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## Effect of Leaders Related Attributes on the Efficacy of Tea Smallholding Development Societies in Sri Lanka

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### ABSTRACT

The Tea Smallholding Development Societies (TSHDS) are farmers' organisations (FO) established under the legislative act in tea-growing rural areas of Sri Lanka. They are largely non-for-profit voluntary organisations. They were expected to work on the development, resource, welfare, economic and market-related matters of tea smallholders. However, currently, the tea smallholding sub-sector seems stagnant as per some key indicators and that questions the interventions made by TSHDS to the lives of tea growers. Other than the collective action, there can be number of factors affect the efficacy of a FO. The present study attempted to find out the contribution of the leaders' attributes to the efficacy of TSHDS. From seven major tea smallholders' districts of Sri Lanka, 120 sampling units were selected for the study by adopting a stratified random sampling technique. Cross-sectional surveys were conducted to collect the data with the help of several questionnaire schedules. Data were analysed employing various statistical tools like descriptive analysis, cluster analysis, factor analysis, chi-square, Man-Whitney test, log-linear analysis. The majority of TSHDSs poorly provide multipurpose services to their members. Their market orientation is weak. Certain attributes of the leaders of TSHDS affect the efficacy of TSHDS. Although the attitudes of most TSHDS leaders were not negative, some other factors appeared to moderate the effect of attitude. The level of external linkages maintained by TSHDS greatly affects the efficacy of TSHDS and competent leaders guide TSHDS in establishing linkages with other organizations.

**Keywords:** *Tea smallholders, Famer organisation, leadership, linking capital and multipurpose activity*

## **INTRODUCTION**

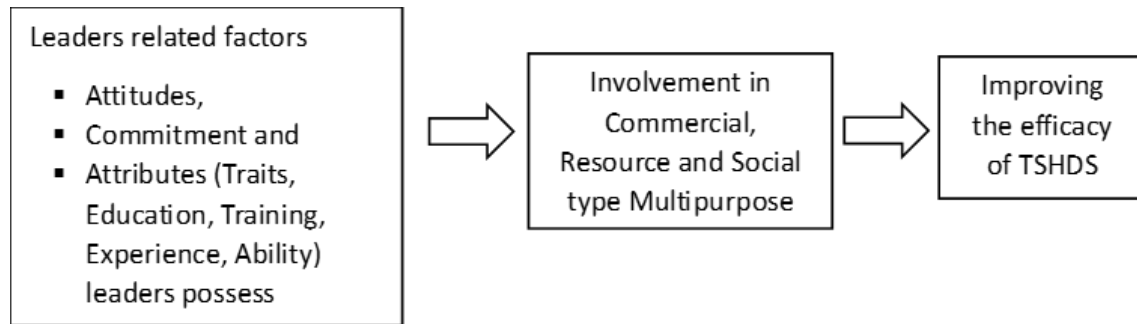
Like many voluntary organisations, the farmer organisations (FO) are predominantly non-profit organisations. FO is an entity that represents the farmers in a given geographical area and mainly deals with the agriculture enterprise-related needs of the members (Esham, 2012). Production and profitability of small farmers have been limited due to certain reasons. FOs emerged to combat some of such issues, like low capital, resource scarcity, lack of knowledge on agricultural technologies and exploitation in the marketplace faced by small-scale farmers (Barham & Chitemi, 2009; Spileman & Bernard, 2009; Trebbin, and Hassler, 2012). Therefore, it is an essential entity to empower the rural farmers, poverty alleviation and eventually uplift their living standards. Usually, a FO has well-defined membership, and its principal function is to provide service to the members (Stockbridge et al., 2003). A FO has an organised structure and a purpose for gathering and attempt to achieve a standard set of objectives. In short, forming a FOs can be understood as collective effort initiated by farmers to combat problems affecting them.

Many scholars have shown that collective action necessarily beneficial for the individuals of the voluntary organisation (Grootaert, 2001; Gillson, 2004) and the level of achievement of the expected goals would greatly determine by the level of collective action within the group (Olson, 1965; Ostrome 2000). Studies have shown that collective action is critically contribute to the performance of FOs (Uphoof et al., 1990; Uphoof & Wijerathna, 2000; Athukorala, K. 2006; Esham & Usami, 2007; Yapa et al., 2022). Further, Mahindapala (2023) found that Collective action has stronger relationship with the efficacy of Tea Development Societies (TSHDS). In addition to collective action, literature has shown that several factors can influence the efficacy of FOs.

