banking Sector of Lahore. *Science International (Lohore)*, 29(4), 975 - 979.
- Abid, A. M., Sarwan, A., Imran, K., Jabbar, A., & Hannan, A. (2013). Effects of job design on employee satisfaction (A study of fertilizer companies listed in Lahore Stock Exchange). *European Journal of Business and Management*, 5(19), 1 - 7.
- Aguinis, H., Joo, H., & Gottfredson, R. K. (2013). What monetary rewards can and cannot do: How to show employees the money, *Business Horizon*, 56(2), 241 - 249.
- Ali, A., Bin, L. Z., Piang, H. J., & Ali, Z. (2016). The impact of motivation on the employee performance and job satisfaction in IT Park (Software House) sector of Peshawar, Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 6(9), 207-310, DOI:10.6007/IJARBSS/v6-i9/2311
- Armstrong, M. (2004). *Armstrong's Handbook of Human Resource Management Practice* (11th Edition), Kogan Page, London.
- Aroian, L. A. (1944/1947). The probability function of the product of two normally distributed variables. *Annals of mathematical Statistics*, 18, 265 - 271.
- ASQ (2015). What is Organizational Excellence? (online) Available at <http://asq.org/learn-about-quality/organizational-excellence/>, Accessed on December 29, 2019.
- Baily, D.M. (2014). Journey to Excellence, *Quality Progress*, (August), 42 - 45.
- Barik, A., & Nayak, B. (2018). Impact of employee satisfaction on employee commitment and organizational effectiveness: The Study of National Public Sector Undertaking Unit, International conference on Advance in Business management ICABM, December 14 - 15, 2018, Available at <http://icabm.sibmpune.edu.in/> Accessed on December 22, 2019.
- Baron, R. M., & Kenny, D. A. (1986). The moderator - mediator variable distribution in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173 - 1182.
- Bateman, T., & Strasser, S. (1984). A longitudinal analysis of the Antecedents of organizational commitment, *Academy of Management Journal*, 21, 95-112.
- Berelson, B., & Steiner, G.A. (1964). *Human Behavior: An Inventory of Scientific Findings*, Harcourt, Brace & World, New York.
- Bhat, Adi (2018). Employee Motivation: Definition, Types, Importance and Ways to Improve it, A question Pro Product.
- Bhatti, K., & Qureshi, T. (2007). Impact of employee participation on job satisfaction, employee commitment and employee productivity. *International Review of Business Research Paper*, 3(2), 54-68.
- Blau, P. M. (1964). *Exchange and Power in Social Life*. John Wiley, New York.
- Boone, H. N., & Boone, D.A. (2012). Analyzing Likert data, *Journal of Extension*, 50(2), 1 - 5.

- Carmeli, A. (2005). Exploring Determinants of Job Involvement: An experimental test among senior executives, *International Journal of Manpower*, 26, 693-717.
- Chalotra, Vipul (2013). Employee Satisfaction: The modern brand of business, *Journal of Exclusive Management Science*, 2(1), 1- 6.
- Emerson, R. M. (1976). Social Exchange Theory. *Annual Review of Sociology*, 2, 335 - 362.
- Freeman, Shelly (2005). Employee Satisfaction: The key to a successful company, Available at: <http://www.mondaq.com/United-States/Strategy/22627/Employee-Satisfaction-The-Key-to-a-Successful-Company>, Accessed on April 2, 2020.
- Goodman, L. A. (1960). On the exact variance of products. *Journal of the American Statistical Association*, 55(292), 708 - 713.
- Gulnu, E., Aksarayli, M., & Percin, N. S. (2010). Job Satisfaction and Organizational Commitment of Hotel Managers in Turkey, *International Journal of Contemporary Hospitality Management*, 22, 693 - 717.
- Hair, J. F., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*, 7th Edition, Pearson, New York.
- Hair, J. F., Bush, R. P., & Ortinau, D. J. (2003). *Marketing Research: Within a changing information environment*, 2nd Edition, McGraw - Hill, New York.
- Harrington, H. J. (2005). The Five Pillars of Organizational Excellence, paper presented at 9th International Convention on Quality Improvement, November 14 - 15, 2005 - Karanchi, Pakistan.
- Hunter, W., & Tietyen, D. (1997). *Business to Business Marketing: Creating a Community of Customers*, Lincolnwood-Illinois, McGraw-Hill Professional.
- Jerald, G., & Robert, A. B. (1995). *Behavior Organizations: Understanding and Managing the Human Side of Work*. 5th Ed., Prentice - Hall International, Inc.
