

# Critical Analysis of Group Dynamics Effectiveness of Farmer Producer Organisations (FPOs) Members in Assam, India

## ABSTRACT

Farmer Producer Organisation (FPO) is a legal entity formed by farmers with a major role in integrating both forward and backward linkages in the agricultural sector for enhancing farmers' income and their livelihoods through reduced cultivation and transaction costs. The present study to analyse the effectiveness of group dynamics of FPOs members was conducted in Lower Brahmaputra Valley Zone (LBVZ) of Assam. In doing so, it utilized the descriptive research design following an ex-post-facto approach to fulfil the objectives of the study and to collect the cross-sectional data from 120 FPO member respondents through personal interview method during 2022. The study reveals that majority of the FPO members had a medium level of group dynamics effectiveness in all selected 12 indicators. The study also shows that among the identified 12 indicators to measure group dynamic effectiveness (GDE) of FPOs, group atmosphere was found with the highest mean value closely followed by teamwork, participation and group cohesiveness. The other indicators in order of importance based on their corresponding mean values were achievement of FPOs, confirmation to group norms, task function, decision making procedure, interpersonal trust, empathy and group communication. As many as 70 per cent members of FPOs in study areas had reported medium level of achievement of FPO, still there is huge scope for their further improvement and achievement in agriculture and allied activities and thereby enhance their income on sustainable basis. The study further reveals that Manikpur Joha Rice Producer Company Ltd. of Chirang district had the highest total GDEI score of 91.027. While Aya Baikho FPO Co-operative Society Ltd. of Goalpara district had the lowest GDEI score of 60.441.

*Keywords: Group dynamics effectiveness, Farmer producer organisation, Lower Brahmaputra valley zone, Assam*

## 1. INTRODUCTION

Group approach has been gaining its wide recognition in India for poverty alleviation in recent years. Many forms of group-based poverty alleviation initiatives have associated social action with finance over the past few decades to boost the living conditions and well-being of the peoples (Anderson) [1]. The group based approach does not only help vulnerable citizens to accumulate the capital by small savings but also provides them with access to structured credit facilities (Shylendra) [2]. Group dynamics involves the influence of personality, power and behaviour on the group process. It is the internal nature of the group as to how they are formed, what their structures and processes are, how they function and affect individual members, other groups and the organization (Van and Schaller) [3]. While the group dynamics effectiveness (GDE) has been operationally defined as the sum total of forces among the members of group based on certain sub-dimensions (Falguni et al.) [4]. The small and marginal farmers (SMFs) face challenges both in production and post production stages

like access to production technology, quality inputs at reasonable prices, credit, custom hiring, seed production, value addition, processing, investments and most importantly market access. Collectivization of such small and marginal farmers to form their organizations as Farmer Producer Organisations (FPOs) has been recognized as the most effective and appropriate institutional mechanism to reduce cost of production, increase per unit productivity and facilitate better market linkages so as to enhance their net income. This will not only help in augmenting income of the farmers but also considerably improve rural economy and create job opportunities for rural youths in village itself. A Farmer Producer Organization (FPO) is a legal entity formed by farmers which provides for sharing of profits/benefits among the members (NABARD) [5]. In an FPO, farmer members interact amongst themselves in relatively enduring basis, identify themselves as belonging to a distinct unit, sharing certain common activities and values. Effective teamwork allows teams to produce outcomes greater than the sum of individual members' contributions (Salas et al.) [6]. FPOs have therefore, been playing a major role in integrating both forward and backward linkages in the agricultural sector with the main objective of enhancing farmers' income and their livelihoods through reduced cultivation and transaction costs (Ramappa and Yashashwini) [7].

Realising the significance of FPOs, Government of India launched the dedicated Central Sector Scheme titled "Formation and Promotion of Farmer Producer Organizations (FPOs)" in July, 2020 with a clear strategy and committed resources to form and promote 10,000 new FPOs with a budgetary provision of Rs. 6865 crores to ensure economies of scale for farmers over the next five years. In Assam, presently there are 95 nos. of FPOs registered by different agencies. The importance of FPCs and FPOs in the state of Assam can be envisaged from the fact that Assam has 18.3 lakh marginal farmers and 4.96 lakh small farmers (Ministry of Agriculture & FW) [8]. In this scenario, formations, promotion and implementation of FPCs/ FPOs in Assam have the potentiality of benefiting these large groups of farmers immensely in the state. FPO being an organisation functioning primarily based on the contributions of the member farmers, their participation in activities and decision making, essentially group dynamics is important for better performance of such organisations (Ajith) [9]. However, successful formation and implementation of this project in achieving of its goal, largely depend on effectiveness of group dynamics including existing nature and degree of bondage among the members and their interactions within the groups. Such complex powers interplay and contribute greatly to efficiency among the members of every FPO. Group dynamics is