According to the results of some studies conducted in locally, FOs' decline has been attributed to poor leadership, poor attitudes, cultural and religious ideological conflicts, political influences, structural factors and inefficiency of the relevant government officials appointed to serve them (Gerragama et al., 1999; Rajarathna, 2007). Moreover, Farmer companies (FC) were introduced to commercialise the FOs and resolve the issues which could not be succeeded by the traditional mode of FOs. However, these FC also could not produce the expected results for various reasons, such as political influence, poor management skills, lack of dignity of the board of directors, poor monitoring and mistrust between management and member farmers (Senanayake, 2002; Esham & Usami, 2007). According to the agrarian service act in 1958 (later repealed by act no.58 of 1979), these FOs and FCs are not the independent organisations and have some attachment with the government. Hence, in a way, it can also be argued that state intervention (dependency on state) and poor leader related attributes are the real reasons behind their failures. Further, the links maintain by the FOs with other external agencies also help to overcome their deficit of physical capital (Amarasinghe & Bavinck, 2007).

According to statistics published by the Tea Controller's Department and the Tea Smallholding Development Authority (TSHDA), the area held by the tea smallholdings has doubled in the early 1990s compared to 1978. With the rapid expansion of the tea small holdings, the TSHDA alone could not cope with the service demanded. Under such circumstances, the government took steps to establish Tea Small Holding Development Societies (TSHDS) by a legislative act (No. 36 of 1991). On the other hand, this emergence indicates a failure of the public sector and the market. (Anheier; (2005). The expected purposes of TSHDSs were (i) To contribute to the development of tea smallholdings, (ii) to provide marketing facilities for growers' production, (iii) to promote the economic and welfare activities of members and (iv) To facilitate the members in the area of credits.

The government expected TSHDSs to take rural leadership and carry out appropriate social and commercial activities to develop the smallholdings. However, several indicators such as productivity, tea production, replanting rate, income of tea growers, technology adoption indicate a shortfall in achieving the expected objectives by the TSHDSs. (Mahindapala et al. 2019a; Mahindapala et al. 2019b; Mahindapala et al. 2019c; Mahindapala et al. 2020a; ILO, 2018; TSHDA, 2005 - 2020). It implies that the organisations initiated to address the key problems of tea smallholders are in crisis. This study attempted to find out the leaders related factors that contribute to the efficacy of TSHDS. Based on the literature discussed in the above following conceptual framework was derived to provide the guidance in the methodology (Figure 1).



**Figure1:** Conceptual frame of the study

## **METHODOLOGY**

The contribution of the variables in figure 1 were preliminary confirmed through a qualitative study – Focus Group Discussions held with the Tea Inspectors, A key extension entities of tea smallholders (Mahindapala 2020b).

In this study the following hypothesis were tested

H1<sub>0</sub>; There is no association between efficacy index and leaders-related attributes (Education, Knowledge, Experience, Age, Training, Attitudes, Personality traits, Commitments, organizing ability)

H1<sub>a</sub> There is an association between efficacy index and the above leader related attributes

### **Sampling Technique:**

The unit of analysis of this study was TSHDSs and among the registered TSHDSs (about 1340), 1200 TSHDS were found to be lasted as per the statistics available in TSHDA as of 2017. From that sampling frame, 120 sampling units (from seven major tea smallholders’ districts of Sri Lanka) were selected by adopting a stratified random sampling technique. The basis of the stratification was the basic operating level of the TSHDS. (As per the TSHDA records, these TSHDSs had been grouped into several categories based on the functionality of the TSHDSs and hence, the sample was drawn in a stratified manner to ensure the variability in the sample). Further, an equal number of sampling units were drawn from each stratum and they were selected randomly within the strata.

### **Research strategy**

A cross-sectional survey was carried out using structured interviews with several questionnaire schedules to collect the data with respect the various variables indicated in Figure 1. Table 1 describe the purpose of the different questionnaire schedules.

**Table 1:** Purpose of different questionnaire schedules

Questionnaire No.	Research participant and technique	Purpose in brief
Questionnaire 1 (Q1)	Main Officers (President, Secretary, Treasurer)Collectively (face to face interview)	To collect the data on level of engage in different Multipurpose Services/Activities (MPA)and to work out the efficacy index
Questionnaire 3 (Q3)	Main Officers separately (self-completion questionnaire in the presence of researcher)	To collect the data on Leaders’ related property (knowledge, education level, training, attitude, time spent on society affairs) and links with other organisations
Questionnaire 4 (Q4)	Tea Inspectors and Senior Tea Inspectors (self-completion)	Collect the data on personality traits of Leaders

