

# Analysis of Positive Deviance Farmer Training Centers in Northern Ethiopia

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**Abstract** FTC-based farmer training is an emerging extension strategy geared towards human capital development through need-based, hands-on practical training in order to facilitate agricultural transformation and rural livelihood improvement. Although, FTCs were established and made functional in the Tigray National Regional State and Alamata Woreda but, no systematic assessment of the positively deviated farmers training center. Hence, to alleviate this problem, educating this research was initiated to fill the gap. Specifically the research attempted to address this important question: Are there FTCs with successful experience for scale-out/up 14 DAs and 20 woreda experts by means of semi-structure interview schedule. Qualitative methods that were used at community, organizational and individual levels include: document review, focused/group discussion, personal interviews and direct observation. The quantitative data were also analyzed using descriptive statistics. Based on the indicators of positive deviance like, departure from the norms, intentional behavior and honorable outcomes such as technology dissemination, exemplary demonstration field management, diversified and substantial training outreaches of the four sampled FTCs, Selambkalsi FTC is found to be positively deviating. In this research context, positively deviant FTC is the one that performed better than the other FTCs regardless of similar problems and resource base. Therefore, it is recommended that policy aimed at FTC based training in the area could be the result of this study are taken in to consideration and there should be experience sharing mechanisms among FTCs so as to cross fertilize the successful results throughout the study area and lesson are developed and institutionalized.

**Keywords:** *positive, deviance, farmer, training centers*

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## 1. Introduction

Ethiopian development policy and strategy document had given credence to different institutional arrangements so as to reduce the bottleneck of development. Government reports shows that, 25 Technical Vocational and Education Training Colleges had been established at the beginning of 2000. The aim of such establishment was to develop technical capacity of the frontline extension workers that will have beneficial impact on medium and long term objectives of the country [3]. The government plans to establish about 15,000 centers in all. During the last two decades about 8500 farmer training centers (FTCs) were established throughout the country. The centers were set up in 2002 in each rural kebele<sup>1</sup>. Initially, FTC at each kebele was proposed to serves as center of information, demonstration, source of advisory services, a bridge to different services provides and place where different types of trainings are delivered [1,2,4].

Farmer training centers are the cornerstone of Ethiopia's strategy to support small-scale farming as a

business. Each farmer training centre is staffed by three extension agents. From the 8,500 such centers throughout the country only 2,500 are fully functional [4]. So far the centers provide a wide range services: farmer training and extension services on improved farming techniques (through training courses, exhibits, demonstration farms, field days and farmer-to-farmer extension); market-oriented information and advisory services; meeting and communication facilities; and seed and seedlings of new crops, vegetables, fruit and forage varieties. Besides hand on training, the Ministry of Agriculture has developed and distributed some 20 training modules for use in the centers [4,6]. In effect, different capacity building programs have been delivering training at FTCs by subject matter specialists [5].

Despite many efforts in capacitating the entire FTCs, the continent and the outreaches of most FTCs still lacks uniformity to flexibly respond to fast demand-driven approaches of the agricultural market [6,8]. In addition to this, the situation of each FTC in the study area with respect to the type and the quality of the training offered and technologies disseminated are the unattached agenda for development studies. In line with such context, assessing the performance of the different farmer training centers is quite important. Hence, this study was designed to analyze positively deviating farmers training center in

<sup>1</sup>In Ethiopia Kebele/Tabia represents the smallest administrative unit formerly known as Peasant Associations/PA/. One kebele/Tabia can have also 4-6 sub –villages. Each kebele has around 5,000 people

the study area. The working hypothesis of this paper is: there is no difference among different FTC and hence there is no positively deviating FTC as they are implemented within similar socio-politics.

## 2. Research Methodology

The study primarily followed quantitative research design. Qualitative data were also collected from group discussion. The combination of both methods is believed to provide the advantage of overcoming the problem associated when solely one is used.