very important for successful performance of farmer producer organizations and the success of FPOs is critical for ensuring the success of small and marginal farmers in India (Goraiet al.) [10]. In this present backdrop, the study was designed and conducted to analyze the present internal structure of the group, magnitude of group dynamics effectiveness and the predominant forces that lead to their effectiveness of the groups.

## **2. MATERIALS AND METHODS**

### **2.1 Sampling plan and data collection**

The present study was carried out in six districts viz., Kamrup, Bongaigaon, Nalbari, Chirang, Barpeta and Goalpara under Lower Brahmaputra Valley Zone (LBVZ) of Assam. These districts had good number of functional FPOs promoted by Assam Agricultural University in both the streams of Cluster Based Business Organisation (CBBO) and Assam Agri-business and Rural Transformation Project (APART). A total of eight FPOs that were promoted by Assam Agricultural University through CBBO-AAU and World Bank supported APART project were selected purposively. These FPOs were *Maa Chandka Farmer Producer Company Limited* (Kamrup), *Pagladiya Agro-Organic Producer Company Limited* (Nalbari), *Mandia Co-operative Farmer Producer Organisation Ltd.* (Barpeta), *Manikpur Joha Rice Producer Company Ltd.* (Chirang), *Bhairavchura Farmer Producer Company Ltd.* (Bongaigaon), *Aya Bhaikho FPO Co-operative Society Ltd.* (Goalpara), *Maa Banabashi FPO Co-operative Society Ltd.* (Goalpara) and *Nasiriba Producer Company Ltd.* (Goalpara). From each FPO, a total of 15 active members who were directly involving/ associating in activities in group for better performance of such organizations were randomly selected and approached for data collection. This makes a total sample size of 120 under the study. Data collection from the respondents was made through personal interview method with the help of pretested structured interview schedule prepared based on identified 12 indicators of Group Dynamics Effectiveness index (GDEI).

### **2.2 Measurement and analytical tools**

In the present study, 'Group Dynamics' of the FPOs and its members was quantified with the help of an index called as 'Group Dynamics Effectiveness Index (GDEI)' developed by

Purnima) [11]. Indicators of the index, their measurement procedure and weightage are presented in Table 1.

**Table 1. Indicators of group dynamics effectiveness (GDE) with their measurement procedure and weightage**

Sl. No.	Name of the indicators	Measurement Procedure	Weightage
1.	Participation	Procedure followed by Pfeiffer and Jones [20] with slight modification.	1.0
2.	Team work	Procedure followed by Purnima [11] was used with slight modifications.	0.9
3	Group atmosphere	Procedure followed by Pfeiffer and Jones [20] with slight modifications.	0.9
4	Interest and motivation	Procedure followed by Ganguly [16] with slight modifications.	0.8
5	Decision making procedure	Procedure followed by Ganguly [16] with slight modifications.	0.8
6	Group cohesiveness	Scale developed by Mangasri [19] with slight modifications.	0.8
7	Group communication	Scale developed by Mangasri [19] with slight modifications.	0.7
8	Interpersonal trust	Procedure followed by Ganguly [16] with slight modifications.	0.7
9	Empathy	Procedure followed by Ganguly [16] with slight modifications.	0.7
10	Task function	Procedure followed by Ganguly [16] with slight modifications.	0.7
11	Conformation to group norms	Scale developed by Mangasri [19] with slight modifications.	0.9
12	Achievements of FPO	Procedure followed by Ganguly [16] with slight modifications.	1.1

For the computation of Group Dynamics Effectiveness Index (GDEI), the raw scores of each of the indicators were first normalized (by using the equation no i) and then multiplied by the corresponding weightage of that indicator. These scores were then added up to get the GDE score of each respondent (by using the equation no ii). Average GDEI score of each group were considered as GDEI score of that FPO.

$$X_{ij} - X_{\min}$$

$$\text{Normalized score (Nij)} = \frac{X_{ij} - X_{\min}}{X_{\max} - X_{\min}} \dots \dots \dots \text{eqn. (i)}$$

$$X_{\max} - X_{\min}$$

$$\text{Group Dynamics Effectiveness Index (GDEI)} = \sum W_j N_{ij} \dots \dots \dots \text{eqn. (ii)}$$