The questionnaire related to MPA contained a set of closed-ended pre-coded questions intended to assess the involvement of the TSHDSs on the MPA (See annexure 1 for type of MPA and its sub-levels). Each of the functions was assessed by giving 0-10 scores based on the level of engagement in the activities. Data (behavioural type data) were collected through face-to-face in connection with the activities conducted in 2019. Certain information regarding the activities by referring to the records. In some cases, the study depended heavily on the recalling ability of respondents, and a ‘more than one interviewee’ approach was adopted to collect data. On the other hand, data and variables were behavioural in type (not perceptual), thus the technique adopted was compatible. Such types of practice have been adopted in other studies (Bryman, 1999; Pahl, 1990). The overall efficacy of TSHDSs were estimated using the relative importance factors related to each function, which have been established in a previous study (Mahindapala et al, 2021) (see Anexture1) and the score values obtained in the present study. The overall efficacy index (EI) is calculated as follows (Mahindapala et al. 2022, see page no 20-21)

$$EI = (X1.S1) + (X2.S2) + ..... (X11.S11)$$

Where X1.....X11 = Relative importance factors in relation to different functions (Anexture1)

S1..... S11 = Scores levels for related to different functions.

Data were collected with respect to the different leader related attributes as per the research strategy outlined in annexure 2. The attitude level of leaders was obtained on a 1-5 scale concerning 16 questions and a mean value was calculated.

To estimate the linking capital, the number of links and frequency of interaction with outside organisations concerning each of the three key leaders were examined, and real data were converted to a 1-5 Likert like scale during tabulation.

The questionnaires were submitted to four expert personnel on the related subjects to check the validity (Content and construct validity), and they were pilot tested before being used. Data were

triangulated by interviewing the respective Tea Inspector of the region and two-three ordinary members of the respective society and reviewing the records.

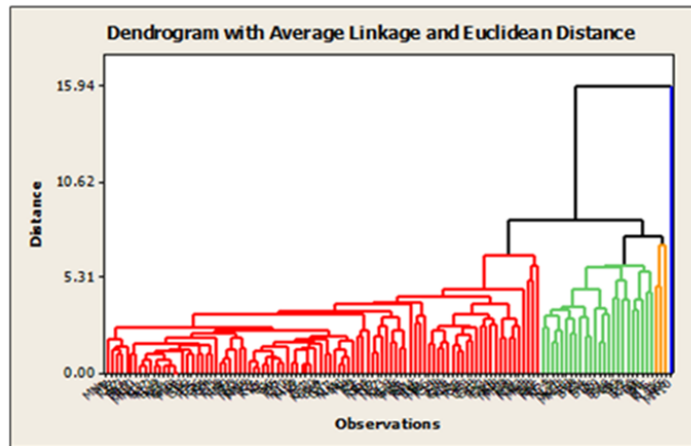
**Statistical Analysis**

Descriptive and cluster analyses were done to evaluate and categorise the TSHDS according to the multipurpose efficacy, and Mann-Whitney test was also performed to confirm the variability among the clusters. The associations between different independent variables and efficacy index are evaluated using chi-square test and log linear analysis. The factor analysis is also done as a data reduction technique. (The statistical software used was SPSS version 25).

**RESULT AND DISCUSSION**

1. Clustering the TSHDS based on the performance of the MFA

Cluster analysis was performed using 120 observations based on the score values obtained for different functions. In this analysis observations have been separated to 4 different clusters (at 7.66 distance level) based on the level of implementation of MFA (Figure2). Out of the four clusters, one cluster comprise of most poorly performing (89) TSHDS, which has least centroid values for all the functions considered. Hence, the factors affecting multipurpose capacity should also be reflected in these clusters. Most importantly responses to external interventions (dependency level on state) will also be varied among these clusters.



**Figure 2:** Dendrogram of cluster analysis.

Cluster 1 appeared to have large variability from the rest of the clusters. Thus, a comparison was made between cluster 1' (least performing cluster) and Clusters 2' (relatively moderately performing cluster) using Mann-Whitney test. Cluster 2 showed significantly higher performance over cluster 1 in commercial activities and almost all the other activities at the levels of  $p < 0.001$ ,  $p < 0.05$ , and  $p < 0.1$  (depending on the type of activities). This difference caused, may be due to some characteristics shared collectively by the relevant group. In addition to the above variability, clusters 3-4 also have shown a significant variability over cluster 2 with respect to six variables, including market-related activities, financial support, welfare and for-profit activities, as illustrated in Table 2