### 2.1. Survey Design and Data Collection

Qualitative data were used to supplement and to fill gaps inquired during the quantitative data collection process, particularly at exploratory phase. In order to have clear idea and to identify priority issues to be focused for the formal survey, exploratory study was first carried out. Sampling procedure was followed to collect the necessary data. First, 4 FTCs were purposefully selected based on accessibility. Data were collected from 20 experts of the *Alamata Woreda* Office of Agriculture and Rural Development and 14 DAs working at the selected FTCs using structured questionnaires. A Likert type response format was used for rating FTC in the positive deviance analysis. Initially, anchors for the scale were 5 ranging from strongly agree (5) to strongly disagree (1) were developed. After the pretest the anchor for the scale were adjusted in to thee. The three anchors for this scale were (1) disagree, and (3) agree with the middle point on the scale being neutral (2). The instrument employed for assessing positive deviances were refined with the relevant experts before actual application. The instrument was designed to capture the extent to which the respondents agree or disagree to each item with reference to each FTC. Group discussion was conducted with different experts and DA to supplement the data collected using survey.

### 2.2. Data Analysis Method

Using descriptive statistics such as, mean, standard deviation, frequency of occurrences and percentage were employed to assess the positive deviance FTCs. Moreover, a Likert-type response format were used to rate positive deviance FTC, the anchors for this scale were (1) disagree, and (3) agree with the middle point on the scale being neutral (2). The whole quantitative data have processed by SPSS version 12.

## 3. Result and Discussion

### 3.1. Exploration of Positive Deviance Case among the Studied FTCs

The term positive deviance refers to ‘a departure from the norm’ which results in a positive outcome. Our measure of positive deviance is based on the definition of positive deviance which we have adopted from Speritzer and Sonenshein [7]. The authors define positive deviance as: “Intentional behaviours that significantly depart from

the norms of a referent group in honourable ways.” The two key concepts for understanding and analyzing positive deviance are ‘departure from the norm’ and ‘intentional behavior’. The former suggests that positive deviance involves a departure from the norms of a referent group with some visible indicators often unexpectedly. The second, intentional behavior underlines that the positive deviance ought to be voluntary, purposeful, and discretionary.

In this research context, positively deviant FTC is the one that performed better than the other FTCs regardless of similar problems and resource base. Of the four sampled FTCs Gerjalle, Selambikalsi and Tumuga are supported by IPMS as a result they are more resourceful in terms of communication facilities like computer TV and wireless telephone. However, all the 4 FTCs attended the training organized by IPMS. Background information on each FTCs establishment, resources, activities, governance, linkages and partnership, etc were collected; and individual interviews and group discussion were conducted with DAs and document review were employed to identify and characterize any positive deviance case.

Secondly, brainstorming was conducted with experts at woreda office, local administrations representatives, supervisors and FTCs managements. The discussion was held to elicit their views as regard to which FTC and in what respect might represent a special case among the studied four FTCs. The dimensions of the FTCs considered during the discussion included factors such as resource governances, linkage with both governmental and non-governmental actors/organizations, client-orientation in training design, delivery, monitoring and evaluation, actual and/or perceived impacts of the training in addressing practical needs of different categories of farm households in their respective peasant associations. Further, discussion was held with other key informant farmers to compare and contrast the FTCs from the same area, which are working to address more or less similar challenges with comparable physical, financial and other resources. The brainstorming and group discussion process helped to understand the key practices of each FTC and to highlighted and analyze the perceived superior results of the respective FTCs.

Activities of the FTCs were differentiated and contrasted to explore into the existence of any departure from norms. In addition whether this departure might be desirable of ‘an honorable nature’ was also contrasted. A list of set of behaviours perceived deviating positively and substantially from norms or the expected roles and/or performance of FTCs were singled out and attempt was made to learn about what exactly made the deviants successful.

To understand whether a departure from norms has occurred, it is important for a respondent from the appropriate referent group to rate the behavior. In our case identifying positive deviance among the FTCs involves a unit departing from the office of agriculture and rural development, hence the final rater were experts from the *Alamata Woreda* Office of Agriculture and Rural Development who are engaged in a continuous assessment of activities and performances of each of the FTCs and those who also understand the norms regarding FTCs. Besides, the input of each DAs collected during FTC

survey was instrumental for the final rating of the deviance FTC.

As can be seen in Table 1, S/Bikalsi FTC has been found a positive deviant among the sample FTCs. About 97 percent of the respondents agreed that the outputs of S/Bikalsi FTC was positively and substantially different

from outputs of the other FTCs. S/Bikalsi FTC outperformed as reflected in indicators such as its diversified and substantial training outreaches, better credit access, effective use of technology, and high repayment rates among its clients, successful promotion of commercial vegetable production and fattening.

