Employee Turnover: A Study on Information Technology Sector

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Under the globalized market, a firm's success depends on its innovativeness, adaptability and speed. These all are derived from its own human resources, but employee turnover can jeopardize a firm's efforts. This study, based on a primary survey, tries to explore the underlying reasons behind the voluntary turnover of Information Technology (IT) professionals. Among the six plausible considered push and pull factors – 'higher-salary', higher-portfolio', 'higher-company-brand-name' – these three pull factors chronologically appear to be responsible for IT professional turnover, regardless of age and gender. From an empirical and turnover model, it appears that an employee's attitude towards life and work is a key parameter affecting employee turnover.

The key players behind the spectacular technological changes in the 21st century are human beings. Human resources are sometimes referred to as human capital by different schools of thought and is considered as intangible intellectual capital with distinctive functional capabilities that control and augment both physical capital and other resources. Consequently, intellectual property has become the obvious concern of the present century, which in turn, has diffused in order to develop hypercompetitive market rivalries in world markets. Pfeffer (1994) argued that success in the present dynamic, hypercompetitive markets depends more on innovation, speed, and adaptability which are largely derived from a firm's own employees and the way in which they are managed. With similar arguments, various scholars (Wernerfelt, 1984; Levine, 1995; Lawler, 1996; Grant, 1996; O'Reilly & Pfeffer, 2000) advocated that for the competitive advantage, a firm should adopt a set of management practices with high involvement from human resources (HR). These arguments are the genesis for the development of today's system of Strategic Human Resource Management (SHRM).

Highly skilled and talented employees are indispensible for achieving or maintaining competitive advantages and are considered as assets to an organization. Therefore, any loss of this resource undoubtedly would be at great cost to the organization. In the present globalized competitive market, firms generally set up their respective HR divisions to promote, protect, and utilize their employee resources. The major problem faced by the firms though, is the departure of these resources, especially skilled ones. The employee turnover cost becomes even greater when efficient and skilled employees leave the firm. On the other hand, most employees will try to optimize their professional career, which is subject to their capability and functional domain. An employee's career scale is always judged in terms of income, professional position, and the reputation of the organization where the employee works. Therefore, human resources management often confronts two types of problems: recruiting and retaining high-value employees.

The Information Technology (IT) sector is one of the most important sectors of the world, especially in India where the voluntary employee turnover is the highest compared to other sectors. It is therefore pertinent to identify the reasons behind voluntary employee turnover in this changing market environment. This study, based on a primary survey, will endeavor to find the reasons behind the voluntary turnover of IT professionals.

Literature Review

Job Satisfaction, Employees' Future Expectations and Employee Turnover

Researchers have tried to unveil the impellent factors behind an employee leaving or choosing to stay with the firm. In this regard, Hom and Griffeth (1991) argued that an employee's job satisfaction or dissatisfaction is what motivates them to stay with or leave the firm. But these work attitudes play a relatively small role (Hom & Griffeth, 1995; Griffeth, Hom, & Gaertner, 2000) in overall employee retention. Instead, various other factors like organizational commitment, the opportunity for job alternatives, etc. are more important in explaining employee turnover. Mobley et al. (1979) observed that there are two factors responsible for employee turnover: one is the employee's evaluation of the firm's future expected value with respect to their own work aspirations, and the other is the tension associated with the employee's present work conditions. Researchers like Becker (1975), Kraut (1975), Stevens et al. (1978) and many others argued that employees make an implicit comparison between expected job benefits and alternative job opportunities. If the offered benefits of the present job are greater than or equal to alternative offers, then they will be less likely to leave the firm. An employees' personal commitment is a completely different aspect which indicates the intention of the employee to continue working in the firm in lieu of accepting an alternative job that may offer potentially better socio-economic benefits.

Workload, Role Ambiguity and Employee Turnover

Numerous studies have reported evidence like workload, role ambiguity, and role conflict in determining turnover decisions (Bostrom, 1981; Goldstein & Rockart, 1984; Ivancevich, Napier, & Wetherbe, 1983; Li & Shani, 1991; Sethi, Barrier, & King, 1999;

Weiss, 1983). It has been suggested that IT professionals in many firms are continually asked to take on impossible workloads and deadlines (Bartol & Martin, 1982; Ivancevich et al., 1983). The primary component of job burnout and exhaustion is the depletion of mental resources (Schaufeli, Leiter, & Kalimo, 1995). Consequences of exhaustion include job dissatisfaction (Burke & Greenglass, 1995; Maslach & Jackson, 1984; Pines, Aronson, & Kafry, 1981; Wolpin, Burke, & Greenglass, 1991), reduced organizational commitment (Jackson, Turner, & Brief, 1987; Leiter, 1991; Sethi et al., 1999; Thomas & Williams, 1995), and enhanced turnover intention (Jackson, Schwab, & Schuler, 1986; Jackson et al., 1987; Pines et al., 1981).

