The Likert Organisational Profile: Methodological Analysis and Test of System 4T in Tourist Destinations

Mathew C.D (Corresponding author)

School of Management SASTRA University, India.

Tel:919400352781, Email: mathewerattupetta@yahoo.co.in

R.Renganathan

Dept of Management Studies, SASTRA University, India

Email:renganathanss@yahoo.com

Kurian Joseph

Dept of Management Studies, SASTRA University, India

Email:brincepmathew@gmail.com

Abstract

In the working paper (Butterfield & Farris 1974), which was done at Massachusetts Institute of Technology, 20 item Likert Organisational Profile (LOP) was administered twice to 256 employees in 13 Brazilian development banks. Actual and ideal bank profiles were similar to those found in U.S and elsewhere. In the said working paper, test-retest reliability of the LOP as a whole was moderate. Here after the pilot study System1-4T Rensis Likert Scale has been revalidated with 17 items and the test-retest reliability has been tested with Karl Pearsons Coefficient of Correlation over two time series with stronger correlation coefficient of .88. In the organisational climate survey, median averages have been taken in order to measure the organisational health. It has been found that the organisational health at tourist destinations improved after the OD interventions, the said fact is doubly checked with direct employee feedback. So it is corroborated

with valid data that System 1-4T is a reliable tool to apply in organisational health and hence to rectify organisational pathologies.

Key Words: LOP, Test-retest reliability, Organisational Health, Median Average

1 Introduction

1.1 Scope and Coverage

Though the whole Kerala State in the Southern part of India is blessed with unmatched natural diversity that provides immense scope for eco-tourism, there are certain areas or destinations which are already developed as far as eco-tourism is concerned. Development of tourism in these areas has a wide variety of impacts on the ecology of that locality and on the overall contribution towards tourism in the state. Naturally development of certain areas would help similar areas or destinations to develop their tourism potential in eco-friendly way. The impact of the tourism development is directly felt by the people who are directly or indirectly involved in tourism business. Therefore the universe of the present study is limited to those areas where eco-tourism is developed and to those persons who are directly connected with eco-tourism business. This study is explorative in nature as a hypothesis testing experimental one and the first of its kind in Kerala. Therefore the study has been conducted mainly to explore the positive impacts of Organisation Development in the eco-tourism developed areas. Eventhough there are 56 locations identified by Eco-tourism Directorate, according to the statistics, Thenmala and Periyar Tiger Reserve rank best in terms of tourist arrivals. So they have been selected for the study.

1.2 Thenmala

1.2.1 Location Map

Located at about 72kms from Thiruvananthapuram, the State Capital of Kerala, God's Own Country, and the southern most State of India. Thenmala is a small village at the foothills of Western Ghats and predominantly a forest area. The famous Shenduruney Wildlife Sanctuary is the most important eco-tourism resource of Thenmala Eco-tourism. This Wildlife Sanctuary is of about 100 sq. km. and harbours large varieties of flora and fauna (Thenmala Eco-tourism Promotion Society 2007).

1.3 Periyar Tiger Reserve

Located at about 172kms from Thiruvananthapuram, the State Capital of Kerala, God's Own Country, and the southern most State of India. Periyar Tiger Reserve is a Wild Life Sanctuary at the foothills of Western Ghats and predominantly a forest area. According to the World Bank sponsored Eco Development Committee (EDC), tribal people act as tourist guides in connection with various eco-tourism activities (Periyar Tiger Reserve 2007).

2. Collection of Data

The data has been collected by conducting interviews with the samples selected for the study. Multiple

www.iiste.org

choice questions, open-end questions, rankings by the respondents and a five point scale developed by the researcher especially for this in conformity with statistical methods and principles are used wherever necessary. 17 point System 1-4T Likert Scale is used in order to assess the organisational climate survey at different stages of OD process. Separate questionnaires were used to measure social status index and environmental awareness at different stages. Questionnaires have been corrected and modified based on the findings of pilot study. In order to test the reliability of the 20-point Rensis-Likert System 1-4T Scale, 'test-retest reliability' has been done to find out the real change as a function of time. Time 1 actul LOP scores were compared against Time 2 actual LOP scores. During the pre-test it has been a found a perfect correlation of .88 between the two time series. So it can be concluded that Rensis-Likert System 1-4T Scale is reliable in this context.