**Table 1. Experts levels of agreement on the analysis of Positive deviance FTC Alamata Woreda, 2010 (N=20)**

| S/N                         | Items used to measure Positive Deviance  | FTC                |              |            |               |         |
|-----------------------------|--|--------------------|--------------|------------|---------------|---------|
|                             |  | Level of agreement | Gerjalle (%) | Tumuga (%) | S/Bikalsi (%) | Tao (%) |
| <b>Departure From Norms</b> |  |                    |              |            |               |         |
| 1                           | The behaviors/ outputs described in the FTC (training, technology dissemination, loan repayment etc)/ significantly departed from other FTCs | Disagree           | 20           | 25         | -             | 5       |
|                             |  | Neutral            | 35           | 45         | -             | 20      |
|                             |  | Agree              | 55           | 35         | 100           | 75      |
| 2                           | The FTC out smarts/acted in a way that was not expected  | Disagree           | 5            | 5          | -             | 30      |
|                             |  | Neutral            | 55           | 45         | 5             | 25      |
|                             |  | Agree              | 40           | 40         | 95            | 45      |
| 3                           | The actions of the FTC did not represent "business as usual."  | Disagree           | 30           | 65         | -             | 5       |
|                             |  | Neutral            | 10           | 25         | -             | 30      |
|                             |  | Agree              | 60           | 10         | 100           | 65      |
| <b>Intention</b>            |  |                    |              |            |               |         |
| 1                           | The behaviors/outputs described in the FTC (training, technology dissemination etc) were intentional rather than happening by chance.        | Disagree           | 15           | 30         | -             | 5       |
|                             |  | Neutral            | 10           | 25         | 15            | 45      |
|                             |  | Agree              | 75           | 45         | 85            | 55      |
| 2                           | What occurred happened in the FTC (training, technology dissemination, loan repayment etc) by accident                                       | Disagree           | 10           | 30         | 10            | 25      |
|                             |  | Neutral            | 25           | 25         | 5             | 35      |
|                             |  | Agree              | 65           | 45         | 85            | 40      |
| 3                           | The DAs, administrators and stakeholders in the FTC acted voluntarily rather than being coerced by others.                                   | Disagree           | 5            | 10         | -             | 10      |
|                             |  | Neutral            | 30           | 15         | 10            | 45      |
|                             |  | Agree              | 65           | 75         | 90            | 50      |
| 4                           | The actions of the FTC were discretionary/open/unlimited.  | Disagree           | 5            | 10         | -             | 10      |
|                             |  | Neutral            | 30           | 15         | 10            | 45      |
|                             |  | Agree              | 65           | 75         | 90            | 50      |
| <b>Honorable Nature</b>     |  |                    |              |            |               |         |
| 1                           | The outputs described in the FTC (training, technology dissemination, disbursement loan repayment etc)/ in the episode/FTC were honorable.   | Disagree           | 25           | 55         | -             | 15      |
|                             |  | Neutral            | 30           | 5          | 5             | 20      |
|                             |  | Agree              | 45           | 40         | 95            | 65      |
| 2                           | The actions of the FTC could be characterized as virtuous.   | Disagree           | 25           | 55         | -             | 15      |
|                             |  | Neutral            | 30           | 5          | 5             | 20      |
|                             |  | Agree              | 45           | 40         | 95            | 65      |
| 3                           | The FTC outputs described in the FTC (training, technology dissemination, loan repayment etc) / episode could be described as ennobling.     | Disagree           | 30           | 35         |               | 20      |
|                             |  | Neutral            | 25           | 55         | 5             | 15      |
|                             |  | Agree              | 55           | 5          | 95            | 65      |
| 4                           | The FTC performance is honorable   | Disagree           | 25           | 55         | -             | 15      |
|                             |  | Neutral            | 30           | 5          | 5             | 20      |
|                             |  | Agree              | 45           | 40         | 95            | 65      |

Sources: own compilation, 2010.

