

Factors Affecting Worker Turnover Intention in Tea Plantations in Sri Lanka

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ABSTRACT

Turnover intention is highly correlated with actual turnover behavior. Therefore, the present study aims to find out the factors affecting worker turnover intention in tea plantations and to identify correlation between worker turnover intention on commitment and job satisfaction. Sixty-six estates were chosen using stratified random sampling techniques. Primary data on 1800 estate workers (10% of the workers in sample estates) were gathered by using a pre-tested questionnaire. An ordinary logistic regression analysis was employed to determine the factors affecting turnover intention. Pearson correlation was computed to identify correlation between turnover intention and job satisfaction and organizational commitment. The results revealed that the significant positive factors of worker turnover intention are income, time taken to reach plucking fields, recognition, working environment, supervisory support and workload. Worker's job satisfaction and organizational commitment had a negative significant correlation with their turnover intention. The study highlights the importance of giving attention on the significant factors of worker turnover intention to minimize it in tea plantations.

Key words: Job satisfaction, organizational commitment, turnover intention



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INTRODUCTION

Tea industry is one of the main sources of foreign exchange earnings in Sri Lanka economy and tea sector contributed US\$ 1,244 million (Rs. 230,170 million) to the total export earnings. It accounted 12.38% of total export earnings and 53.15% of agriculture export earnings in Sri Lanka (Central Bank of Sri Lanka, 2019). Tea is the most labor-intensive plantation industry having the highest labor requirement per hectare and absorbing about 88% of the total plantation sector workforce (Sivaram and Herath, 1995). However, statistics revealed a declining trend of workforce employed in the plantation sector which causes to the problem of worker shortage. The reasons for worker shortage are worker outmigration, turnover and absenteeism of registered resident workers and plantation workers in the villages (Illukpitiya *et al.*, 2004).

The turnover has been defined in many ways and the simple definition of turnover is an actual employee's behavior of leaving the organization. Joshi (2002) found that there are several reasons attributed to the high rates of worker turnover. Houkes *et al.*, (2003); Iverson & Roy, (1994); Rosse and Miller, (1984) suggested that, pertaining to work related factors particularly conditions of employment (e.g. earnings, career opportunities) are important reasons of turnover intention. Blau and Boal (1987); Rosse and Miller (1984) found that, in particular, lack of satisfaction with salary and career opportunities was associated with turnover intention. Bawa and Jantan (2005) and Huselid and Day (1995) found that perceptions of human resource practices such as job security and compensation level are important determinants of employee turnover. A poor working environment is among the main reasons of turnover. Griffeth *et al.*, (2000) suggests the employees are

having high potential to leave if the job requirements are conflicting, unclear or if opportunities for growth, skill development, and promotions are lacking.

Turnover intention was found highly correlated with actual turnover behaviour (Bluedorn, 1982). Consistent with this observation, Fang (2001) stated that turnover intention is important in the turnover literature and can be used as a substitute for turnover behaviour. In this regard, it was found in many studies that, turnover intention has been viewed as the best predictor of actual turnover (Herrbach *et al.*, 2004; Allen *et al.*, 2003; Griffeth *et al.*, 2000; Tett and Meyer, 1993). Further, high level of worker turnover intention leads to low performance and ineffectiveness in tea plantations.

With this background the present study was undertaken with the objectives of (1) identifying socio economic measures which affect the worker turnover intention in tea plantations, (2) identifying correlation between turnover intention and commitment and job satisfaction and (3) suggesting strategies to overcome an issue of high worker turnover in tea plantations.

MATERIALS AND METHODS

Sampling Procedure

The present study was conducted covering all the tea growing regions in Sri Lanka and Stratified Random Sampling technique was used to select the sample tea estates, which are facing a problem of worker shortage at different severity levels. Details on severity level of the estates were collected from the literature. Shyamalie *et al.*, (2016) studied severity of worker scarcity in tea plantations and categorized estates in to four groups such as severe, average, less and adequate depending on level of severity.

Table 1. Severity of Worker Scarcity in Tea Plantations					
Category	No. of estates				
	Mid	Low	Uva	Up	Total
Severe	20	18	6	10	54
Average	20	36	33	61	150
Less	8	16	16	49	89
Adequate/ excess	3	3	0	8	14
Total	51	73	55	128	307

Source: Shyamalie *et al.*, 2016

Sixty six estates were randomly chosen from up, mid, uva and low country to represent each level of labour scarcity. The selected sample

estates from up, mid, uva and low country respectively, 30, 12, 12, and 12 and the sample frame is also given Figure 1.