From the table it can be inferred that there is a strong correlation between the scores at two time periods. It shows that the tool for assessing organisational climate survey is reliable.

3. Systems 1-4T at Thenmala and PTR

Survey feedback is based on a conceptual scheme and an integrated package of measurements that Rensis Likert and colleagues called Systems 1-4 (and later 1-4T). This management typology is based largely on measures pertaining to leadership, organizational climate and job satisfaction.

In his earlier writings, Likert called System 1 "exploitive authoritative", System 2 "benevolent authoritative", System 3 "consultative" and System 4 "participative group". In later works only the Systems 1-4 terms were used, probably because of the heavily evaluative connotations of the other systems. Some would argue that the terminology of some of the scales is also too value laden. In the Likert model, each type of organisation (Systems 1-4) is seen as having internally consistent characteristics of which organizational climate is a major part.

Organizational climate survey at the beginning and at the end of the third phase has been executed exclusive for local guides. It has been found a significant improvement in connection with organisational climate. It is an indicator of Organisation Development outcomes. Both in Thenmala as well as in Periyar Tiger Reserve all the guides have been exposed to OD process. Obviously it has made a positive impact in these two destinations. While numerically calculating the various aspects, the median average value at PTR was 12 at the beginning of the third phase. At the end of the third phase the same average has been gone up to 16. In connection with Thenmala the same median average was 12.5 at the beginning of the third phase. At the end of the third phase the same median average has been gone up to 16.5. Eventhough OD is a long term effort it can boost up the organisational health. In the Likert model, each type of organisation (Systems 1-4) is seen as having internally consistent characteristics of which organisational climate is a major part.

4. Degree of Success in Achieving Tourist Satisfaction

Regarding the degree of success in achieving the tourist satisfaction by the local guides, the pattern of answers has been as follows:

The data show that both the destinations have only a poor estimate of their success record. This is a situation that needs to be changed. The forest officials as well as others involved and the tourists should be able to feel that the destinations are having a satisfactory record of performance.

5. Constraints to Achievement of Tourist Satisfaction

Regarding the ten constraints identified in the questionnaire, the respondents expressed their priorities as follows.

Role ambiguity among officials gets the maximum scoring (19/20) as the first priority constraint followed by lack of commitment among officials (15/20) as second priority item. Lack of political support comes third 14/20) at PTR.

Thenmala: The comparative position is as follows

In Thenmala role ambiguity among officials gets the maximum scoring (18/20) as the first priority constraint followed by lack of political support comes second (14/20) and lack of commitment among officials (14/20) as third priority item. *It has been decided to conduct role efficacy lab exercise for senior officials in both the destinations.*

6. Problems in Guiding

The comparative position is as follows:

Lack of training and development (19/20) and lack of problem solving ability (18/20) rank first and second among the problems of local guides at PTR.

The comparative position is as follows:

Lack of problem solving ability and lack of training and development ranks first and second respectively where as in Thenmala lack of training and development ranks first.

This led to the following action steps, i.e. Training Interventions.

1.   Process Consultation

2.   T-Group, L Group or Sensitivity Training

3.   Life and Career planning intervention

4.   Transactional Analysis as an Intervention

5.   Reengineering

6.   Conflict Resolution

7.   Role Analysis Technique

8.   Role Negotiation

9.   Management by Objectives

10.   Quality of Work Life Programmes

7. ANOVA Test for Differentiating the Effects of OD Interventions.

ANOVA Test has been conducted in order to find out if there is any significant difference in connection with the effects of different OD interventions. After the ten OD interventions in Thenmala and PTR, behavioural science test has been conducted. The total score was thirty. The relevant scores of different guide's along with their OD Interventions are given in the ANOVA table. Here the researcher had tried to find out whether different interventions have produced same results or different results. It has been tested whether the effects of various interventions are equal.