Where,  $X_{ij}$  = raw score of ith respondent of jth indicator

$X_{\min} / X_{\max}$  = minimum/maximum score of the jth indicator, respectively

$N_{ij}$  = normalized score of the  $i$ th respondent of  $j$ th indicator

$W_j$  = Weightage of the  $j$ th indicator

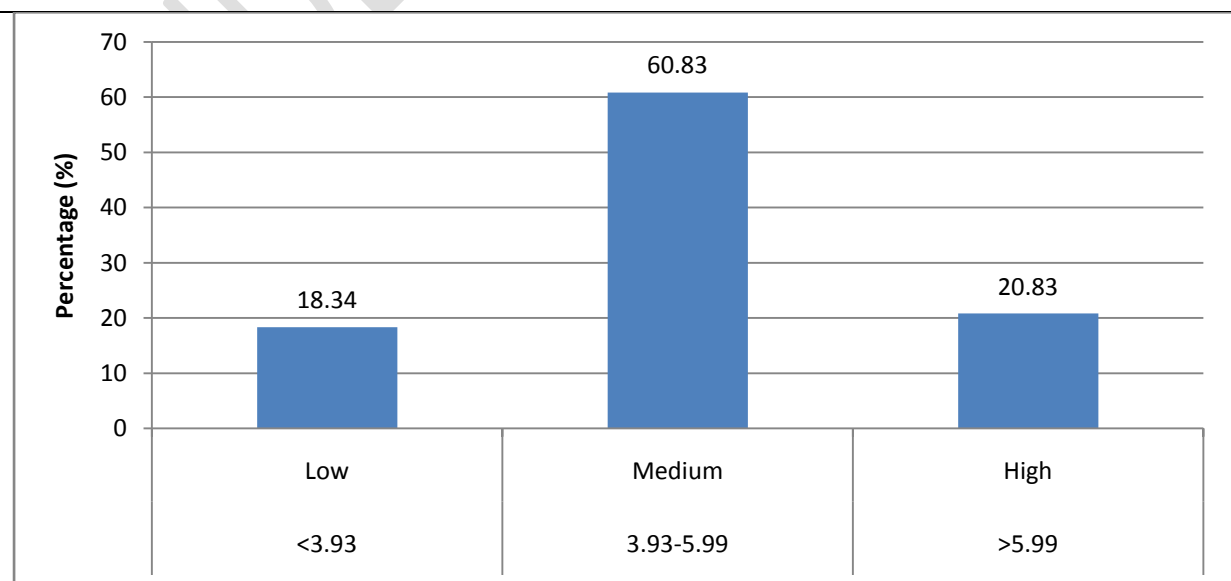
### 3. RESULTS AND DISCUSSION

#### 3.1 Overall group dynamics effectiveness

Table 2 and Fig. 1 show the results of the distribution of the FPOs members according to their overall level of group dynamics effectiveness. Over three-fifths (60.83%) of the FPOs members across eight FPOs in study areas had medium level of group dynamics effectiveness followed by high level (20.83%) of GDE and the remaining 18.34 per cent of them had low level of group dynamics effectiveness. The mean value of 4.96 also indicates that majority FPOs members in the study jurisdiction had medium to high levels of group dynamic effectiveness. These findings are in line with those reported by Darji [12] and Gorai and Wason [13]. While the findings are in contrast with those of Chethan Patil et al. [14] who reported that majority members of SHGs in Ahmedabad district of Gujarat belonged to high level of overall group dynamics effectiveness.

**Table 2: Distribution of the FPOs members according to their overall GDE (N=120)**

S.No.	Category	Score range	Frequency (f)	Percent (%)	Mean	S.D
1.	Low	<3.93	22	18.34		
2	Medium	3.93-5.99	73	60.83	4.96	1.03
3	High	>5.99	25	20.83		
<b>Total</b>			<b>120</b>	<b>100.00</b>		



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**Fig 1. FPOs members according to their overall GDE**

### **3.2 Group Dynamics Effectiveness of the Farmer Producer Organizations**

Table 3 and Fig 2 depict the results of the distribution of the FPO members according to different indicators of group dynamics effectiveness.