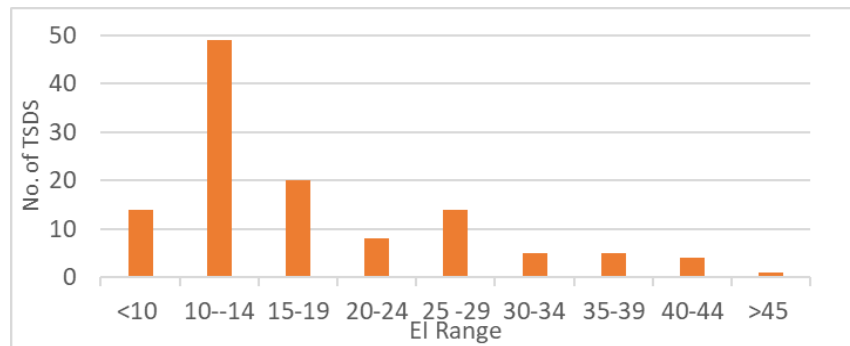
**Table 2:** Comparison between clusters 2 and 3& 4

Variable	Mean rank		p-value
	Cluster2	Cluster 3 & 4	
Marketing related activities	12.33	26.63	0.08
Welfare	12.25	23.25	0.011
Financial support	12.35	23.5	0.09
Other for-profit activities	12.74	21.25	0.049

In conclusion, significant variability with respect to the efficacy can be seen among these clusters.

**2. Overall Efficacy (Efficacy Index -EI)**

The eleven functions (Annexure 1) considered may not be equally important to the TSHDSs. Hence, as mentioned in the methodology, a relative important factor was estimated for each of the functions. Taking into consideration of relative importance, the overall efficacy index (EI) was calculated for each TSHDS and values were summarised in Figure 3



**Figure 3:** Variability of Overall efficacy/EI of TSHDS.

Results of the clustering and EI index are compatible. About 93% of the observations comes under cluster 1 have less than 20 EI value while 96% of the observations grouped into clusters 2, 3 and 4, respective value more than 25. The EI value ranges from 6.63 to 56.46. Therefore, there must be a reason for the that kind of variability and which should be investigated. One of the reasons uncovered was level of collective action (Mahindapala et al. 2023). However, in addition to the collective action there can be some other reasons. Nevertheless, it is also worth noting that efficacy of TSHDSs was limited to some degree may be due to common cause(s) affecting all TSHDSs.

**3. Leader- related Factors**

First, different variables under this are discussed using descriptive statistics, and then their relationship to the efficacy is examined.

**3.1. Status of the TSHDS in Relation to the Leader-related Factors**

As per the constitution, the main action coordinating body of the TSHDS is the executive committee. Thus, certain attributes possessed by the leaders may have contributed to the efficacy of TSHDS, and nine such attributes were considered.

**3.1.1. Educational level**

The educational status of the committee members is given in Table 3

**Table 3:** Education level of the main leaders of TSHDSs

Education level	Main leaders (n=351)		Average leaders' education level for TSHDS n=120	
	Number	%	Number	%
No schooling	5*	1.4	0	0
Up to grade 5	6	1.7	2	2
Grade 6- O/L	56	16	9	9
O/L qualified	141	40.2	55	55
A/L qualified	139	39.6	34	34
Degree	4	1.1	0	0

\*Those who are covering the duties in the absence of leaders

Out of 351 main leaders of 120 TSHDSs, about 40.2% of leaders passed the GCE (O/L) examination, and 39.6% were GCE (A/L) qualified. The lower education categories and higher education categories were relatively low.

**3.1.2. Knowledge level**

The rural communities -especially the farmers, gain knowledge not only through formal education but also through informal /non-formal means as well. Therefore, the leaders' knowledge level on FOs-related aspects was assessed and given in Table 4. Accordingly, the majority of the leaders obtained moderate to low marks level. Therefore, most TSHDS leaders have a moderate and low level of knowledge of the essential functions of FOs. Although 19% of leaders have fairly high knowledge, they were from different TSHDSs, and their other fellow leaders have poor knowledge, the mean value becomes low.

**Table 4 :** Knowledge level of the main leaders of TSDSs on FOs functional aspects

Marks level out of 15	Main leaders (n=349)		Mean for TSHDS
	Number	%	%
0-3.5	7	2	0
3.6-6.5	120	34	31



6.6-9.5	152	44	62
9.6-12.5	68	19	8
12.6-15	2	1	0

### 3.1.3. Mean Experience and Age Level of TSHDS Leaders

TSHDS leaders' experiences, (i) in tea cultivation, (ii) as members of the tea society and (iii) on the executive committee were also considered (Table 5). About 82% of TSHDS have main leaders with a mean experience level of more than 20 years of tea cultivation, while 48% of TSHDS have leaders with more than a mean experience of 10 years as a member. Further, 45% of the TSHDS have main leaders whose mean experience in the committee was more than 6 years, of which half of the TSHDS have main leaders who have served in the committee average of more than 9 years. Moreover, more than 80% of the leaders were more than 50 years old. The young (age below 35 years) tea smallholders were hardly seen in the leadership.