Null hypothesis: Scores of tourist guides after various interventions are equal.

Alternative: Scores of tourist guides are not equal.

Conclusion: The null hypothesis does not stand. That is the effects of various interventions are not equal. The results are tabulated in ANOVA table.

Coefficient of Variance has been taken in order to measure the consistency of various Organisation Development (OD) Interventions. The very first intervention in the history of OD- Sensitivity Training is the most consistent one. While Reengineering, QWL and Sensitivity Training showed greater consistency, Process Consultation, TA, Role Analysis and MBO showed less consistency.

8. Fresh Organisational Climate Survey at The End of OD Interventions and Future Decisions

Organisational climate survey at the end of the third phase has been executed. A significant improvement has been found in connection with organisational climate. It is an indicator of Organisation Development outcomes. Both in Thenmala as well as in Periyar Tiger Reserve all the guides have been exposed to OD process. Obviously it has made a positive impact in these two destinations. While numerically calculating the various aspects the median averages at PTR and Thenmala were 16 and 16.5 respectively at the end of the third phase. At the end of the fourth phase the same median averages have been gone up to 18 and 18.5 at PTR and Thenmala respectively. However OD interventions solely contributed change in the Eco-tourism destination or not, is not easily gaugable. Eventhough OD is a long term effort it can boost up the organisational health in the shorter run also. Eventhough employees like System-4 organisations, their immediate supervisors and top management do not support much System-4 organisations because the power enjoyed by the supervisors is much less in System-4.

9. Feedback from Participants of OD Intervention Programme

Feed back has been taken from local guides in order to measure the impact of OD interventions and hence to corroborate the results of System 1-4T, it has been found that results are consistent and ultimately results got doubly checked. Four dimensional feed back in connection with the conformity towards OD programme has been administered and it has been found that participants are highly satisfied with the OD programme. The results shows that OD programme as well as OD interventions particularly produced results in capacity building of local tourist guides.

10. Conclusion

The organisational climate survey at different stages shows that organisational health has been improved through the application of OD interventions. Moreover a positive vibe has been generated in the organisation. It is quite evident from the survey feedback which was carried out at the end of the behavioural science interventions. Rensis Likert's Organisational Climate Survey Tool is an effective diagnostic instrument to measure organisational health at different life cycles of an organisation and the results could be cross checked through even informal employee feedback.

REFERENCES

Butterfield, D. Anthony & Farris, George F 1972, *The likert organisational profile: Methodological analysis and test of system 4 theory in Brazil* ,July, D-space of MIT,viewed 30 January 2007,<http://www.dspacemit.edu/2007/January/BB007_2007.htm>.

Periyar Tiger Reserve Location 2007, *Ecotourism Activities*, Periyar Tiger Reserve Location,viewedFebruary2007,<http://www.http://periyartigerreserve.org/location=Ecotourism+Activities> .

Thenmala Eco-tourism Promotion Society 2007, *Location Map,* Thenmala Eco-tourismPromotionSociety,viewed7February2007,<http://www.thenmalaecotourism.com/location map>.

Scores of the tourist guides at two time periods

Table 1 Time 1

TIME 1	13 8	12 9	13 8	10 7	12 9	14 12	13 13	10 11	11 7	9 8

Table 2 Time 2

TIME 2	12 8	13 10	12 9	8 8	11 8	13 11	12 14	9 11	12 8	10 7

Test-Retest reliability measured by Pearson's coefficient of correlation as regards with Rensis-Likert System 1-4T Scale

Table 3. Periyar Tiger Reserve

1.	Very Much	0
2.	Too great extent	3
3.	Some what	23
4.	Very little	1
5	No Answer	3

Table 4. Thenmala

1.	Very Much	0
2.	Too great extent	3
3.	Some what	13
4.	Very little	1
5	No Answer	3

Table- 5. (contd. on next page)