#### ***Participation***

It is evident from the table that majority of FPOs members (64.16%) had a medium level of participation, followed by 20.00 per cent had low and 15.83 per cent had high level of participation in different activities of the organisation. It can be said that most members of the FPOs had a medium to low level of participation, and this result is attributed to medium level of economic motivation of the members of the FPOs, which in turn leads to medium participation in different group activities for the better performance of the organisations. These findings are in line with those reported by Darji [12], Bhatt [15], Ganguly [16], Purnima [11] and Chethan Patil et al. [14].

#### ***Teamwork***

Three-fourths (75.00%) of the FPOs members had medium level of teamwork followed by low (13.33%) and high (11.67%) levels of teamwork. Good group cohesiveness of rural culture coupled with a favourable disposition towards FPOs of the member to remain close in relationship with each other among the group might be the possible explanation of this type of the results. The mean value of 32.92 also clearly indicates that most of the FPOs members belonged to medium level of teamwork in the study areas. These findings are in line with those reported by Darji [12], Bhatt [15], Ganguly [16] and Chethan Patil et al. [14].

#### ***Group atmosphere***

Over half (61.67%) of the FPOs members had perceived a medium level of group atmosphere among the members, followed by low (22.5%) and high (15.83%) level of group atmosphere. The group members of FPOs believed that favourable atmosphere is must needed for better performance to harvest the fruitful results of the group approach and during field investigation, it was also observed that there are minimum quarrel and quadral relationship

among the members in various groups. The findings are in line with those reported by Darji [12], Bhatt [15], Ganguly [16], Purnima [11] and Chethan Patil et al. [14].

### ***Interest and motivation***

Data presented in Table 3 indicate that 66.67 percent FPOs members had medium level of interest and motivation. While 20.83 percent respondents (FPOs members) had high level of interest and motivation followed by low (12.5%) level of interest and motivation. The mean value of 26.63 also clearly shows that majority respondents had belonged to medium level of interest and motivation for group dynamic effectiveness of FPOs members.

**Table 3. Distribution of the FPOs members according to different indicators of GDE (N=120)**

S.No.	Indicator	Category	Score range	Frequency (f)	Percent (%)	Mean	S.D.
1.	Participation	Low	<28.37	24	20	32.24	3.87
		Medium	28.37-36.11	77	64.16		
		High	>36.11	19	15.84		
2.	Teamwork	Low	<29.67	16	13.33	32.92	3.25
		Medium	29.67-36.17	90	75		
		High	>36.17	14	11.67		
3.	Group atmosphere	Low	<31.04	27	22.5	33.82	2.78
		Medium	31.04-36.6	74	61.67		
		High	>36.6	19	15.83		
4.	Interest and motivation	Low	<23.81	15	12.5	26.63	2.82
		Medium	23.81-29.45	80	66.67		
		High	>29.45	25	20.83		
5.	Decision making procedure	Low	<10.72	17	14.17	12.73	2.01
		Medium	10.72-14.74	84	70.00		
		High	>14.74	19	15.83		
6.	Group cohesiveness	Low	<25.09	21	17.5	28.91	3.82
		Medium	25.09-32.73	76	63.33		
		High	>32.73	23	19.17		
7.	Group communication	Low	<15.46	12	10.00	10.00	2.68
		Medium	15.46-20.82	88	73.33		
		High	>20.82	20	16.67		
8.	Interpersonal trust	Low	<9.93	11	9.17	12.1	2.17
		Medium	9.93-14.27	94	78.33		
		High	>14.27	15	12.5		
9.	Empathy	Low	<8.52	18	15.00	10.57	2.05
		Medium	8.52-12.62	80	66.67		
		High	>12.62	22	18.33		
10.	Task functions	Low	<10.16	32	26.67	12.82	2.66
		Medium	10.16-15.48	71	59.16		
		High	>15.48	17	14.17		
11.	Confirmation to group norms	Low	<12.9	19	15.83	15.75	2.85
		Medium	12.9-18.6	83	69.17		
		High	>18.6	18	15		