**Table 5:** TSHDS by the mean experience of leaders and age.

Experience and age of leaders						
Mean leaders' Experience of TSHDS in different activities/roles					Mean age of leaders	
Category (years)	Tea cultivation	As a member	Category (years)	As a committee	Age category	% TSHDS
5<	0%	22%	3<	29%	25-35	0%
5-10	2%	41%	3-6	26%	36-50	19%
11-15	3%	41%	6-9	18%	51-65	67%
16-20	13%	13%	9-12	19%	66-75	14%
20<	82%	3%	12<	8%		

### 3.1.4. Vocational Training Exposure of TSHDS Leaders.

Among the leadership (Chairman, Secretary, and Treasurer), the majority have not undergone any vocational training and only about 13% have undergone related training (to their business activities), for more than 3 months period (Table 6). Moreover, those who obtained more than 3 months were from different TSHDSs, and therefore mean training level of the TSHDS was low in the majority of the cases.

**Table 6:** Level of the training exposure received by TSHDS leaders.

Duration of training	% of main leaders received	% of TSHDS based on mean values
No training	46.7	82 (both no training and less than 1month training)
1- 30 days	40.5	
1-3Months	2.6	16
4-12 months	2.6	2
1-2 year	3.6	0
>2 year	4.0	0

**3.1.5. Commitment of the TSHDS Leaders**

TSHDS leaders' commitment level was measured through their engagement in TSHDS affairs. The mean time spent on society affairs of the three main TSHDS leaders was stated in Table 7. The mean time spent by the majority of key leaders on TSHDS activities was less than 5 hours per week, with only 8% of key leaders in TSHDS spending more than 15 hours per week. It was found that some TSHDS have one out of three leaders working hard, and the rest of them are not so, and the mean time spent in such cases was not high.

**Table 7:** Level of commitment of the main leaders by.

	<5 hrs./week	5-10 hrs./week	10-15 hrs./week	15-20 hrs./week>	>20 hrs./week
% of TSHDS	51%	31%	10%	4%	4%
have come under mean value					

**3.1.6. Attitudes of the main leaders**

The leaders’ attitudes on FOs-related matters were measured using 16 questions. The Cronbach's alpha value related to the responses were 0.711 (> 0.7), which confirms the internal consistency of the questions used. Attitude preliminary modifies the behaviour of the person. In that argument, the efficacy of the FOs can be influenced by the leaders' attitudes. The majority of the TSHDS have leaders with moderate attitudes towards the FOs' activities, and about 30% of the TSHDSs consist of leaders with favourable attitudes. Notably, the TSHDS with strong negative and strong positive attitudes holding leaders were lacking (Figure 4).