Gender Differentiated Employee Turnover

Marta M. Elvira (2001) observed that women were less likely to leave when there were other women employed at high levels within the firm. On the other hand, men's turnover was not significantly affected by the proportion of men in their own hierarchical level or immediately above their level, but decreased when more men were employed in executive levels. Again, social structure affects individuals differently, and different aspects of that same social structure have differing effects. Hence, it can be said that women are less likely to leave when they work with more women at their job level (Tolbert et al., 1995). Tsui, Egan, and O'Reilly (1992) observed that men's psychological attachment diminished with an increasing proportion of women. This evidence suggests that men are less likely to exit when more men work at their job level.

Employee Turnover in the IT Sector

Voluntary employee turnover of Information Technology (IT) professionals has become one of the persistent challenges faced by technology-based firms, and one of the major problems lies in employee retention. Adams, Clark, and Goldman (2006) argued that IT turnover remains a chronic problem. Despite a significant number of studies on IT turnover that have been conducted in the last two decades; there is no symmetric review of this topic for the collective understanding of accumulated knowledge on the IT turnover phenomenon. Most of the literature on IT professionals' turnover has focused on turnover intentions and very few have examined actual IT turnover behavior. Some IT firm level turnover studies emphasized contextual factors related to IT (Ang & Slaughter, 2000; Cappelli & Sherer, 1991) and focused on the internal labor market (Ang & Slaughter, 2004) and human resource practices' (Ferratt, Agarwal, & Brown, 2005) influence on IT turnover rates. Bacharach (1989) tried to specify interrelationships among the existing antecedents to explain why IT professionals develop turnover intentions. Thus, the crux of the problem therefore lies in the organizational internal environment, external labor market conditions as well as an employee's perception and attitude towards life and work.

Conceptual Framework

Employee Turnover: Refers to the percentage of employees who have left the organization during a specific period (usually one year) to the average monthly employee strength of the organization.

Employee turnover = $\frac{Y}{\bar{x}} * 100$; where $\bar{x} = \frac{\sum_{i=1}^{12} x_i}{12}$;

y=Number of employees left in a year

Employee turnover can primarily be classified as voluntary or involuntary. In the case of voluntary, the employee's decision to leave a company is solely that employee's decision. The voluntary turnover occurs, because of various factors like an employee's job dissatisfaction, workload, familial reasons and/or when the employee is attracted by lucrative offers from other similar organizations. In the case of involuntary turnover, the employee's job termination decision is made by the organizational authority. Employee retirement, layoff, etc. are examples of involuntary turnover.

It is apparent that the employee's decision to leave or not to leave an organization is influenced by either endogenous factors, exogenous factors, or both. Keeping this in mind and for the sake of better understanding, this study classified the underlying reasons of employee turnover into push and pull factors.

Push Factors: Push factors are those factors which compel the employee to quit a job (e.g., employee's job dissatisfaction, breach of commitment, familial compulsion and other like factors).

Pull Factors: Pull factors motivate employees to change organizations voluntarily in order to achieve a better and higher position in the professional-hierarchical scale. Pull factors include attractive offers from similar competitive firms, like 'higher salary', 'higher portfolio', 'higher company-brand-name', which are the means of upgrading an employee's social and economic status.

Theoretical Framework

The employee turnover phenomenon is the consequence of various impulsive factors. These factors are classified into exogenous pull factors (e.g., attraction of a higher salary, higher portfolio, more prestigious company or better brand name) and endogenous push factors (e.g., job dissatisfaction, breach of commitment, familial compulsion, retirement, etc.) which compel an employee to leave an organization voluntarily. For the sake of simplicity, it was assumed that the goal of an employee was to optimize professional achievement and that he/she would always accept any available better offer in order to upgrade their professional career. It was also assumed that alternative job opportunities were available in the market.