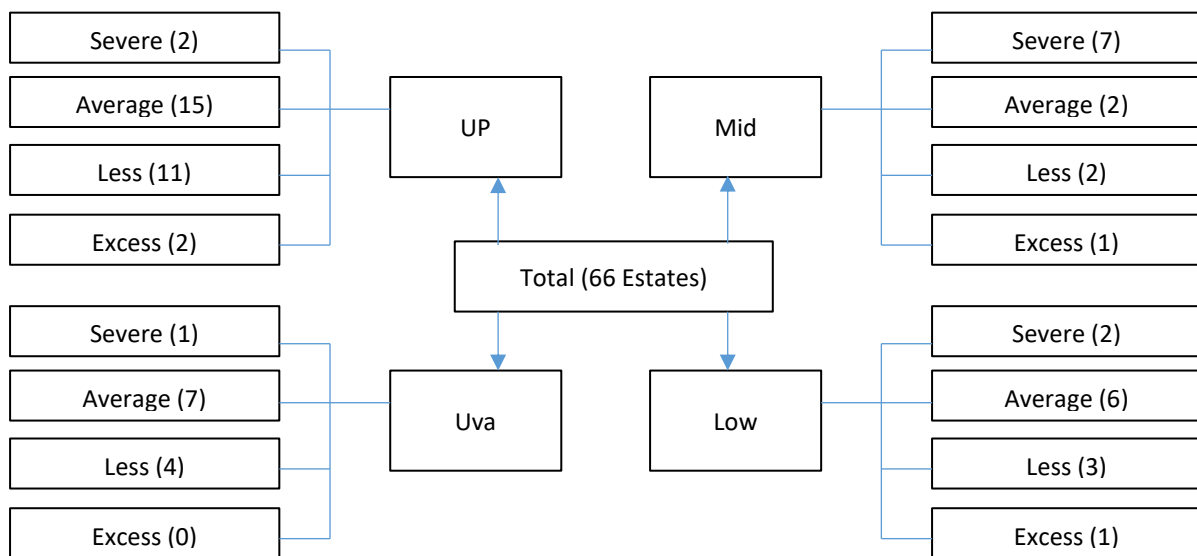


Figure 1. Sample Frame

Estate workers were selected randomly from the list of registered workforce, representing every single division in each selected tea estate and 10% of the estate workers from each estate were interviewed in data collection procedure. Total number of workers selected for the sample was 1800.

Data Collection

Primary data on estate workers were gathered by using a pre tested questionnaire and the questionnaire mainly comprised with

demographic factors, determinants of turnover intention, and consequences of turnover intention in terms of commitment and satisfaction and potential retention strategies.

Conceptual Framework

As the graphical illustration of the conceptual framework (Figure 2) turnover intention occurs due to various determinants and those were identified from the available literature.