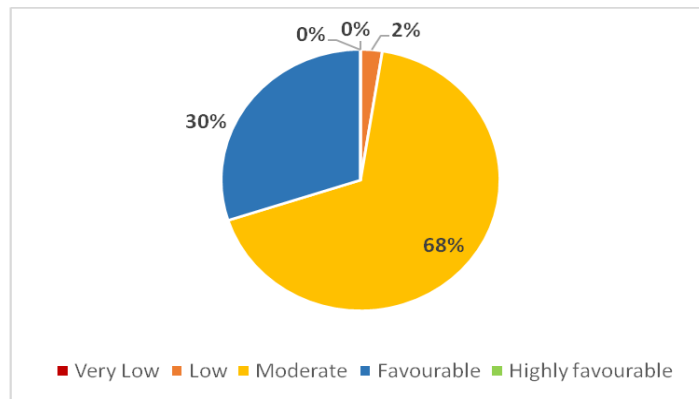


Figure 4: TSHDSs by leaders' attitudes

**3.1.7. Personality Traits Related to the Leadership of the Most Dominating leader of the TSHDSs.**

Extraversion, Conscientiousness and Openness to experience are the important traits out of main 'Big-five' personality traits that have been proven to have a relationship with leadership (Robbins and Judge, 2007). The availability of these factors with the TSHDS leaders was assessed on a 1-5 scale by a set of questions. The relevance of the questions to each trait was confirmed through factor analysis. The internal consistency of the questions is at a satisfactory level (Cronbach's alpha value = 0.745). Figure 5 illustrates the availability of three traits and their average. Accordingly, about 40% of TSHDS's most dominant leaders have satisfactory levels of these three characteristics, while 25-30% of TSHDS leaders have moderate levels of these characteristics (3) (Figure 5). Among the traits, only conscientiousness personality traits were the most existing personality (32%) trait at a very high level (5) compared to the other traits. About 20% and 15% of TSHDS have leaders with low levels (2) of openness and extraversion personality traits, respectively. The combined average value for these three-personality traits was estimated, and 53% of TSHDS leaders have more than 3 value. The leaders are appointed through the members' vote; generally, it is not a thorough screening process. In this context, the presence of these characteristics is important to convince others of the ability of leaders so that members can choose a suitable person as a leader. Hence it is required to examine the relationship between the efficacy of TSHDS and the personality traits of the TSHDS leaders.

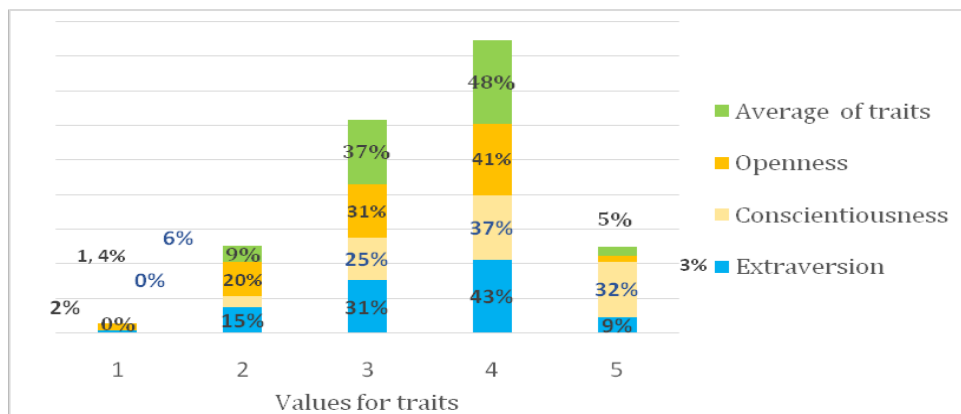


Figure 5: Availability of personality traits with TSDS leaders

**3.1.8. Leadership Ability is Based on Members' Perceptions.**

The members' perceptions of the main leaders' organising capability were measured using five statements (Cronbach's alpha value = 0.737). The mean score values of the leaders in different TSHDSs are summarized in Table 8

**Table 8:** Categories TSHDS by leadership capability level

Leaders	mean	5	4	3	2	1
Score level						
% of TSHDS		0	19	54	27	0

Most of the TSHDS (54%) have moderately capable leaders based on the opinion of the members. On the other hand, very low or very highly capable leaders are not seen in any of the TSHDS studied.

**3.2. Relationship Between Leader-related Factors and Efficacy of TSHDS.**

Whether any association existed between the above-discussed leader-related factors and the efficacy of TSHDSs was evaluated using the chi-square test, and results are indicated in Table 9.

**Table 9:** Association between leader-related factors and efficacy

Type of association	Chi-Square value	p-value
Efficacy X Mean Education level of leaders	13.90	0.307
Efficacy X Mean Knowledge of leaders	20.071	0.01**
Efficacy X Vocational Training level of leaders	8.855	0.355
Efficacy X Mean Experience of leaders	11.812	0.757
Efficacy X Mean Age level of leaders	3.146	0.925
Efficacy X Mean attitudes level of leaders	15.708	0.047*
Efficacy X Mean availability level of personality traits	22.582	0.031*
Efficacy X Mean commitment level of leaders	98.061	0.0001**
Efficacy X organising ability level of the main leader	12.482	0.131

\*Significance at P<0.05 level, \*\* significance at p<0.01 level

According to Table 9, there is no association at all between the Efficacy of the TSHDS and the educational level of the leaders, exposure to vocational training, experience in the tea society, and mean age level of the leaders. Further, it is surprising to notice that a significant association did not detect between the efficacy of TSHDS and the organising ability level of the leaders at 0.05 level. However, it existed at the 85% confidence interval. The capability of leaders was measured through the perception of fellow members. One's perception of the individual can be dependent on contextual factors. This means that contextual factors can distort reality to a certain extent. In addition, factors such as the perceiver's attitudes, interests, expectations and experiences are also influential. Such moderating factors may have acted to mask the relationship between the ability of the main leader and TSHDS effectiveness.

