Turnover intention among generation Y: a study of coal sector

The modern workplace is undergoing a constant change as the new generation that is generation Y is replacing the previous generations rather fast. This generation has a different mind-set from the earlier one which were more loval to the organisation. With more and more generation Y entering the coal industry a new trend has been observed that turnover rates is rising significantly. The present paper is an attempt to investigate the relationship between job satisfaction, job stress, job characteristics on the one hand and employee turnover intention on the other among generation Y employees in the coal sector. Survey respondents include 267 frontline executives and the nonexecutives working in coal industry in Dhanbad region, India, who were selected by simple random sampling method. Results derived from structural equation modelling (SEM) and AMOS showed that job satisfaction and job stress have significant impact on employee turnover intention whereas job characteristics does not have any significant impact on employee turnover intention.

Keywords: Job satisfaction, job stress, job characteristics, employee turnover intention, coal sector.

Introduction

The composition of the 21st century workplace has changed. The modern day workplace comprises employees of different generations. People are working with persons as young as their children and as old as their parents (Gursoy et al., 2008). The present workforce composition includes three generations (Dwyer, 2009) viz baby boomers (born between (1946-1964), generation X (born between 1965-1980), and generation Y (born between 1981-1999) working together in many organisations, generation Y (also known as millennials) being the youngest one (Lancaster and Stillman, 2002). Most of the baby boomers have retired or would be retiring in a couple of years (Helyer and Lee, 2012). However, over the period of time it has been observed that turnover intentions among the generation Y in the coal industry has significantly increased (HR Vision 2020, 2015). Therefore the purpose of the paper is to investigate the factors that lead to turnover intention among generation Y in the coal industry.

Background of the industry

Coal industry is highly strategic industry as it contributes significantly to the Indian economy. India has the third largest coal reserves in the world. The coal industry has a strong economic relevance as it facilitates the growth of other industries like steel, cement and power. Further, it is the mainstay of our energy security (Garg and Shukla, 2009).

Though one of the oldest, the coal industry is still evolving and faces a number of challenges such as enhancing production through mechanization, and there is need for competent HR for higher coal production to meet energy demands. This industry shoulders the responsibility of providing more than fifty per cent of our energy needs (ICC-PWC-coal report 2016). The industry has difficult working conditions and improving the quality of life of workers and keep them motivated to perform to the best of their capacity is another challenge. There is hardly any doubt that human resources hold the key to the progress and growth of this industry. Researchers suggest that there is a considerable degree of skill gap and dearth of right talent among the workforce. The success of any organization depends upon the knowledge and capabilities of the employees, thus, recruiting and retaining employees is imperative for the organisation. The Indian coal market has experienced considerable growth in recent years due to several government initiatives and plans for achieving the target of one billion tonnes in the production of coal (ICC-PWC-coal report 2016). However, besides the plan of achieving billions in coal production it is also important to reset and reboot the people practices and processes to take the industry on a high performance track. One of the major concerns today for the coal sector is the changing demographic profile of the management cadre employees. The sector is witnessing influx of a lot of young people in the management cadre. There are two reasons for this. The first reason is the superannuation of these middle and senior level managers which is around 750 persons per year (HR Vision 2020; 2015). These comprise mainly baby boomers and

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generation X. The second reason is the influx of some 1000 young talented pool of employees annually (HR Vision 2020; 2015) owing to the growing expansion needs. Dealing with this new breed of next generation often called as generation Y or the millennials is a difficult task as they come with different values, attitude and career aspirations (Gursoy et al 2008). Of late it has been observed that turnover intention among generation Y is rising. (HR Vision 2020, 2015). The working conditions rather tough and the quality of life is comparatively poor. Thus retaining generation Y employees in this industry becomes a major challenge for the management (Srinivasan 2012).

Research background

Employee turnover proves to be a costly affair for organisations. It directly impacts the organizational performance, productivity and profitability. Moreover, companies in the coal sector spend considerably on training and development and give the rigorous and mandatory training hours. The younger employees are naturally a valuable asset as they will be replacing the experienced one in the future. An employee's age is an important factor in an employee's decision to remain with an organisation. Usually the younger employees are more likely to change jobs. (Gursoy et al 2013) .Generation Y refers to the individuals who are born during the period 1980-1999. Attitude, values, beliefs, aspirations and perspectives towards work of this generation are different from other generational cohort as has been found in several studies (Gursoy et al 2013, Lyons and Kuron, 2014, Schullery, 2013).