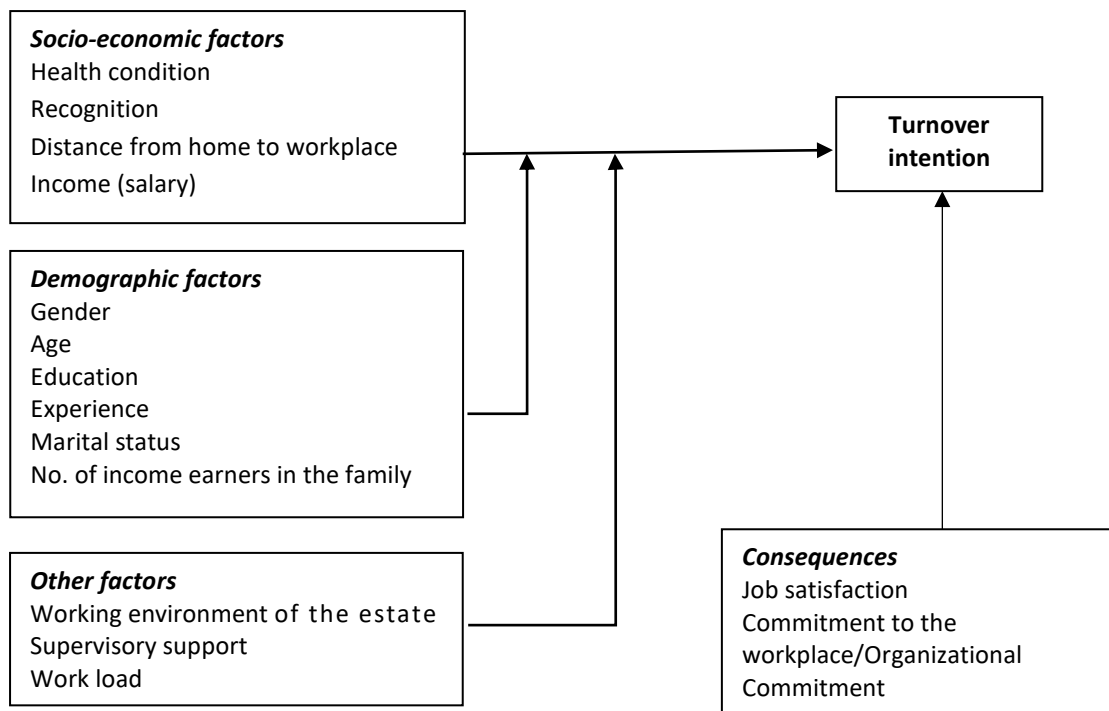


Figure 2. Conceptual Framework

The determinants of turnover intention were classified as socio-economic (health condition, recognition, distance from home to workplace), demographic (gender, age, education, experience, marital status) and other (working environment of the estate, supervisory support, work load). The framework further identifies the relationship between the turnover intention and its consequences, organizational commitment and job satisfaction.

Measuring Variables

Turnover Intention

To measure the turnover intention, the scales developed by Galhena (2009) were adopted with minor modifications and five points likert scale ranging from (1) “strongly agree” to (5) “strongly disagree” was used for the assessment (refer Table 1 in annex).

Job Satisfaction Index

Job satisfaction is an important indicator of how workers feel about their jobs and is a predictor of work behaviour. According to Vroom (1964), job satisfaction is an emotional orientation and performing a task at the working place owned by the workers towards role they are performing at the work place. Hoppok and Spielgler (1938) defines job satisfaction is an integrated dimension of psychological, physiological and environmental situations that compel the workers to accept that they are happy with their given task. The Job Satisfaction Index was measured by using scale developed (refer Table 1 in annex) and assessed using five point Likert scale ranging from (5) “strongly agree” to “strongly disagree” (1).

Commitment to the Workplace /Organizational Commitment

Organizational commitment is the individual's psychological attachment to an organization and the variable contains eleven adjectives describing various aspects related to client service, team work, employee relationship, employee responsibility, employee behavior and attitude. The scale used to measure commitment to the workplace is given in Table 1 in annex. Similar to the job satisfaction index, organizational commitment was also assessed

using five point Likert scale. If strongly agree, score given was 5 and if strongly disagree score 1 was given.

Determinants of Worker Turnover Intension

An ordinary logistic regression model was employed to determine the relationship between worker turnover and socio-economics, demographics and other factors related to workplace. The empirical model used in this study is given below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \beta_{13} X_{13} + u_i$$

Where,

Y = Turnover intention of i^{th} worker

X_j = Factors affecting turnover intention of i^{th} worker

$j = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13$

X_1 - Health condition (Dummy variable, if Illness =1, otherwise =0)

X_2 - Recognition (Dummy variable, if recognized =1, otherwise =0)

X_3 - Availability of alternatives jobs (Dummy variable, If jobs are available -1, otherwise =0)

X_4 - Income from estate work (Rs./month/worker)

X_5 - Time taken to reach workplace (Number of minutes)

X_6 - Gender (Dummy variable, if Male=1, Female=0)

X_7 - Age (Years)

X_8 - Marital status (Dummy variable, if Married=1, unmarried=0)

X_9 - Experience (years)

X_{10} - Number of income earners in a family (number)

X_{11} - Working environment of the estate (Dummy variable, if sound working environment=1, otherwise=0)

X_{12} - Supervisory support (Dummy variable, if better support =1, otherwise=0)

X_{13} - Work load (Dummy variable, if heavy workload=1, otherwise=0)

β_i 's- Unknown parameters to be estimated

u_i - Error term

Pearson Correlation

Pearson correlation was computed to identify the relationship between turnover intention on job satisfaction and organizational commitment.

Econometric Technique

Estimation of ordinal logistic regression model was done by using SPSS 16 statistical software and Excel package was used for descriptive analysis.

RESULTS AND DISCUSSION

Characteristics of the Sample

Age is the variable that may determine turnover decisions among employees. Age profile of the sample workers is presented in Table 2 and data revealed that majority (72.7%) were belonged to age category of 30-49 years. However, percentage of workers in 19-29 years was 10.3 and it revealed unavailability of young workers in tea plantations.