Organizational variable

	System 1	**System 2**	**System 3**	**System 4**
	0-------5	--------10	-------15	------20
		Leadership		
How much confidence and trust is shown in	Virtually none	Some	Substantial	A great deal

subordinates			Amount	
How free do they feel to talk to superiors about job	Not very free	Somewhat free	Quite free	Very free
How often are subordinate's ideas sought and used constructively	Seldom	Sometimes	Often	Very frequently
Motivation				
Is predominant use made of 1 fear, 2 threats, 3 punishment 4 rewards, 5 involvement based	1, 2,3, occasionally4	4,Some3	4,some 3 and 5	5,4 on group-set goals
Where is responsibility felt for achieving organization's Goals	Mostly at top	Top and middle	Fairly general	At all levels
How much cooperative team work exists	Very little	Relatively little	Moderate	Great deal
Communication				
How is download communication accepted	With suspicion	Possibly with suspicion	With caution	With a receptive mind
How accurate is upward Communication	usually inaccurate	often inaccurate	often accurate	Almost accurate
How well do superiors know problems faced by	Not very well	Rather well	Quite well	Very well

subordinates				
Decisions				
At what level are decisions made	Mostly at top	Policy at top some delegation	Broad policy at top more delegation	Throughout
Are subordinates involved in decisions related to their work involved	Almost never	Occasionally	Generally	Fully
What does decision-making process contribute to motivation	Not very much	Relatively little	Some contribution	Substantial contribution
Goals				
How are organizational goals established	Orders issued	Orders, some comments invited	After discussion by orders	By group action
How much covert resistance to goals is present	Strong resistance	Moderate resistance	Some resistance at times	Little or none
Control				
How concentrated are review and control functions shared	Very highly at top	Quite highly at top	Moderate delegation	Widely
Is there an informal organization resisting the formal one goals	Yes	Usually	Sometimes	No-same as formal
What are cost, productivity and other control data used for	Policing punishment	Reward punishment	Reward some-self guidance	Self-guidance problem-solving

www.iiste.org

IISTE

Table 6. Comparative Positions at Thenmala

SL NO.	Problems/Constraints	Points	Percentage
1	Lack of commitment among forest officials	191	95.5
2	Lack of political support	194	97
3	Lack of leadership and guidance from higher authorities	188	94
4	Lack of proper planning by the forest department	189	94.5
5	Lack of training and Development of Officials	178	89
6	Role ambiguity among Officials	198	99
7	Lack of proper systems and procedures	20	10
8	Lack of support from the public	30	15
9	Role of corrupt officials	20	10
10	Role of corrupt politicians	20	10

Table 7. Comparative Position at Thenmala in Connection with Problems in Guiding

SL NO.	Problems/Constraints	Points	Percentage
1	Lack of proper facilities in guiding	188	94
2	Lack of communications from above	186	93
3	Lack of leadership and guidance from higher authorities	189	94.5
4	Lack of training and development at all levels	199	99.5
5	Lack of problem solving ability among guides	198	99
6	Lack of systems and procedures for effectiveness	20	10
7	Lack of supervision	30	15
8	Lack of support from higher authorities	50	25
9	Lack of team work among officials	30	15
10	Lack of work motivation among guides	40	20

Table 8. Comparative Position at PTR

SL NO.	Problems/Constraints	Points	Percentage
1	Lack of commitment among forest officials	275	91.66
2	Lack of political support	274	91.33
3	Lack of leadership and guidance from higher authorities	258	86

4	Lack of proper planning by the forest department	269	89.66
5	Lack of training and Development of Officials	248	82.66
6	Role ambiguity among Officials	279	93
7	Lack of proper systems and procedures	40	13.33
8	Lack of support from the public	60	20
9	Role of corrupt officials	40	13.33
1 0	Role of corrupt politicians	20	6.66