12.	Achievement of FPO	Low	<19.13	22	18.33	23.42	4.29
		Medium	19.13-27.71	84	70		
		High	>27.71	14	11.67		

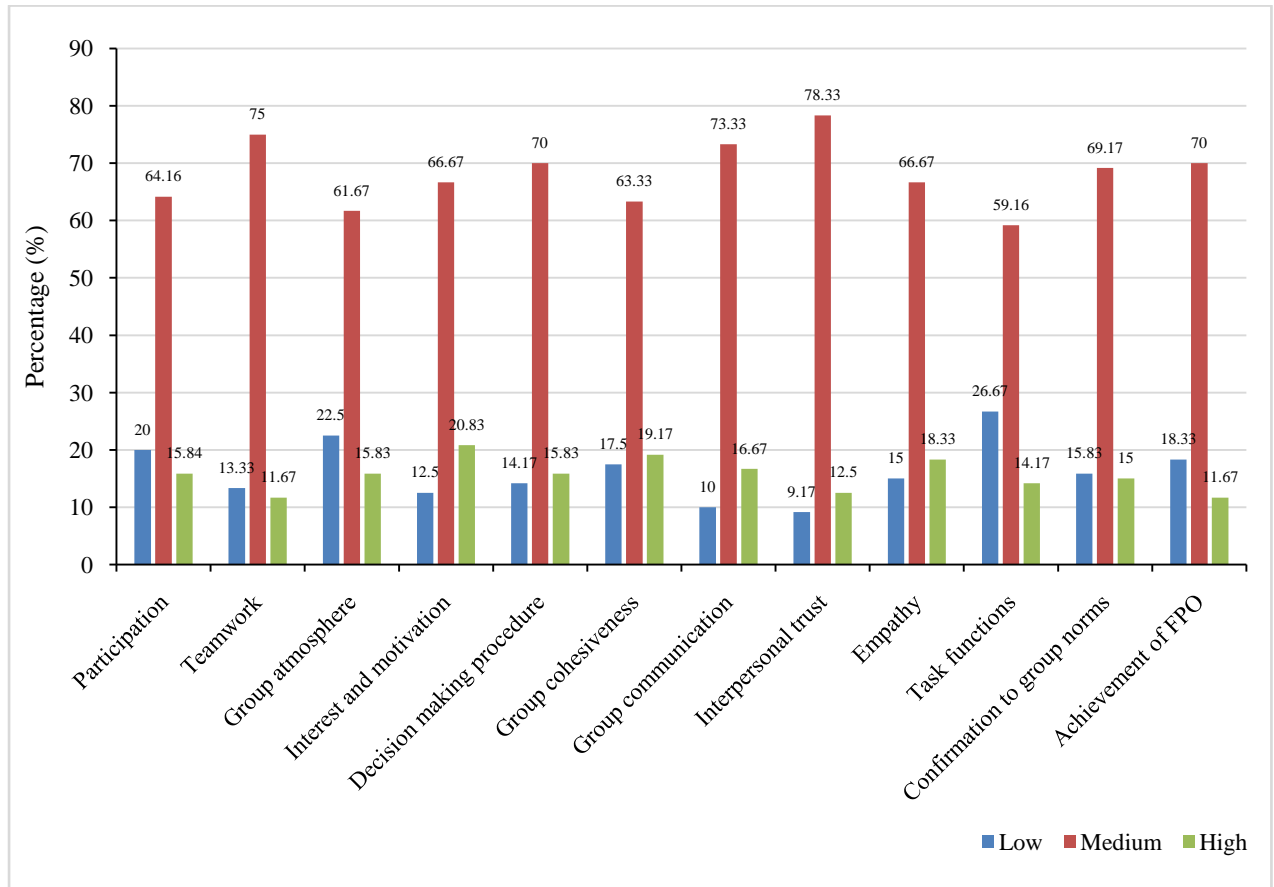


Fig 2. Distribution of FPOs members according to different indicators of GDE

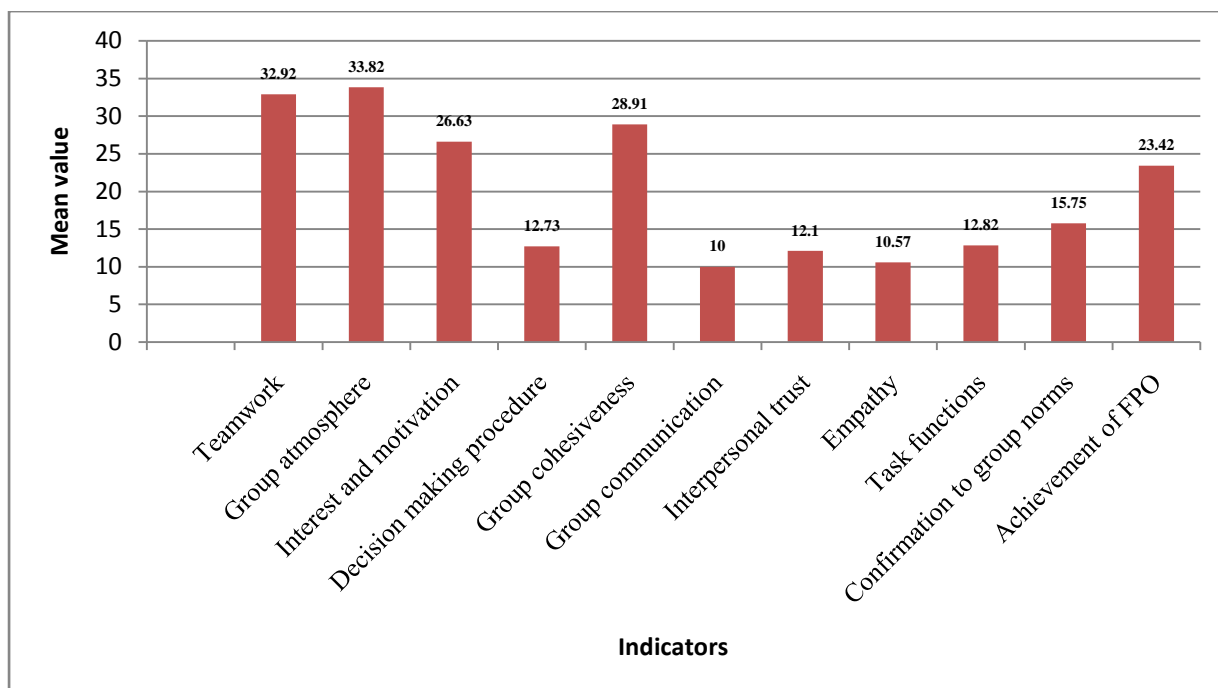


Fig 3. Distribution of FPOs members based on mean scores in different indicators

### Decision making procedure

Over two-thirds (70.00%) of the members of FPOs had medium level of decision-making procedure in their respective FPOs followed by high and low levels with 15.83 percent and 14.17 percent respectively. The group members had perceived that there was a good to a fair level of decision-making procedure as prompt decisions are part and partial for the successful running of the group. It is thus suggested that some decisions are to be taken with some cautious approach to sustain groups. These findings are in line with those reported by Darji [12], Bhatt [15], Ganguly [16] and Purnima [11].

### Group cohesiveness

As high as 63.33 percent of the total respondents were found to have medium level of group cohesiveness, followed by high (19.17%) and low (17.5%) levels of group cohesiveness. The calculated mean value of 28.91 also indicates that majority FPOs members had medium level of group cohesiveness in the study areas. The possible reason for this result might be due to medium to a high level of group cohesiveness, good teamwork, good group atmosphere and also willingness to remain united in the group for problem solving phenomena which in turn, resulted into medium to high group cohesiveness among the members. These findings are in line with those reported by Darji [12], Ganguly [16] and Purnima [11].

### **Group communication**

A perusal of data presented in the table shows that 73.33 percent of the respondents had medium level of group communication in FPOs. This was followed by high (16.67%) and low (10%) levels of communication in groups. The mean value of 18.14 also indicates that majority FPOs members had medium level of group communication. This is probably due to the fact that in the present day society, members of FPOs were easy exchanging and sharing information with the help of information technology like mobile phone, internet connectivity, and other social media platforms. This helps to improve the nature and extent of information flow among the group members.