Table 2. Age Profile of the Sample Workers

Age Category (Years)	As % of sample
19-29	10.3
30-39	39.2
40-49	33.5
≥50	17.0

Plantation sector is owing to the aspirations of the educated generation for better conditions and a more fulfilling life outside the tea sector and that attitude and their dignity tend to move them outside the estate. The study analysed educational level of sample workers and found that the highest percentage of the sampled workers (77.4%) is reported to be in the group of primary and middle level of educational attainment (Table 3). Only 14 percent of the sample workers have educated up to secondary level. It can be noted from the data that not schooling percentage was about 9%.

Table 3. Educational Qualifications

Category	As % of sample
No Schooling	8.5
Primary (1-5)	39.5
Middle (6-10)	37.9
Secondary (10-12)	14.1

Working experience indeed has their respective influence on the performance of the workers. With increase in working experience, the workers tend to exhibit relatively better performance. The result of the study revealed

that the working experience of majority (38.7 percent) of the workers ranged between 11-20 years (Table 4). Percentage of the sample those who had less than 10 years and above 30 years' experience was 26 and 13, respectively.

Table 4. Working Experience

Category (Years)	As % of sample
1-10	25.89
11-20	38.70
21-30	22.61
≥30	12.80

With regards to job satisfaction of sample workers, about 84 percent had 3.1-4 aggregate score (Table 5). Portion of the sample those who obtained job satisfaction index below 2 was negligible. Higher score of job satisfaction indicates greater level of job satisfaction. Hence, in overall job satisfaction level of sample workers is high.

Table 5. Aggregate Score of Job Satisfaction Index

Aggregate score	Frequency	As %
≤1	1	0.06
1.1-2	1	0.06
2.1-3	96	5.33
3.1-4	1515	84.19
4.1-5	187	10.37
Total	1800	100.00

According to Table 6, aggregate organizational commitment score of majority sample workers was 3.1 -4 and only few sample workers belonged to organizational commitment score below 2 categories. Sixty-four workers (3.57%) scored above 4 for organizational commitment. Similar to the job satisfaction, higher organizational commitment score means, workers are having high level of organizational commitment. These results revealed that organizational commitment of the sample workers is also high.

Table 6. Aggregate Score of Organizational Commitment

Aggregate score	Frequency	As %
≤1	0	0.00
1.1-2	3	0.17
2.1-3	200	11.10
3.1-4	1533	85.16
4.1-5	64	3.57
Total	1800	100

High score of turnover intention means, there is high probability of move away workers from the estate. Aggregate score of work turnover intention is given in Table 7 and it showed that more than three fourths of workers in the sample were grouped into the aggregate score of 1.1-2. Low aggregate score of worker turnover would be due to high level of job satisfaction and organizational commitment among the workers as shown in Tables 5 and 6. However, about 11 percent of the sample workers' turn over intention was above the average score 2.5.

Table 7. Aggregate Score of Turnover Intention of Sample Workers

Aggregate score	Frequency	As %
≤1	113	6.29
1.1 – 2	1371	76.15
2.1 – 3	288	15.98
3.1 – 4	22	1.25
4.1 – 5	6	0.34
Total	1800	100.00

Results of Ordinary Logistic Regression Analysis

Before looking at the effects of each independent variable in the model, it is required to determine whether the model improves ability to predict outcome. As stated in the model fitting information (Table 8), the final model (with all independent variable in the model) compared with the intercept only model (the base line) to examine whether it has significantly improved the fit to the data.

The significant chi-square statistics ($p < 0.000$) indicates that the final model gives a significant improvement over the base line model.

Table 8. Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	1627.235			
Final	1376.109	251.126	16	0.000

The results of the Goodness of fit given in Table 9 showed that P value of chi-square statistics (10822) is greater than 0.05 probability level and it indicates the observed data are

consistent with the fitted model. That means, the data and the model predictions are similar and model is well fitted one.

Table 9. Goodness-of-Fit Test

	Chi-Square	df	Sig.
Pearson	10822.08	4764	0.000
Deviance	1376.109	4764	1.000

Results of the ordinary logistic regression imply that income, recognition, working environment of the estate and supervisory support negatively and significantly related on sample workers' turnover intention. In

contrast, time taken to reach plucking fields and work load positively and significantly related on turn over intension of sample workers (Table 10). The above findings indicates that increasing income and

recognition, arranging better working environment and giving supervisory support tend to reduce worker turnover intention while taking more time to reach plucking fields and more work load tend to increase worker turnover intention. The selected model was statistically significant ($P = 0.000$). Liyanage

and Galhena (2014) conducted a study in leading Apparel Company and the results revealed that the residency, civil status, recognition, workload, social image and job alternatives were the determinants of the sewing machine operators' turnover intention.