Q_t implies an employee's voluntary decision to leave an organization at time t, and P_t^l and P_t^h are the respective impulsive pull and push factors at time t. Then,

$$Q_t = Q\,(P_t^l, P_t^h); \frac{dQ_t}{dP_t^l} > 0, \ \frac{dQ_t}{dP_t^h} > 0 \qquad \ldots (1)$$

Now,

$$P_t^l = f\,(S_t^*, P_t^*\ C_t^*); \frac{dP_t^l}{dS_t^*} > 0, \ \frac{dP_t^l}{dP_t^*} > 0, \ \frac{dP_t^l}{dC_t^*} > 0 \qquad \ldots (2)$$

Where, S_t^* , P_t^* and C_t^* are the attractions of 'Higher Salary', 'Higher Portfolio' and 'Higher Company-Brand-Name' respectively offered by other organizations at time, t.

If S_t, P_t and C_t are the 'Salary', 'Portfolio' and 'Company-Brand-Name' enjoyed by employees in the organization where they are working at time, t.

Then, $(S_t^* - S_t) = s_t \Rightarrow$ Higher Salary impulsion at time t,
$(P_t^* - P_t) = p_t \Rightarrow$ Higher Portfolio impulsion at time t, and
$(C_t^* - C_t) = c_t \Rightarrow$ Higher Company-Brand-Name impulsion at time t.

Then function (2) becomes,

$$P_t^l = f(s_t, p_t, c_t); \frac{dP_t^l}{ds_t} > 0, \frac{dP_t^l}{dp_t} > 0, \frac{dP_t^l}{dc_t} > 0 \quad \ldots (3)$$

On the other hand,

$$P_t^h = f(B_t, O_t); \frac{dP_t^h}{dB_t} > 0, \frac{dP_t^h}{dO_t} > 0 \quad \ldots (4)$$

Where, B_t and O_t are the 'Breach of Commitment' and 'Others' factors respectively at time t.

Considering $\hat{B}_t$ and B_t as the commitments made and the commitments fulfilled in practice at time t respectively and $\hat{O}_t$ and O_t as the 'Other' Expected Employees' own constraints, and the actual constraints faced by the employee at time t then,

$(\hat{B}_t - B_t) = b_t \Rightarrow$ Breach of Commitment impulsion at time t, and
$(\hat{O}_t - O_t) = o_t \Rightarrow$ Other self-constraints impulsion at time t.

Then function (4) becomes,

$$P_t^h = f(b_t, o_t); \frac{dP_t^h}{db_t} > 0, \frac{dP_t^h}{do_t} < 0 \quad \ldots (5)$$

Replacing functions (4) and (5) into function (1), then there is,

$$Q_t = Q(s_t, p_t, c_t, b_t, o_t), \quad \ldots (6)$$

$$where \ \frac{dQ_t}{ds_t} > 0, \frac{dQ_t}{dp_t} > 0, \frac{dQ_t}{dc_t} > 0, \frac{dQ_t}{db_t} > 0, and \ \frac{dQ_t}{do_t} < 0$$

Hence, it can be said that the voluntary decision of employees to quit (Q_t) an organization depends on a number of factors and the impact of these varies from employee to employee. If a linear relationship is assumed between Q_t and its predictor variables, then the required equation:

$$Q_t = \alpha + \beta_1 s_t + \beta_2 p_t + \beta_3 c_t + \beta_4 b_t - \beta_5 o_t + e_t \quad \ldots (7)$$

But, the outcome of Q_t is reflected only when the decision of the employee has been measured, (i.e., either the employee quits or stays in the organization). Then the dependent variable Q_t becomes dichotomous. If values 0 and 1 are assigned to employee's staying or leaving the organization respectively, then the coefficient of each independent predictor will show their respective contribution to the variation of Q_t. From the knowledge of relevant independent predictors and coefficients, the objective becomes not to find a numerical value of Q_t as in linear regression, but the probability (θ) that it is 1 rather than 0. Then outcome will not be a prediction of a Q_t value but a probability value which can be any value between 0 and 1. A log transformation was needed to normalize the distribution and this log transformation of the θ values to a log distribution enabled the study to formulate a normal regression equation. The log distribution (or logistic transformation of θ is the log (to base e) of the odds ratio that the dependent variable was 1 and was defined as,

$$log\left[\frac{\theta}{1-\theta}\right] = In\left(\frac{\theta}{1-\theta}\right), \text{ where } \theta \text{ ranges between 0 and 1}$$