### **Interpersonal trust**

Over three-fourths (78.33%) of the FPOs members had a medium level of interpersonal trust, followed by 12.5 per cent and 9.17 per cent had a high and low level of interpersonal trust. The mean value of 12.1 also shows that majority FPOs members had medium level of interpersonal trust. This might be due to fact that members of FPOs had a positive disposition towards FPOs and excellent group atmosphere. These findings are in line with those reported by Darji [12], Bhatt [15] and Ganguly [16].

### **Empathy**

The table shows that as many as 66.67 percent of the respondents under the study had medium level of empathy towards others. While 18.33 percent and 15.00 percent respondents were found to have high and low levels of empathy, the mean value of 10.57 also clearly shows that majority FPOs members had medium level of empathy towards others. It is learnt that most of the FPOs members in the study jurisdiction belonged to high level of literacy/ education with fair level of economic condition and socio-political participation, which helped them to understand other person's feelings and internal frame of mind in real time and field situations.

### **Task functions**

Task function refers to the degree to which a group member is involved in the roles related to the achievement of the purposes of the group such as initiating activity, seeking information, seeking opinion, giving information, giving opinion, elaborating, coordinating, summarizing and testing feasibility. The study reveals that over half (59.16%) of the respondents were found having medium level of task function towards achievement of the organizational objectives. This was followed by low level (26.67%) and high (14.17%) level of task

functions. The mean value of 12.82 clearly shows that majority FPOs members had medium level of task functions in their respective FPOs.