Literature review

Employee turnover intention

Employee turnover intention (ETI) is defined as "the last in a sequence of withdrawal cognition", where an individual thinks of quitting the organisation (Chiu and Francesco, 2003) and intent to look for an alternative employment. It is conscious and deliberate will of an employee to leave the organisation (Cho, et al 2009.)

Employee turnover intention has both positive and negative aspects. It is regarded as a positive factor for an employee as it can lead to better personal and professional growth (Mowday, et al 2013). However from the point of view of an employer turnover is considered as a huge loss.

Many aspects has been investigated by academicians and experts considering various factors contributing to employee turnover intention such as organization commitment, organisation culture, job characteristic, job satisfaction, person organisation fit, technology advancement. But for our study we have focused only on job characteristics, job stress and job satisfaction keeping in mind the unique nature of the coal industry. Studies have revealed that higher the employees job dissatisfaction level, the higher will be employee turnover intention (Bright, L. (2008)). Therefore job satisfaction is an important predictor of employee turnover intention. Literature indicates that job stress has significant positive relation with employee turnover intention and significant negative relation with job satisfaction (Kemery et al., 1987). High level of job stress can exert negative effects on physical and mental health and lead to higher employee turnover intention (Firth et al., 2004).

JOB SATISFACTION

Job satisfaction refers to the attitude a person holds for his job. It is a result of a range of factors that is related to job which motivates him to work and perform better (Zhou and George, 2001). Job satisfaction is often explained as an affective reaction to one's job (Weiss, H. M. 2002). Job satisfaction is "an internal state that is expressed by affectively and/or cognitively evaluating an experienced job with a certain degree of favour or disfavour favour (Wright and Cropanzano, 2000)." Job satisfaction is regarded as a multifaceted construct which includes feeling of employees towards intrinsic and extrinsic job elements (Howard and Frink (1996)). For decades, researchers and practitioner have intrigued employee satisfaction with work. Job satisfaction is very important as people spend most of their time at their workplace. When employees have positive attitude towards their job and organisation they achieve satisfaction and therefore tend to perform better (Bontis et al, 2011). Relationship between job satisfaction and employee turnover intention is one of the highly and most popularised researched topics. It has been noted that there is significantly and consistently negative relationship (Mobley et al., 1979) that is low job satisfaction level lead to higher employee turnover intention. Therefore dissatisfied employees are more likely to leave the .organisation as compared to the one who are satisfied (Kharti, et al., 2001). Hence job satisfaction supports intentions to stay and job dissatisfaction supports intentions to leave (Griffeth, et al., 2000; Cote and Morgan, 2002). Job satisfaction is a key antecedent to employee turnover intention (Lambert, et al 2001, Mobley, et al., 1979).

JOB CHARACTERISTICS

Job characteristics are key predictors of job satisfaction among generation Y employees (Kim, et al 2008). Employees' perception about job characteristics affects their performance and productivity. It also motivates them to perform better (Morgeson and Humphrey, 2006). When job characteristics are perceived favourably it leads to job satisfaction and eventually results in reducing employee's turnover intention (Mbah and Ikemefuna, 2012). Coal industry is typically supposed to be a hazardous industry with poor quality of work life and hence job characteristics are not perceived favourably. A job must include those characteristics which would lead to employee satisfaction to minimise employee turnover intention (Schaufeli and Baker 2004). Job characteristics contribute to employee satisfaction (Bontis and Serenko 2007). The job characteristics model given by Hackman and Odlham, provides a framework to understand the extent to which individuals believe that their jobs are providing job satisfaction and motivation as result of certain job characteristics. The five job dimension (task variety, task significance, task identity, autonomy, and feedback) (Hackman, et al 1976) explained in the model influence a number of personal and work outcomes such motivation, job satisfaction, personal and professional growth, lower absenteeism and turnover intentions (De Varo and Brookshire, 2007). The literature has plenty of evidences which empirically supports the positive link between job characteristics and behavioural outcomes (Chang and Lee, 2006; Thomas, et al., 2004).