Hence, the required equation becomes,

$$In\left[\frac{\theta}{1-\theta}\right] = \alpha + \beta_1 s_t + \beta_2 p_t + \beta_3 c_t + \beta_4 b_t - \beta_5 o_t + e_t \qquad \ldots (8)$$

$$where\ P(Q_t = 1) = \theta\ and\ P(Q_t = 0) = (1 - \theta)$$

Methodology

Primary information regarding causal factors behind employee turnover in the IT sector was collected through a questionnaire given to 460 IT employees working presently in 17 different IT firms in Kolkata, West Bengal. The snowball method was used for sample selection. The questionnaire contained multidimensional questions to capture the behavioral patterns of IT employees under the influence of different push and pull factors. In this study, 420 respondents (out of a total of 460 respondents) had left companies at least once before joining their current company at the time of the survey. The number of companies covered by the survey, including the companies the respondents had left, was approximately 90.

This study was concerned with six plausible factors: 1) 'higher salary', 2) 'higher portfolio', 3) 'scope of foreign assignment', 4) 'higher company-brand-name', 5) 'breach of commitment', and 6) 'others' (which includes employee's job dissatisfaction, familial obligations, and other factors) which were hypothesized to be influential in causing Indian IT professionals to leave their jobs voluntarily and examine relative factors of dominance across gender and age groups. The respondents were asked to rank these factors according to their reasons for leaving their last company. Thus, respondents' given ranks expressed their respective motivation behind leaving the last company they worked for.

One of the implicit assumptions made in the study was that an employee's decisions were strongly affected by their attitudes towards life and work. Research in psychology and organizational behavior, especially the content theories, focused on the needs, wants

and desires of people which were the main impetus for motivational behaviors. The study also incorporated a self-appraisal of the IT employees' attitudes towards life and work and examined its effect on their turnover intent as well as the actual turnover. It appeared that the reasons behind turnover of the two groups of employees [ones who give 'Highest Priority to Work Life' (HPWL) and others who give 'Highest Priority to Social Life' (HPSL) in accordance with employees' self-assessment] were distinctively different. Respondents were classified by gender and age. Frequency and percentage distributions will be presented in tabular form. A correlation matrix and linear regression analysis were done. In addition, this paper developed a theoretical framework for employee turnover and based on that, a turnover model was created. The characteristics of sample respondents are presented below in the form of descriptive statistics.

Table 1: *Descriptive Statistics of Sample Respondents*

Characteristics of Sample Respondents	Age Group									Total		
	Less than 30			30-40			Above 40					
A. Gender	No.	$\bar{x}$	σ	No.	$\bar{x}$	σ	No	$\bar{x}$	σ	No.	$\bar{x}$	σ
Male	119	27.0	1.6	188	34.1	3.3	21	43.8	2.5	328	32.2	5.3
Female	69	27.4	1.7	60	33.4	3.2	3	42.0	1.0	132	30.5	4.2
Total	188	27.1	1.6	248	33.9	3.3	24	43.6	2.4	460	31.6	5.7
B. Experience in IT (in yrs):												
Less than 1yr.	5	0.4	0.2	0	0.0	0.0	0	0	0	5	0.4	0.2
1-5 years	144	2.8	1.4	32	4.7	1.0	0	0	0	176	3.1	1.5
6-10 years	38	6.7	1.0	124	7.7	1.4	1	10	0	163	7.5	1.4
10 yrs.+	1	29.0	0.0	92	12.8	1.9	23	18.2	2.9	116	14.0	3.3
Total	188	3.7	2.1	248	9.2	2.7	24	17.9	3.3	460	7.4	4.4
C. # of company changes:	27	-	-	10	-	-	3	-	-	40	0	0
0 change	38	-	-	43	-	-	6	-	-	87	0	0
1 change	41	-	-	73	-	-	5	-	-	119	0	0
2 changes	82	3.4	1.0	122	3.5	1.0	10	3.6	1.1	214	3.5	1
3+ changes												
Total	188	3.4	1.0	248	3.5	1.0	24	3.6	1.1	460	3.5	21.4