### **Confirmation to group norms**

It was operationalized as the extent to which the members feel that the rules and regulations governing the group behavior are in operation for effective functioning of FPOs. The results presented in the table indicate that majority respondents were observed having medium level (69.17%) confirmation to group norms. While nearly equal number of respondents i.e., 15.3 percent and 15 percent had low and high levels of confirmation to group norms. The mean value of 15.75 also indicates that majority FPOs members had medium level of confirmation to group norms of the organization.

### **Achievement of FPO**

Achievement of FPO at FPO level was operationalized as the level of performance of the FPO as perceived by the members in consensus with the objective of improving farm income through set of activities including improved production, marketing and local processing activities etc. The study shows that 70 percent respondents had perceived as medium level of achievement of their respective FPOs/FPCs for the social and economic development. This was followed by 18.33 percent and 11.67 percent respondents, who had perceived their FPOs/FPCs achieving low and high level achievements respectively. The inner desire of the FPOs member to achieve certain goals in a group was fairly satisfactory among the young aged group members which leads them to achieve goals resulted into better performance of the group might be the possible explanation of this type of result. These findings are in line with those reported by Ganguly [16].

### **3.3 Average Group Dynamic Effectiveness (GDE) of FPOs**

Table 2 and Fig. 3 also show that among the identified 12 indicators to measure group dynamic effectiveness (GDE) of FPOs, group atmosphere was found with the highest mean value of 33.82 with Standard Deviation (SD) of 2.78. This was closely followed by teamwork (32.92), participation (32.24), group cohesiveness (28.91) and interest and motivation (26.63), indicating that performance of these group dynamics effectiveness indicators to determine group dynamics effectiveness was alike and had a more or less equal contribution. The other indicators in order of importance based on their corresponding mean values were achievement of FPOs with mean value of 23.42, confirmation to group norms (15.75), task

function (12.82), decision making procedure (12.73), interpersonal trust (12.1), empathy (10.57) and group communication (10). The findings are in line with those reported by Darji [12], Bhatt [15], Ganguly [16], Purnima [11] and Chethan Patil et al. [14].

### 3.4 Farmer Producers Organisations (FPOs) and their Group Dynamic Effectiveness Index (GDEI)

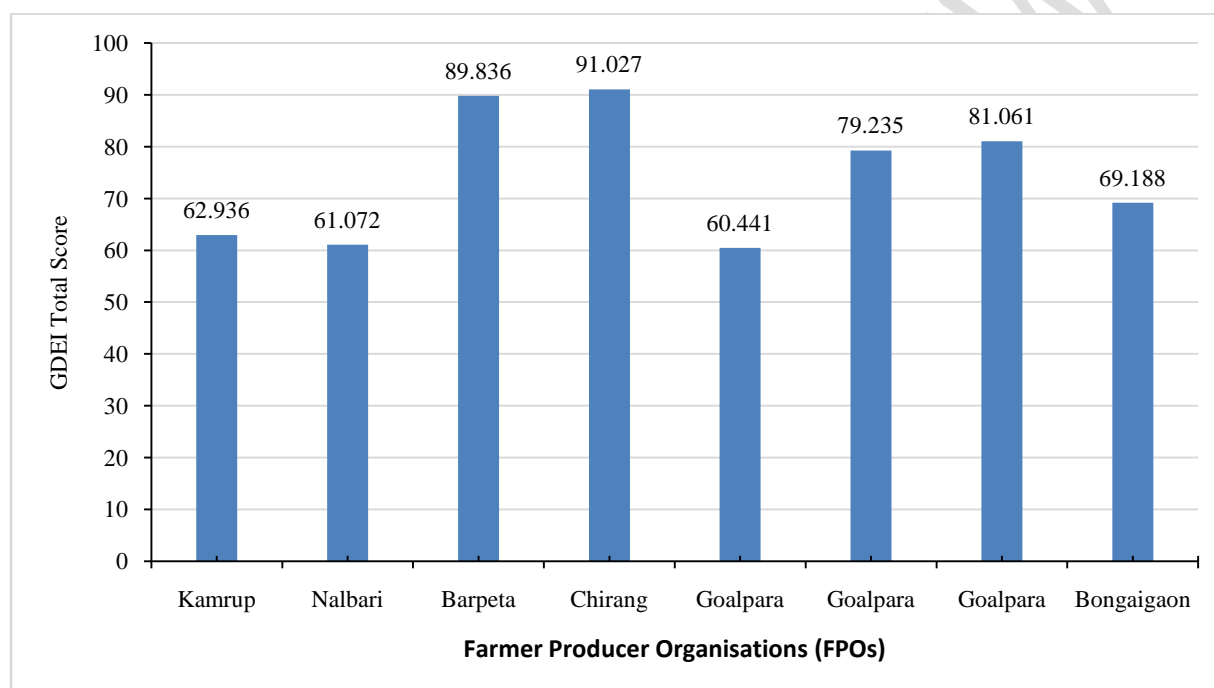
A view of computed GDEI score of selected eight FPOs/FPCs under study is given in Table 4 and Fig.4.