JOB STRESS

Stress has been defined in a variety of ways but it essentially is the state of mind where an environmental demand exceeds response capabilities and there are perceived important consequences of not being able to meet those demands (McGrath, J. E. 1970). Stress is a situation in which an individual realises the pressure on him until he cannot afford to handle the demands of the situation (Stevens et al 2013). Workplace stress can be referred to as a harmful physical and emotional response that arises when there is a conflict between job demands as perceived by the employee and the degree of control an employee thinks he has in meeting those demands (Schaufeli & Baker 2004). Workplace stress includes role ambiguity, role conflict and role overload. In the mining sector the employees at work may worry about things like excessive working hours, unsafe working conditions, job pressure, quality of work life particularly working in shifts (Stranks, J. 2005) (Williams, et al. 2001), have suggested that increased stress level can lead to withdrawals symptoms. Stress among employees and their turnover intention have always been important issues for managers and academicians. Studies have been carried out to find what determines people's intention to quit by investigating possible antecedents of employees' intentions to quit. Firth et al. (2004) identified that the experience of job related stress and the range of factors that lead stress (stressors) create in employees the intention to quit the organization. Role stressors further push to employees' turnover intention. (Jamal, M. (1990)). Insufficient information on how to perform the job adequately, unambiguous expectations from superiors and pees, extreme job pressures, and lack of consensus on job functions or duties can make employees feel less involved and less satisfied with their jobs and careers (Brown 2016). This results in lower organizational commitment, create stress and eventually increase the propensity to leave the organization (Udo, et al., 1997). Studies on the relationships between workplace stress and turnover intention have concluded that high perceived job related stress are associated with high turnover intention. (Jogaratnam and Buchanan, 2004). Employees working in the mining industry are more likely to face uncertain situations as they are

exposed to more occupational stress (Jogaratnam and Buchanan, 2004). According to Kemery, Mossholder, and Bedeian (1987), perceived job stress is positively related to employee turnover intention. According to (Fairbrother and Warn, 2003) high levels of work stress results in physical and psychological problems and have negative effects on employee turnover intention. Job stress can have dysfunctional consequences like low levels of job satisfaction and increased absenteeism and turnover intention (Mikkelsen et al.,2000) Thus job related stress is a key predictor to several negative behavioural and attitudinal outcomes (Kokkinos 2007, MacKay, et al 2004).

The present paper aims to identify the relationship between job satisfaction, job stress and job characteristics and how they impact employee turnover intentions among generation Y employees working in the coal sector. There is scant literature available on factors of turnover intentions among generation Y in the Indian coal sector. Taking into account these the present research paper is aimed at examining the influence of job satisfaction, job characteristics, job stress on employee turnover intention in the coal sector.

- H1: There is a negative relationship between job satisfaction and employees turnover intention.
- H2: There is significant relationship between job characteristics and employees turnover intention.
- H3: There is positive relationship between job stress and employees turnover intention.

Methodology

DESIGN AND PARTICIPANTS

The population of the study is composed of frontline executives and non-executives working in Bharat Coking Coal Limited in Dhanbad. The sample consists of 267 managers and staff working at the middle level that were selected using convenient sampling. Then purposive sampling technique (Tongco 2007) was used to select employees who fall in the category of generation Y as the respondents of the study. A total of 290 forms were received from which 23 of them were not taken into consideration as they were incomplete. A total of 267 surveys were being used for data analysis. The questionnaires were adopted with slightly modifying items to suit the context of the coal industry turnover intention. We have summarized the constructs and their measurement in Table 1. All measures were in Likert five-point scales from 1 (strongly negative) to 5 (strongly positive) unless otherwise noted.

To assess the dimensionality of the data, the items were subjected to principal component analysis. The Kaiser-Meyer-Olkin (KMO) measure of sample adequacy found was .850, which is well above the suggested value of .6 or above (Kaiser, 1974). Principal component analysis (PCA) was carried out to assess the underlying factor structure for variables. We further used SPSS 21.0 and found that the original pool of 24 TABLE 1: SUMMARIZATION OF THE CONSTRUCTS AND THEIR MEASUREMENTS

	Variables	Items	Reference
1.	Job satisfaction	I am satisfied with the pay I receive. I am satisfied with the physical working conditions of the in the organisation. I am satisfied with the fringe benefits I receive. I am satisfied with the promotional policy of the organization.	Wu, X. (2012)
2.	Job characteristics	The job is quite simple and repetitive. The job denies me any chance to use my personal initiative or judgments. The job requires me to use a number of complex or high level skills.	Kim et al., 2009
3.	Job stress	I feel stressed out with my job. Problems associated with work keep me awake at night. I feel fidgety and nervous due to my job. I am pressured to work for long hours.	Qureshi et al., 2012
	Employee turnover intention	I often think of changing my job. It is likely that I will actively look for a new job next year. I never want to work in mining sector again. It is likely that I will actively pursue a mining career. If I may choose again, I will choose to work for current organization.	(Dess and Shaw, 2001), Kim et al., 2009