Note: $\bar{x}$ = mean; σ = Standard deviation and No. = Number of respondents

Empirical Observations

The empirical analysis was based on the information collected through a survey of 460 IT professionals in West Bengal. In order to judge the intrinsic factors behind an employee's propensity to leave a company, some endogenous factors [e.g., scope of revealing skill (SRS), professional attitude (PA), locational advantage (LA), experience

in IT (EIT), 'higher degree of independence leads to greater attachment' (HIGA)] were obtained from the 460 respondents (40 of which did not change companies at the time of survey), to reveal their plausible response. First, a correlation matrix was computed to see the relationship between these factors and the number of company changes (NCC) made by each respondent. Then a linear regression was estimated by assigning the 'number of changes' as the dependent variable (Y). The results of the correlation matrix and the regression analysis are presented below.

Figure 1: *Pearson Correlations Matrix (n=460)*

Variables	NCC	SRS	PA	LA	ExIT	HIGA
NCC	1					
SRS	- .098*	1				
PA	-.326*	.076	1			
LA	.131**	.061	- .005	1		
EIT	.128**	.028	.012	- .055	1	
HIGA	.127**	.014	-.067	.008	.040	1

**. Significant at the 0.01 level (2-tailed). *. Significant at the 0.05 level (2-tailed).

The correlation matrix among the endogenous factors explored the relationship of these factors with the 'number of company changes' (NCC) made by each respondent and also the inter-correlation between factors. Most of these endogenous factors appeared to be significantly correlated with 'number of company changes', but inter-factor correlations were found to be very insignificant.

Linear Regression Equation:

NCC = 1.853 - 0.123 (SRS) - 0.393 (PA) +0 .408 (LA) +0 .038 (EIT) +0 .279 (HIGA)
(5.155*) (-2.033) (-7.258*) (3.285*) (3.198*) (2.321*)

(Figures in the parenthesis indicate t value and *, indicates significant at the 0.01 level)

The correlation matrix showed that all the variables were highly correlated with the 'number of company changes' (NCC) and from the regression it appeared as expected, that all the predictor variables were significantly related to the predicted variable. The employee's propensity to change companies was negatively related with SRS and PA. This implies that an employee's highly professional attitude combined with the greater scope of revealing skill would reduce their propensity for leaving the company. On the other hand, highly experienced (EIT) employees revealed their preference to locational advantage (LA) and greater freedom of work (HIGA) and if these preferences were not satisfied at their existing company, it increased their propensity to change companies. The reason behind this may as an employee ages, they may be more likely to look for work in a better location in order to avoid non-professional problems as well as have greater freedom to demonstrate their work efficiency and commitment.

Respondents (n = 420) who changed at least one company ranked the given 6 plausible causal factors according to their own rationale of leaving their last company. Respondents' given ranks were arranged in accordance with age groups ('below 30',

'30-40'and 'above 40') and gender. It was apparent that most of the respondents (47.5% male and 49.6% female; overall 48%), irrespective of age and gender, gave rank-1 to 'higher salary'. This implied that the attraction of a higher salary was the most important factor for IT professionals for joining a new company. After 'higher salary', about 32% (27.2% male and 43.7% female) of the respondents ranked 'higher portfolio', and over 32% (34.6% male and 40.3% female) ranked 'higher company-brand-name' third. It is evident that the three impulsive pull factors, irrespective of age and gender, were mostly responsible for IT employees' leaving a company. 'Breach of commitment', 'others', and 'scope of foreign assignment' respectively ranked 4th, 5th and 6th. However, it appeared that the top three priority causal factors differed between male and female IT professionals. Male employees' first concern was 'higher salary' followed by 'higher company-brand-name' and 'portfolio'. On the other hand, female employees' main concern was also 'higher salary' but the second concern was 'portfolio', followed by 'higher company-brand-name'. Females appeared to be more concerned about professional hierarchy than their male counterparts.

In order to single out the most important reason among different age groups of IT employees for leaving their last company, the distribution of which of the 6 factors was ranked first was observed. Fifty-one percent of the 'below 30' age group of respondents ranked 'higher salary' first. The corresponding figures for the '30-40' and 'above 40' age groups respectively were around 48% and 33%. After 'higher salary', the second highest frequency of factors ranked was to 'higher company-brand-name' by the 'below 30' group (27%), age '30-40' (22%) and 'above 40' (24%) age group of respondents respectively (see Table 2). The third highest frequency of factors ranked was given to 'higher portfolio' by 10%, 13.8%, and around 10% of respondents 'below 30', '30-40', and 'above 40' respectively (see Table 1). One distinctive feature was that the propensity to change companies was much higher among younger IT employees which reflected their zeal to reach the top of the professional-ladder within a short period of time.