- Judge, T.A., & Hulin, C. L. (1993). Job Satisfaction as a reflection of a disposition: A multiple source causal analysis, *Organizational Behavior and Human Decision Process*, 56,388 - 421.
- Khan, M. A., Yussoff, R. M., Hussain, A., & Ismail, F. B. (2019). The mediating effect of job satisfaction on the relationship of HR practices and employee job satisfaction: Empirical evidence from higher education sector. *International Journal of Organizational Leadership*, 8,78-94.
- Khanna, V. (2017). Measuring Job Satisfaction of Academicians using Herzberg Theory, *Delhi Business Review*, 18(2),75 - 86.
- Kumar, R. P., & Murugaiah, V. (2019). Relationship between employee engagement and employee retention: Mediating role of job satisfaction, *AIMS Journal of Management*, 5(1), 1 - 13.
- Kumari, S. (2018). A study of factors influencing employee satisfaction and its impact on organization. *International Research Journal of Commerce and Law*, 5(2),22-28.
- Kumari, Sony (2020). Role of employee motivation in determining employee satisfaction and organizational excellence: An exploratory study of an organization. *The International Journal of Analytical and Experimental Model Analysis*, 12(10), 1236 - 1247.
- Kumari, S. (2021). Role of motivational activities in determining employee motivation and its impact on job satisfaction of public sector executives: an empirical study. *International Journal of Research in Applied Science and Engineering and Technology*, 9(1),493-503,DOI:<http://doi.org/10.2224/ijraset.2011.32850>
- Kumari,S., Bendigeri, R. S., & Bhagat, L. N. (2020). Identification of factors affecting employee satisfaction and their relative importance: An empirical study of an Indian public sector organization. *European Journal of Business and Management* 12(33),16-23, DOI:10.71176/EJBM/12-33-02
- Kumari,S., & Bhagat, L. N. (2020). Measurement of organizational excellence in Indian context: an exploratory study. *International Journal of Engineering Technologies and Management Research*, 7(12),25-32.
- Kuruuzum, A. Centin, E. I., & Irmak, S. (2008). Path analysis of organizational commitment, job involvement and job satisfaction in Turkish Hospitality Industry, *Tourism Review*, 64(1), 4-16.
- Likert, Rensis (1932). A technique for the Measurement of Attitudes, *Archives of Psychology*, 22(40),1-55.
- Luthans, F., & Stajkovic, A. D. (1999). Reinforce for Performance: The need to go beyond pay and even rewards, *The Academy of Management Executive*, 13(2),49 - 57.
- Luthans, S. (1998). *Organizational Behavior*, Eighth Edition, McGraw - Hill, Irwin, Boston.
- Madan, M., & Gupta, N. (2015). An empirical study of factors affecting satisfaction of employees and their impact on the organization with special reference to Education Sector, XVI Annual Conference Proceedings, January, 2015, 974 - 991. Available at <http://www.internationalconference.in/XVI-AIC/INDEX.HTM>.
- Mahesha, V., & Aakash, S. B. (2011). Motivation: A tool for retaining good employees in hospitality industry with special reference to select star hotels in Karnataka, *ACRM Journal of Business and Management Research (AJBMR)*, 6(2), 12 - 17.
- Malina, M. A., & Selto, F. H. (2001). Communicating and Controlling Strategy: An empirical study of the effectiveness of the balance score card, *Journal of Management Accounting Research*, 13,1 - 54.
- Maloney, W. F., & McFillen, J. M. (1986). Motivational implications of construction work. *Journal of Construction Engineering and Management*, 112(1), 137 - 151.

- Mangaraj, Sujata, & Patra, S. K. (2017). Employee Satisfaction, Commitment and Organizational Effectiveness: A study of steel industry in Odisha, *AIMS Journal of Management*, 2(2), 150 - 170.
- Mohsan, F., Nawaz, M. M., Khan, M. S., Shaukat, Z., & Aslan, N. (2011). Are Employee Motivation, Commitment and Job Involvement Interrelated: Evidence from Banking Sector in Pakistan, *International Journal of Business and Social Science*, 2, 226 - 233.
- Moyes, G. D., Shao, L. P., & Newsome, M. (2008). Comparative analysis of employee job satisfaction in the accounting profession, *Journal of Business & Economic Research*, 6(2), 65 - 81.
- Nancy, C. Morse (1977). Satisfaction in the white - collar job, Ayer Publishing.
- Nenadal, J., Vykydal, D., & Waloszek, D. (2018). Organizational Excellence: Approaches, Models and Their use at Czech Organziattions. DOI: 10-12776/QIP.V2212.1129/, Accessed on December 29, 2019.