As indicated in the table 6, more than 80% of the society leaders have not undertaken vocational training for more than one month, and on average, no leader has received more than one-year

period of vocational training. This means that the TSHDS has realised this level of achievement without such a component, which could be the reason for not showing an association between training and efficacy. On the other hand, TSHDS do not engage in processing and value-addition activities (except in one case) as done by many FPC in India and Japanese Agriculture cooperatives, and hence such professional qualifications are not critical for TSHDS unlike Indian farming companies and Japanese agricultural cooperatives. That could also be a reason for not having an association with efficacy. The experiences mostly matter for job performance and decision-making events (Rhodes, 1983). However, such a relationship too has not prominent in the TSHDS context as such kinds of business decisions are hard to arise as they are not market-oriented and hardly run as business entities. Although it was expected that organisations run by middle-aged leaders are expected to be performed well as the combined effect of both experience and energy, (McEvoy & Cassio, 1989) which has not been seen in this context. Moreover, the education level of the TSHDS leaders has not contributed to the effectiveness of the TSHDS. In the rural setup, formal education is not the only way to gain knowledge in farming in rural communities. Confirming this fact, the mean knowledge level of the TSHDS leaders has a positive association with the efficacy of the TSHDS. Along with the knowledge, mean time devoted to society affairs by the leaders has a positive association at  $P < 0.01$  level, while Attitudes of leaders and availability of leadership traits have shown a positive association with the efficacy at  $P < 0.05$ .

Knowledge and attitude are the essential elements for behavioural change (Hanik, 1988). Here, behavioural change means implementing strategies to elevate the FOs to a status that can address the array of members' issues. The leaders need to have the right attitudes and a vision of the right direction to bring the TSHDS towards success. The vision develops through knowledge. Thus, that way, these two associations work to uplift the TSHDS. However, knowledge–efficacy associations were relatively strong ( $\phi = 0.409$ ) compared to attitude–efficacy ( $\phi = 0.362$ ). As leaders of voluntary organisations, their attitudes are at a certain basic level, which is why they intrinsically motivate common activities. On top of that, leaders with more positive attitudes would position the TSHDS at a relatively higher level. The leaders' commitment has a strong association ( $\phi = 0.904$ ) with efficacy. Understandably, TSHDSs are pushed forward through leaders' commitment. This finding confirms the argument that arises in the preliminary study that 'some TSHDS survive due to leaders' (Mahindapala, 2020b). On the other hand, the reverse side of this phenomenon is also true – less committed leaders spoil TSHDS. This study showed that the presence of the personality traits in the most dominating leader has a bearing on efficacy. This is one of the leadership approaches, arguing that those who sufficiently enrich these three traits can direct the organisation towards success (Geier, 1967; Judge et al., 2000).

Finally, out of the nine features of the leaders considered, leadership, commitment, knowledge and attitudes are the important factors that influence the efficacy of the TSHDS.

### **3.3. Confirmation Through the Factor Analysis of Leader-related Factors**

To further understand the behaviour of these factors considered, a Factor analysis (FA) was performed and Bartlett's test ( $P < 0.0001$ ) and KMO factor (0.574) indicated that it is reasonable to go ahead with FA. The varimax rotation has also been done to ensure fair loadings only on some of the variables with few factors. Based on the eigenvalues ( $> 1$ ), 3 components were identified, which accounted for 68% of the total variance (Table 10).

**Table 10:** Component Metrix of Factor

Variables considered	Component		
	1	2	3
The ability of the Main leader	.942		
Education	.928		
Commitment		.740	
Attitudes		.695	
Knowledge		.617	
Leadership-related Personality Traits		.595	
Experience			.900

Accordingly, factors that significantly contributed to the efficacy of TSHDS came under one component (2), indicating the uniformity of these variables. Therefore, the latent factor in this component is here argued as contributing to the efficacy.

The links maintained by the TSHDS with the other organisations were examined. Here the attention was drawn to the links initiated and maintained in voluntarily with private, public or voluntary organisations. Only 12% of TSHDS maintained satisfactory links with external entities. These external links are an asset to an organisation and are therefore considered 'Linking social capital' (Woolcock, 2001). When there is a shortage of physical capital, especially for a voluntary organisation like this, linkage capital can be used to improve the status of farmers. (Ostrom, 2000) Amarasinghe and Bavinck (2011) have shown that linking capital was successfully utilised to cope with the vulnerability and poverty of small scaled fishers attached to fisheries cooperatives. Therefore, leader-related factors (Based on the outcome of FA – Table 10, the composite mean value of related variables were used), Link with external organisation and efficacy were considered, and attempted to fit a log-linear model. Based on the  $\Delta G^2$  value and p-value, a suitable model was selected. Accordingly following interaction terms were fitted to the model:

(Links X Efficacy) + (Leader related factors X Links) + (Leader related factors X Efficacy)

These results show that, while directly contributing to efficacy, leader-related factors could even influence the establishment of links with the other organization and thereby indirectly also contribute to the efficacy.