Table 2: *Distribution of Highest Rank Given by the Respondents by Age Group*

Age Group	Most important reason (Rank-1) for changing company						Total
	Higher Salary	Higher Portfolio	Scope of Foreign Assignment	Higher Company-Brand-Name	Breach of Commitment	Others	
Below 30	82 (51.0)	16 (9.9)	7 (4.4)	44 (27.3)	6 (3.7)	6 (3.7)	161 (100)
30-40	113 (47.5)	33 (13.8)	8 (3.4)	53 (22.3)	14 (5.9)	17 (7.1)	238 (100)
Above 40	7 (33.4)	2 (9.5)	2 (9.5)	5 (23.8)	1 (4.8)	4 (19.0)	21 (100)
Total	202 (48.1)	51 (12.1)	17 (4.0)	102 (24.3)	21 (5.0)	27 (6.5)	420 (100)

Note: Figures in the parenthesis are the % of total respondents.

In order to judge attitudinal affect on employee turnover intention, the 460 employees were divided into two groups: 1) 'Highest Priority to Work-Life' (HPWL) and 2) 'Highest Priority to Social-Life' (HPSL) according to the respondents' self-evaluation

of their attitudes towards life and work. Each group was then divided into three sub groups: 1) 'no change of jobs', 2) '1 or 2 changes of jobs', and 3) '3 or more changes of jobs' (see Table 3). Out of a total of 460 respondents, 8.6% did not change companies (n = 40) at the time of the survey, of which 75% belonged to the HPSL category and the remaining 25% belonged to the HPWL category. Around 206 respondents had already made '1 or 2 changes of job' of which 55% belonged to the HPSL category. However, it is interesting to note that out of those who had already changed 3 or more jobs, only 29% of them fell into the HPSL category and the remaining 71% were from the HPWL category. It was observed that for IT employees 'higher salary', 'higher portfolio' and 'higher company-brand-name' were the three primary reasons for them leaving a company. Therefore, it is evident that for the HPWL categories of employees, financial gain, professional position, and professional glamour with a more prestigious company brand name were the most important factors.

Table 3: *Distribution of Respondents in Accordance with Their Highest Priorities between 'Work Life' and 'Social Life' by Age Group*

Age Group	Respondents' Self-Evaluation of Attitudes Towards Their Work and Life								Total
	Highest Priority to Work-Life (HPWL)				Highest Priority to Social-Life (HPSL)				
	No Change	1 or 2 Changes	3 or more Changes	Total	No Change	1 or 2 Changes	3 or more Changes	Total	
Below 30	9 (4.8)	34 (18.1)	62 (33.0)	105 (55.9)	18 (9.6)	45 (23.9)	20 (10.6)	83 (44.1)	188 (100.0)
30-40	1 (0.4)	53 (21.4)	86 (34.7)	140 (56.5)	9 (3.6)	63 (25.4)	36 (14.5)	108 (43.5)	248 (100.0)
Above 40	0 (0.0)	5 (20.8)	5 (20.8)	10 (41.6)	3 (12.5)	6 (25.0)	5 (20.8)	14 (58.4)	24 (100.0)
Total	10 (2.1)	92 (20.0)	153 (33.3)	255 (55.4)	30 (6.5)	114 (24.8)	61 (13.3)	205 (44.6)	460 (100.0)

Note: Figures in the parenthesis are percentage of corresponding totals.

Again, when the respective attitudinal category of respondents was classified according to age group, it became apparent that in the HPWL category, employees of relatively lower age groups frequently changed jobs (59% of 'below 30' and 61% of '30-40' age groups of respondents changed '3 or more companies'). On the other hand, among the HPSL category of employees, only 24% of 'below 30' and 33% and of '30-40' age groups made '3 or more changes of jobs'. Respondents who made '3 or more changes of jobs' among the 'above 40' group were equally distributed between HPWL and HPSL categories (see Table 3). It was also revealed that 91% of 'below 30', 99% of '30-40', and 100% of 'above 40' age groups in the HPWL category of respondents changed at least one company. The corresponding figures for the HPSL category of respondents were 78%, 92% and 79% of the 'below 30', '30-40' and 'above 40' age groups respectively. Thus, it appeared that HPWL category of employees irrespective of their age group generally changed jobs more frequently than those in the HPSL category. Hence, the role of an employee's attitude on their turnover decision appeared to be very much pertinent.