The data presented in the table show that *Manikpur Joha Rice Producer Company Ltd.* of Chirang district of Lower Brahmaputra Valley Zone (LBVZ) of Assam had the highest total GDEI score of 91.027. The average group dynamics effectiveness (GDEI) score was 6.068 with standard deviation 0.523. While *Aya Baikho FPO Co-operative Society Ltd.* of Goalpara district had the lowest GDEI score of 60.441 with average GDEI score and SD were 4.029 and 0.562. The other FPOs in descending order of total values of GDEI were *Mandia Cooperative Farmer Producer Organization Ltd* of Barpeta (89.836), *Nasiriba Producer Company Ltd.* of Goalpara (81.061), *Maa Banabashi FPO Co-operative Society Ltd.* of Goalpara (79.235), *Bhairavchura Farmer Producer Company Ltd.* of Bongaigaon (69.188), *Maa Chandka Farmer Producer Company Ltd.* of Kamrup (62.936) and *Pagladiya Agro Organic Company Ltd.* of Nalbari (61.072) respectively. Further investigation under the study also reveals that majority of the beneficiary members felt themselves as a part of the group and had a high level of concern for the feelings of other members. The members were empathetic towards other group members. The findings are also in line with those reported by Venkattakumar and Narayanaswamy [17]. It was also observed that there was a wide variation among the respondents of different FPOs in term of their contribution in group dynamics effectiveness. The results are in agreement with those of Shashi et al. [18] through their study on dimensions of group dynamics effectiveness in rural Haryana.

**Table 4: Farmer Producers Organisations (FPOs) and their Group Dynamic Effectiveness Index (GDEI)**

District	Name of the FPO/FPC	GDEI total score	GDEI mean score	S.D.
Kamrup	Maa Chandka Farmer Producer Company Ltd.	62.936	4.196	1.058
Nalbari	Pagladiya Agro Organic	61.072	4.071	0.827

Barpeta	Company Ltd. Mandia Cooperative Farmer Producer Organization Ltd.	89.836	5.989	0.261
Chirang	Manikpur Joha Rice Producer Company Ltd.	91.027	6.068	0.523
Goalpara	Aya Baikho FPO Co-operative Society Ltd.	60.441	4.029	0.562
Goalpara	Maa Banabashi FPO Co- operative Society Ltd.	79.235	5.282	0.778
Goalpara	Nasiriba Producer Company Ltd.	81.061	5.404	0.755
Bongaigaon	Bhairavchura Farmer Producer Company Ltd.	69.188	4.612	0.349



**Fig 4. Farmer Producers Organisations (FPOs) and their Group Dynamic Effectiveness Index (GDEI)**

#### 4. CONCLUSION

From the study, it can be concluded that majority of the member beneficiaries across eight selected FPOs in Lower Brahmapura Valley Zone of Assam had medium to high level of their group dynamics effectiveness, which is attributed due to members' medium to high levels of education, interest and motivation, group cohesiveness, group communication and empathy and decision making procedure. As many as 70 per cent members of FPOs in study areas had reported medium level of achievement of FPO, still there is huge scope for their further improvement and achievement in agriculture and allied activities and thereby enhance their income on sustainable basis, which calls for a support from the policy makers, extension agencies as well

as financial organisations in running the FPOs. In conclusion, to build a prosperous and sustainable agriculture sector by promoting and supporting member-owned Producer Organisations, that enable farmers to enhance productivity and sustainable income generation, it is paramount importance for cost-effective and sustainable resource use to realize higher returns for their produce, through collective actions including extension programmes supported by the government, research agencies, civil society and the private sector..

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