items for reflective constructs which was subjected to an exploratory factor analysis (EFA) with varimax rotation. The exploratory factor analysis revealed four factors namely job satisfaction, job characteristics, job stress, and employee turnover intention which explained 77.282% of the variance. While examining the items loading, we found that there were eight items whose loading was less than 0.6 on all factors. They were removed from further analysis. For confirmatory factor analysis (CFA) we used Amos 21 version where we performed a two-step analysis. Firstly we examined the measurement model. Secondly we examined the structural model. In this study we have used confirmatory factor analysis (CFA) to evaluate the measurement model. CFA is an appropriate statistical technique which is used for exploratory factor analysis (EFA) (Bagozzi and Phillips, 1982). The measurement model and structural model were checked to ensure the results were acceptable and were consistent. The measurement model deals with the reliability and validity of the constructs in measuring the latent variables, while the structural model is concerned with the direct and indirect relations among the latent variables (Tan 2001). Table 2 summarises the constructs and their respective factor loading and Cronbach alpha values.

Goodness of fit summary

Fit statistics including Chi-square, comparative fit index (CFI), standardized root mean squared residual (SRMR), and root mean square error of approximation (RMSEA) assessed the model fit. A Chi-square test assesses the adequacy of a hypothesized model to reflect variance and covariance of the data. For the statistical significance of parameter estimates, t

values are used. Generally, fit statistics greater than or equal to .90 for CFI indicates a good model fit (Bentler and Bonnet, 1980). Similarly, RMSEA values lower than 0.05 and SRMR values lower than 0.08 indicate adequate model fit.

We then identify the latent variables in the model using SPSS and conducting EFA and PCA with varimax rotation. A minimum eigenvalue of one was used as the criterion to control the number of factors extracted.

Fit of the measurement model was tested by constraining or referencing the factor loading of one variable per latent construct to one. Table 3 summarises the values of the above discussed indices.

The confirmatory factor analysis supported the exploratory factor analysis. The fit of the measurement model was acceptable ($\chi^2 = 140.099$, CFI = 0.988, RMSEA = 0.037, and RMR = 0.040). Therefore, the measurement model was retained without any modifications. According to Hair, Black, Babin and Anderson (2010), it is absolutely necessary to establish convergent and discriminant validity, as well as reliability, when doing a CFA. There are a few measures that are useful for establishing validity and reliability like composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), and average shared variance (ASV). The thresholds for these values are mentioned in Table 4.

Reliability = CR > 0.7; convergent validity = AVE > 0.5; discriminant validity = MSV < AVE, ASV < AVE; and square root of AVE are greater than inter-construct correlations. The results of the analysis are indicated in Table 4. Each research construct conforms to the above four criteria. Thus all

Constructs	Items	Factor loading	Square multiple correlation (SMC)	Cronbach α
Job stress	JStr 18	.901	.735	alpha (.924)
	JStr 17	.884	.745	
	JStr 16	.916	.828	
	JStrs 15	.871	.722	
Employ turn over intention				
	ETI 19	.841	.644	alpha (.893)
	ETI 22	.888	.777	
	ETI 21	.843	.677	
	ETI 20	.838	.611	
	ETI 23	.724	.445	
Job satisfaction	JSA T4	.948	.877	alpha (.957)
	JSA T7	.940	.854	
	JSA T5	.924	.792	
	JSA T6	.942	.864	
Job characteristics	JCH 1	.838	.633	alpha (.747)
	JCH 2	.801	.427	
	JCH 3	.792	.445	

Table 2: Summary of constructs and their respective factor loading and Cronbach α values

TABLE 3: MODEL FIT INDICES					
Fit indices	Observed value	Cut-off values and references			
χ^2	140.099				
Scaled χ^2/df	1.430	>5.00			
GFI	.948	>90 (Hair et al. 2009)			
NFI	.962	>90 (Hair et al. 2009)			
TLI	.986	>90 (Hair et al. 2009); >95 (Hu and Bentler 1999)			
CFI	.988	>90 (Hair et al. 2009); >95 (Hu and Bentler 1999)			
RMSEA	.037	<70 with CFI >92 (Hair et al. 2009)			
AGFI	.928	>80 (Chau and Hu 2001)			
RMR	.40	<80 (Hair et al. 2009)			

necessary indices are acceptable. The convergent validity was assessed by average variance extracted (AVE) which was greater than 0.50 for all constructs. Finally, discriminant validity was assessed by square root of AVE which was greater than inter-construct correlations. This means the indicators have more in common with the construct they are associated with than they do with other constructs. Therefore, the constructs for the model demonstrate discriminant validity.