Table 9. Comparative Position at PTR

SL NO.	Problems/Constraints	Points	Percentage
1	Lack of proper facilities in guiding	198	66
2	Lack of communications from above	206	68.66
3	Lack of leadership and guidance from higher authorities	204	68
4	Lack of training and development at all levels	209	69.66
5	Lack of problem solving ability among guides	228	76
6	Lack of systems and procedures for effectiveness	40	13.33
7	Lack of supervision	60	20
8	Lack of support from higher authorities	60	20
9	Lack of team work among officials	40	13.33
10	Lack of work motivation among guides	50	16.66

www.iiste.org

Table 10.Scores of Different Guides

Process Consultation	5	8	9	2	1	5				
TA	8	9	4	6	2	5	6			
Career Life Planning	9									
Role Analysis	8	4	9	6	2	5				
Sensitivity Training	5	3	7	9	6	2				
Reengineering	0	4	3	4	6	7				
Quality of Work Life	8	7	2	3	9	2	3	6	7	5
MBO	7	1	8	7	2					
Role Negotiation	2									
Conflict Resolution	3	4								

Table 11. Ranking Different Interventions

Interventions	Mean	Standard deviation	Coefficient of Variance
Process Consultation	16.67	3.83	22.98
TA	18.57	3.59	19.33
Role Analysis	19.00	3.46	18.21
Sensitivity Training	25.33	2.58	10.18
Reengineering	24.00	2.45	10.20

Quality of Work Life	24.20	2.86	11.82
MBO	21.00	3.94	18.76

Table 12. Feedback from Participants of OD Programme

	SA	A	N	D	SD
Helped in Improving Communication Skills	32	18	0	0	0
	64%	36%	0	0	0
Helped in Improving Self Confidence	40	10	0	0	0
	80%	20%	0	0	0
Feedback Process has been improved	50	0	0	0	0
	100%	0	0	0	0
Helped in Developing Positive Attitude	45	5	0	0	0
	90%	10%	0	0	0
Improved Problem Solving Ability	40	10	0	0	0
	80%	20%	0	0	0
Improved Creativity	35	15	0	0	0
	70%	30%	0	0	0
Team Building has been Improved	32	18	0	0	0
	64%	36%	0	0	0
Time Management has been Improved	25	25	0	0	0
	50%	50%	0	0	0
Self Management has been Improved	30	20	0	0	0
	60%	40%	0	0	0

SA- Strongly Agree, A- Agree, N-Neutral, D-Disagree, SD- Strongly Disagree
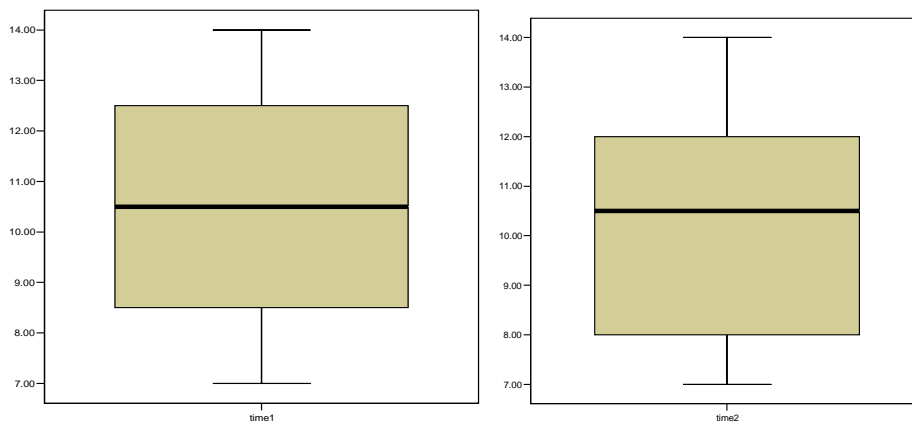
Fig. 1. Box plot for normality testing