- Orpen, C. (1997). The effects of formal mentoring on employee work motivation, organizational commitment and job performance, *The Learning Organization*, 4(2), 53 - 60.
- Parvin, M. M., & Kabir, M. M. N. (2011). Factors affecting employee satisfaction of pharmaceutical sector, *Australian Journal of Business and Management Research*, 1(9), 113 - 123.
- Paul, E. (2017). 10 ways to improve employee motivation, Available at <http://www.emptrust.com/blog/ways-to-improve-employee-motivation/>, Accessed on August 3, 2020
- Payne, R. (1954). An approach to the study of relative prestige of formal organizations. *Social Forces*, 32(3), 244-247.
- Peters, T. J., & Waterman, R. H. (1982). In Search of Excellence: Lessons from America's Best Run Companies, (1st Edition), Harper & Row, New York, USA.p.360.
- Preacher, K. J., & Leonardelli, G. J. (2010 - 2020). Calculation for the Sobeltest: An interactive calculation tool for mediation tests. Available at quantpsy.org/sobel/sobel.htm/ Accessed on April 17, 2020.
- Saifi, I. K., & Khuram, S. (2017). The mediating role of job satisfaction in the relationship between organizational justice and organizational citizenship behaviour. *Pakistan Journal of Commerce and Social Sciences*, 11(1), 126 - 146. Available at <http://handle.net/10419/188285/>, Accessed on June 16, 2020.
- Sageer, A., Rafat, S., & Agrawal, P. (2012). Identification of variables affecting employee satisfaction and their impact on the organization, *IORS Journal of Business and Management*, 5(1), 32 - 39.
- Schneider, D. S., & Bobby, C.V. (1994). A comparison of job satisfaction between public and private sector managers. *Public Relation*, 17(1), 68 - 83.
- Singh, H.R., & Rawat, H. S. (2010). The study of factors affecting the satisfaction level of private school teacher in Haryana, *VSRD International Journal of Technical and Non-Technical Research*, 1(4), 188 - 197.
- Singh, S. K., & Jaiswal, G. (2016). Identifying the relationship between job satisfaction, work-value and organizational commitment in Indian context, *Delhi Business Review*, 17(1), 45 - 53.
- Sobel, M. E. (1982). Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. In Leinhardt, S. (Ed.), *Sociological Methodology*, Jossey-Boss, San Francisco, 290 - 312.
- Subedi, B. P. (2016). Using Likert type data in social science research: Confusion, issues and challenges. *International Journal of Contemporary Applies Sciences*, 3(2), 36-49.
- Swaroop, D., & Sudhir, B. (2017). A study on the impact of employee satisfaction on quality and profitability of organizations. *International Journal of latest Trends in Engineering and Technology*, 8(2), 342 - 347.
- Tang, Y., Shao, Y. E., & Chen, Y. J. (2019). Assessing the mediation mechanism of job satisfaction and organizational commitment on innovative behavior: the perspective of psychological Capital. *Frontiers of Psychology*, 10(2699), 1-12.
- Thawani, Sunil (2004). Six Sigma - Strategy for Organizational Excellence, *The Total Quality Management & Business Excellence*, 15(5-6), 655-664.
- Totawar, A.K., & Nambudiri, R. (2014). Can Fairness explain satisfaction? Mediation of quality of work-life (QWL) in the influence of organizational justice on job satisfaction, *South Asian Journal of Management*, 21(2), 101 - 122.
- Trombetta, J. J., & Rogers, D. P. (1988). Communication Climate, Job Satisfaction and Organizational Commitment: The effect of information adequacy, Communication Openness and Decision Participation, *Management Communication Quarterly*, 1(4), 494 - 514.
- Venderberg, R. J., & Lance, Ch. E. (1992). Examining the causal order of jobsatisfaction and organizational commitment, *Journal of Management*, 18(1), 153 - 167.
- Viteles, M. S. (1953). Motivation and morale in industry, W.W. Norton & Co. New York.
- Warmbroad, J. R. (2014). Reporting and interpreting scores derived from Likert type scales. *Journal of Agricultural Education*, 55(5), 30-47.
- Webster, M. (2016). Organizational Excellence, So What is Organizational Excellence. Available at <https://realorganizationalexcellence.com/2011/08/25/so-what-is-organizational-excellence/>, Accessed on December 29, 2019.
- Yousef, D. A. (2000). Organizational Commitment: A mediator of the relationship behaviour with job satisfaction and performance in a non - western country. *Journal of Management Psychology*, 15(1), 6 - 24.