Employee Turnover Model

Dependent Variable (Y)

An employee's propensity to change companies was the dependent variable of the model. An employee's propensity to change companies is defined as follows:

$$\text{Employee's propensity to change company} = \frac{\text{Employee's IT experience (in years)}}{\text{Employee's number of company changes}}$$

This ratio is the average time that an employee remained in one job. In other words, this ratio is an employee's average propensity to change a company. A higher value of the above ratio indicates lower propensity to change and vice versa. The respondents were classified into two groups: a high-propensity group and a low-propensity group. The median value of the employee's propensity was taken as a cut-off value. Employees having a median value of propensity to change or less than median value were assigned 1 (high-propensity group). Values above the median value were assigned 0 (low-propensity group). Therefore, the dependent variable was a dichotomous one by putting 0 for those employees who had a low-propensity to change companies and l for those who had a high-propensity to change companies.

The dependent variable (Y) became a dichotomous variable: $Y = In\left(\frac{\hat{p}}{1-\hat{p}}\right)$

A linear logistic regression model was fit in the following form:

$$In\left(\frac{\hat{p}}{1-\hat{p}}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 - \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$$

Here, $\hat{p}$ = Probability (Y = 1) implied the probability of an employee to quit the company, and $(1 - \hat{p})$ = Probability (Y = 0) implied the probability of an employee to stay in the company.

Explanatory Variables (X_i)

X_1 = Higher Salary (HS); X_2 = Higher Portfolio (HP); X_3 = Higher company-brand-name (HCBN); X_4 = Others (OTH); X_5 = Breach of Commitment (BoC); X_6 = Age (AG); X_7 = Educational Qualification (Edu_Q); X_8 = Attitude

Respondents were asked to reveal the reasons for their leaving their last company by assigning ranks (1 for the highest rank and 6 for the lowest) for the 6 possible job change factors: 'higher salary', 'higher portfolio', 'company's brand name', 'scope of foreign assignment', 'breach of commitment', and 'others'. The overall rank of 'scope of foreign assignment' appeared as insignificant and therefore this plausible factor was not included in the models. Here, the numerical value of each of the X_1 to X_5 explanatory variables varied from 1 to 6. The value of the variable X_6 was a continuous variable and X_7 and X_8 were binary variables.

Output of the Logistic Regression

Table 4: *Classification Table*[a,b]

Observed			Predicted		
			Bi_prop_change		Percentage Correct
			0	1	
Step 0	Bi_prop_change	0	194	0	100.0
		1	181	0	.0
	Overall Percentage				51.7

a.. Constant is included in the model. *b.* The cut value is .500

Table 5: *Variables in the Equation*

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 0	Constant	-.069	.103	.450	1	.502	.933

Table 6: *Omnibus Tests of Model Coefficients*

		Chi-square	Df	Sig.
Step 1	Step	407.779	8	.000
	Block	407.779	8	.000
	Model	407.779	8	.000

Table 7: *Model Summary*

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	111.630[a]	.663	.884

Note: Estimation terminated at iteration number 9 because parameter estimates changed by less than .001

Table 8: *Hosmer and Lemeshow Test*

Step	Chi-square	Df	Sig.
1	1.505	8	.993

Table 9: *Classification Table*[a]

Observed			Predicted		
			Bi_prop_change		Percentage Correct
			0	1	
Step 1	Bi_prop_change	0	179	15	92.3
		1	12	169	93.4
	Overall Percentage				92.8

a. The cut value is .500

Table 10: *Variables in the Equation*

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1[a]	HCBN	1.316	.337	15.211	1	.000	3.729
	BoC	1.201	.316	14.474	1	.000	3.324
	OTH	.829	.268	9.605	1	.002	2.292
	Age	-1.906	.286	44.551	1	.000	.149
	Attitude	-2.018	.701	8.291	1	.004	.133
	Edu_Q	3.831	.776	24.362	1	.000	46.130
	HS	-2.005	.701	8.188	1	.004	.135
	HP	.454	.264	2.959	1	.085	1.575
	Constant	38.953	6.735	33.446	1	.000	8.257E16

a. Variable(s) entered on step 1: HCBN, BoC, OTH, Age, Attitude, Edu_Q, HS, HP.