Table 10. Results of Ordinary Logistic Regression

	Estimate	Std. Error	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Income from estate work	-2.08E-06	0.000	0.006***	-3.55E-06	-6.05E-07
Experience	-0.006	0.011	0.590	-0.027	0.015
Number of income earners	-0.133	0.087	0.128	-0.304	0.038
Time taken to reach plucking fields	0.018	0.006	0.002***	0.007	0.029
Recognition	-1.124	0.179	0.000***	-1.475	-0.773
Working environment of the estate	-1.533	0.226	0.000***	-1.975	-1.091
Supervisory support	-1.181	0.422	0.005***	-2.007	-0.354
Work load	1.721	0.205	0.000***	1.319	2.122
Gender	-0.13	0.244	0.594	-0.609	0.349
Age_category=1	0.084	0.689	0.902	-1.266	1.435
Age_category=2	-0.413	0.630	0.511	-1.647	0.82
Age_category=3	-0.251	0.612	0.681	-1.451	0.949
Age_category=4	-0.138	0.611	0.821	-1.337	1.06
Marital status	0.087	0.284	0.759	-0.47	0.644
Health condition	-0.18	0.163	0.269	-0.499	0.139
Alternative income generating activities	-0.099	0.154	0.521	-0.401	0.203

Dependent variable: Turnover intention

Pearson correlation was computed to identify correlation between turnover intention and job satisfaction and organizational commitment. Significant negative correlation observed between turnover intention and the job satisfaction and organizational

commitment (Table 11). This indicates that when job satisfaction and organizational commitment decrease, workers tend to move away from the estate work. These findings are in line with the studies conducted by Liyanage and Galhena, (2014); Mobley *et al.*, (1979).

Table 11. Correlation Among Turnover Intention, Job Satisfaction and Organizational Commitment

		Aggregate score for turnover intension	Aggregate score for Job Satisfaction	Aggregate score for organizational commitment
Aggregate score for turnover intention	Pearson Correlation	1	-.403**	-.246**
	Sig. (2-tailed)		0.000	0.000
	N	1765	1765	1765
Aggregate score for Job Satisfaction	Pearson Correlation	-.403**	1	.457**
	Sig. (2-tailed)	0.000		0.000
	N	1765	1765	1765
Aggregate score for organizational commitment	Pearson Correlation	-.246**	.457**	1
	Sig. (2-tailed)	0.000	0.000	
	N	1765	1765	1765

**Correlation is significant at the 0.01 level (2-tailed).

CONCLUSIONS

The study revealed that significant factors of worker turnover intention in tea plantations were income, time taken to reach plucking fields, recognition, working environment of the estate, supervisory support and workload. It also found that worker turnover intention had a negative significant correlation with job satisfaction and organizational commitment.

The above results highlight the importance of taking actions on increasing workers' job satisfaction and organizational commitment.

Attention should be given to identify ways and means to increase workers' income. Providing opportunities like cash plucking, contract work *etc.*, introducing a beneficial production incentive scheme and encouraging workers to engage in alternative income generating activities like cattle rearing, poultry *etc.* would be helpful to enhance workers' income.

In addition, considering worker convenience in allocating fields is also important. If workers reside far away from the tea fields, arranging transport facilities will help them to reduce time taken for walking to the allocated fields. Creating good working environment, supplying required materials, equipment and machineries, treating employees in a friendly manner, adequate supervisory support and having a special training program focus on attitudinal changes of workers are the other effective worker retention strategies.

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Annex:

Table 1. Scales to measure worker turnover intention, job satisfaction and organizational management

Scale to measure turnover intention	Scale to measure Job satisfaction	Scale to measure organizational commitments
Probably look for a new job in the next year	I receive recognition for a job well done	Willing to help estate
Often think about quitting	I feel close to the people at work	Talk up estate to friends as a great pleasure
Very likely to work for a job in the next year	I feel good about working at this estate	I'm a resource to the estate
I work here b/s no any option	I feel secure about my job	My values and estate values are similar
	I believe management is concern about me	Proud to tell others I am part of estate
	On the whole, I believe work is good for my physical health	Glad I chose the estate work
	My wages are good	The best of all possible Institutes
	All my talents and skills are used at work	Estate inspires me to perform
	I feel good about my job	Really care about the future of the estate
		I feel I'm committed to this work
		I'd like my children join with the same job