Results

Table 5 shows the regressions and hypotheses results.

There exists a negative relationship between job satisfaction and employee turnover intention having value - .111 and P value 0.05 which shows significant of results.

	CR	AVE	MSV	ASV	JSTR	JSAT	ETI	JCH
JSTR	0.926	0.757	0.072	0.035	0.870			
JSAT	0.957	0.847	0.015	0.007	-0.062	0.920		
ETI	0.895	0.631	0.072	0.037	0.269	-0.123	0.794	
JCH	0.750	0.502	0.030	0.018	0.172	0.025	0.158	0.708

HYPOTHESIS TESTING

	TABLE 5: HYPOTHESIS TESTING					
	Estimate (β)	S.E	C.R (T value)	P value	Remark	
ETI 🗲 JSAT	111	.056	-1.922	.05	Accepted	
ETI 🗲 JSTR	.242	.065	4.021	* * *	Accepted	
ETI 🗲 JCH	.119	.069	1.810	.070	Rejected	

Results show that with a decrease in job satisfaction the employee turnover intentions are increased. Regressions estimates of job stress and employee turnover intention are .242, which indicate a positive association between the variables, P values less than 0.05 shows the significance of relationship. This shows the acceptance of our second hypothesis. The regression estimates for job characteristics and employee turnover intentions value are .119 and the P value is .070 therefore our third hypothesis is rejected (H3: There exists a significant relationship between job characteristics and employee turnover intentions).

Discussion

The workplace in the present times has undergone a sea change as the new generation that is generation Y is replacing the older ones rather fast. This generation has a different mind-set from the earlier one which was more loyal to the organisation and less impatient with their working conditions. This is particularly for the Indian coal industry which is largely under government and where long term employment has been a norm. With more and more generation Y entering the coal industry a new trend has been observed and turnover rates have been risen significantly (Vision 2020). In the present paper we tried to identify the reasons for this trend and examine what factors are responsible for the growing tendency to quit among generation Y. In our study employee turnover intention is the independent variable whereas job satisfaction, job characteristics and job stress are the dependent variables.

The results depict that employee turnover intentions are negatively related to job satisfaction. With the increase in job satisfaction employee turnover intentions decrease. The results are consistent with previous studies. If organizations are willing to retain employees they must reduce the job stressors which may cause the job stress and ultimately this leads to employee turnover. Another important factor is job stress which is positively related to the employee turnover intentions. That is, increased job stress leads to employee turnover intention. Job stress is an important determinant of ETI, the higher the stress the more likely the employee is willing to quit. This is expected in line with the extant literature. Because a job that disturbs the peace of the employees is not likely to hold him back for long. If organizations are willing to retain employees they must reduce the job stressors which may cause the job stress and ultimately this leads to the employee turnover. Similarly job characteristics was assumed to be a key factor for retaining employees. But our study proved it wrong. The result shows that job characteristics are not having a significant relationship with ETI. The unique nature of the industry may be the plausible explanation for this. Coal industry is largely in public sector and provides reasonable job security, decent pay and respectable social status. The job characteristics thus initially do not matter or are over looked.

Conclusion

The coal industry has to be understood if these findings have to be understood. The general perception of the coal industry is that of hazardous and potentially harmful to health and wellbeing. The quality of life is also not perceived pleasant. Nevertheless these considerations are glossed over initially when a millennial enters the industry and balance the compensation package and security of government job with undesirable job characteristics. However, as an individual gets into the industry and settles, or she finds the conditions trying enough to sustain and starts thinking of other options. Firth et al. (2003) defined that managers can reduce employee turnover rate by reducing employee turnover intention, and then managers need to regulate the relationships between supervisors and subordinates in order to reduce stress from management. They also need to improve the satisfaction and commitment of employee, thus reduces the negative intention from employee. May be taking all these into considerations the company is thinking of revamping its HR policies to add more attractiveness to the job characteristics and is also trying to create a congenial human relations atmosphere by introducing initiatives such as coaching, mentoring and reverse mentoring and various other training and development programmes (HR Vision 2020, 2015).

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