Model Discussion

The output of the logistic regression was derived by using the IBM SPSS Statistics version 20 software package. Out of 420 respondents, after the exclusion of the outliers, the number of samples became 375. The aim was to predict an employee's intention to change organizations for 375 IT respondents using 'higher salary' (HS), 'higher portfolio' (HP), 'higher company's brand name' (HCBN), 'breach of commitment' (BoC), 'others' (OTH), employee's 'attitude' (Attitude), 'age' (Age) and the educational qualification (Ed_Q) of the respondents as predictors. A test of the full model against a constant-only model appeared to be statistically significant, indicating that the predictors as a set reliably distinguished between the 'high-propensity group' and the 'low-propensity group' (chi square = 407.779, $p < .000$ with df = 8).

Nagelkerke's R^2 of .884 indicated a strong relationship between prediction and grouping. Prediction success overall was 92.8% (92.3% for the 'low-propensity group' and 93.4% for the 'higher-propensity group'). The Wald criteria demonstrated that all the predictors made significant contributions to the prediction (p = .000, .000, .002, .000, .004, .000, .004, 085 for HCBN, BoC, OTH, Age, Attitude, Edu_Q, HS, and HP, respectively). It appeared from the outcome of the model results that the model itself could make a correct prediction 51.7% of the time without any predictor variable. By adding the predictors in the model, the study was able to predict 92.8% with accuracy. The Hosmer and Lemeshow (H-L) goodness of fit test had a significance of 0.992 which meant that it was not statistically significant and therefore, the model was quite a good fit. However, it was observed that some of the coefficients [higher portfolio (HP), higher company-brand-name (HCBN), other (TH)] were opposite of those that would be expected. What is perplexing is that, except HP, all were significantly positive. One possible explanation for these results is that if the existing company failed to fulfill their expected portfolio and company's brand name, and if there were scopes of fulfilling their desired expectation to other companies, then an employee's probability to leave the present company would be much higher. It appeared from Exp (B) of the study's predictors that one unit higher offered in terms 'higher portfolio' (HP) or 'higher company's brand name' (HCBN) or 'other' (OTH) would enhance the probability of an employee changing companies by two or three times.

Concluding Remarks

The attraction of a 'higher salary' was the top ranked reason for an employee to leave a company for almost all the IT employees, regardless of gender and age. This reason was followed by 'higher portfolio', and 'higher company-brand-name'. All of these were in the array of pull factors. But, between 'higher portfolio' and 'higher company-brand-name', the female employees gave more priority to 'higher portfolio'. IT employees' attitudes towards life and work which is genetically inherited and determined by the influence of childhood socio-cultural and economic environments was an important parameter for judging the employee turnover phenomenon. Young employees were found to frequently change jobs which may be due to their desire to reach the top of the professional-ladder within a short period of time.

It appeared that lucrative offers from other competitive companies enhanced an employee's propensity to change from their existing company. Therefore, it is imperative to examine the magnitudes of attraction of different pull factors at which an employee finally quit his or her organization. This exercise was not done in the present study and is a limitation of the study. However, this issue could be considered as one for future studies.

Employee turnover models were actually meant for finding ways and means on how to retain skilled and high valued employees. The results in this study also have some policy implications for managers and administrators towards retaining talented employees. It was revealed that employees were very much concerned with their career development. Therefore, the organization should offer them a career path and career development plan. By doing so, an organization will show its commitment to developing its talent which benefits both the organization and the employee. Organizations should try to make employees realize that they are trying to enhance and support their employees' skills and experience. Again, the compensation structure for employees should be designed by giving salary and perquisites by means of a weighted composite function of qualification, talent, skill, performance and experience, as well as offering a slightly higher salary than the existing industry rates to highly valued employees. In reality, when it is followed, it will go much deeper into the human consciousness and the actions and attitudes that make employees feel successful, secure and appreciated. That in turn will help address the four key elements of a sound retention strategy: performance, communication, loyalty, and competitive advantage.

Above all, for a positive outcome with any retention strategy, it is necessary to mentor relationships with colleagues in order to increase emotional ties to the organization. Such familial relationships among the employees of the organization where each employee feels proud to be associated with the organization and his or her colleagues creates commitment to the organization.

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