## CONCLUSION

The majority of TSHDS weakly engage in multipurpose service to address the broader needs of members. The market orientation of the TSHDSs is poor. The knowledge, attitude and commitment of leaders significantly affect the efficacy of TSHDSs. Furthermore, the combined effect of some of the 'Big-five' personality traits - particularly extraversion, conscientiousness and 'openness to the experience', of the most dominant leader in TSHDS was found to have a relationship with the efficacy of TSHDS. However, leaders' education qualification, experience, training and age has no significance relation with the efficacy of the TSHDS. Although the attitudes of most TSHDS leaders are not poor, some other factors appeared to be moderated the effect of attitude. As a result, there is a gap between attitudes and behaviour. This may be the reason for their low market orientation and lack of involvement in multipurpose activities.

The efficacy of TSHDS greatly influence by the level of the external link maintained by the TSHDS and the competent leaders drive the TSHDS to establish such links with the other organization.

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**ANNEXURES**

**Annexure 1:** Estimated relative important factors for different MFA

Main Factor	Relative Importance factor	Sub-level Factors	Sub-level weightage
Need Identification	11.82		
Extension	11.41	Advisory activities	0.285
		Farmer training	0.267
		Diagnose field problem	0.245
		Monitoring /motivate farmers	0.203
Welfare activities	7.59	Educational aids	0.213
		Death donation scheme	0.265
		Medical support scheme	0.202
		Recreation	0.114
		Provide other livelihood support	0.206
Dealing with inputs and	12.53	Supply of Inputs	0.57

resources		Supply of physical resources, machines, tools	0.43
Marketing of produce	13.53	Provide information	0.229
		Handling of members primary products	0.333
		Involve in Value addition	0.240
		Marketing of value-added products	0.198
Financial support for members	9.06	Banking service	0.237
		Sharing of profit/Bonus	0.146
		Coordinating to obtained government subsidies	0.229
		Providing Insurance service	0.142
		Transport service	0.176
Joint field operations	8.47		
Capacity Building	8.41		
Involvement in natural Resource management and national/Common/Industry issues which have Broder level impact	5.21	Natural resource conservation and management programs and	0.409
		Intervening in policy formulation	0.313
		Acting as a pressure group	0.278
Adherence to administrative and financial procedures	5.09	Admin activities	0.294
		Accounting	0.264
		Auditing	0.218
		Record keeping	0.224
Other for-profit activities	6.88		
Total	100.0		

(Source: Mahindapala et al., 2021).

**Annexure 2:** The research strategy to measure the leader related attributes.

No.	Attributes that possess by leaders	Research Strategy	Measurement
i	Knowledge level	A self-completing questionnaire was administered to three main leaders. Five questions related to operational aspects of FOs were stated in the questionnaire [Q3] to measure the knowledge.	Answers are evaluated, and 15 marks are given; Scaled into five categories.
ii	Exposer to professional training	Self-completing questionnaire[Q3]; Two questions asked (Q3)	Categorical data with five levels
iii	Education level	Self-completing questionnaire [Q3]	Categorical data with five levels
iv	Attitudes of leaders	Self-completing questionnaire; 16 combined statements directed to main officers. [Q3]	Likert scale with five levels consists of highly Agree – highly disagree (Likert, 1932); finally, to be worked out – the mean attitude scale.
v	Commitment	Self-completing questionnaire [Q3]; directed to main leaders.	The number of hours spent on society activities per week – to be categorised into five levels.
vi.	Experience of leaders	Above Questionnaire [Q3]	The experience was measured in three areas- Tea cultivation, as a society member, and as the main leader – to be converted into 5 scaled categorical data.
vii.	Presence of leadership characteristics of the most dominating leader (most relevant three big- five factors)	Asses based on the perception of the Tea Inspector in charge of the range by a questionnaire consisting of 10 questions related to Openness, Extraversion and Conscientiousness traits. [Q5]	Responses were measured using 5 Likert scales. Finally, the mean value was taken.
viii	Members' perception on organising ability of TSHDS leaders	This was evaluated by asking three questions from members in a separate questionnaire given to the members [Q4]	Likert scale with five level