Besides, it has better cattle breeding service provision (exotic bull service), well designed demonstration fields of the FTC, large and increasing number of improved technology adoption among its client farmers. Further, more than 85 percent of the respondents agreed that the outstanding performance of S/bikalsi FTC was resulted from intentional behavior, did not happen by chance.

In the second place, about 58 percent of the respondents agreed that Tao, although established relatively late and got less support, also represents a substantial departure from the remaining FTCs. Among others, in its training outreach and the quality of demonstration field management incorporating new crops like jathropha, moringa and different fodder banks are some of the indicators of recognizable norms of the FTC.

The result with regard to Gerjalle FTC is mixed. Although 52 percent of the respondents perceive favorably the relative performance of Gerjalle FTC, more than 50 percent of the respondent disagreed that the performance represents a substantial departure and expressed some reservation as regards to the FTC sustainability indicators.

This is witnessed by the availability of field demonstration of commercial crops and forage multiplications, the availability of family drip systems and water reservoirs built by the community mobilization and the availability of physical and biological soil and water conservations are some of the indicators for the existence of intentional actions. In this regard about 75 and 55 percent of the respondents also agreed on the intentional actions of Gerjalle and Tao FTCs, respectively. However,

more than 50 percent of the respondents also agree that Tumuga lacks the element of intention from all stakeholder, the indicators for such responses were justified by the absences of representative field demonstration sites and supporting infrastructures.

The third criteria used to characterize positive deviance FTC was the performance represent an honorable nature beyond the ambitions of the FTCs actors. To capture this issue indicators and certificate offered by the woreda to the FTCs were assessed. Based on the document assessment and experts rating of the sampled FTCs about 95 percent of the respondents agreed on the performances of S/bikalsi as an honorable nature than the rests of the woreda FTCs. To verify this response we also get some important indicators of honor and prizes given to it like the modular training graduation and the certificate they obtained before 4 years. In this regard, about 65 percent of the respondents also pointed out on the performances of Tao FTC as an honorable nature. However, more than 50 percent of the respondents disagreed on the performances of Tumuga and Gerjalle to be honorable nature in their performances.

### 3.2. Training Outreaches of the FTCs

The very objective of FTC establishment was to upgrade knowledge and practical skills of the farming households and to avail agricultural information and technical support so as to positively contribute for agricultural development of its mandate area. During

2009/2010 production season, each FTC has offered training. The durations of the training varies based on the content and complexity of the topic to be trained. Major areas of the training were soil and water conservation, household package, compost preparation, livestock fattening, credit, fertilizer usage, agronomic practices such as row planting, irrigation and livestock feed managements on urea treatment and urea molasses blocks etc. Target beneficiaries of the training vary from commodity to commodity and from FTC to FTC as well.

As shown in Table 2, Selambikalis FTC has performed relatively much better interns of outreach and gender sensitivity in training. For instance, of the total 1516 farm households 86% of MHH and 47% FHH were beneficiaries of the training delivered in crop commodities. While 14% of MHH and 53% of FHH were not attend crop related training. Similarly, about 65 and 46 percent of MHHs were trained in livestock and natural resources commodities, respectively. While about 53% and 28% of the FHHs were also trained in livestock and natural resources related commodities. Toa FTC is also the second efficient in crop technology related training with 85% of the MHHs and 17% of FHH training out reaches. While 15% of MHH and 83% of FHH were not attend crop related training. In addition Toa is also second in terms of NRM training with 28% MHH and 14% FHH out reaches and third with respect to livestock training that cover about 63% MHH and 10% FHHs.

**Table 2. DAs response on trainings offered in agriculture and rural development in the past 12 months at FTC Alamata Woreda, 2010 (N=14)**

| Training subject | Percentage of Trainee Categories by sex and FTC |     |        |      |           |    |     |    |
|------------------|---|-----|--------|------|-----------|----|-----|----|
|                  | Gejalle   |     | Tumuga |      | S/bikalsi |    | Tao |    |
|                  | M   | F   | M      | F    | M         | F  | M   | F  |
| Crop             | 30  | 2.1 | 57     | 3.2  | 86        | 47 | 85  | 17 |
| Livestock        | 9   | 2   | 67     | 14   | 65        | 53 | 63  | 10 |
| NRM              | 14  | 4   | 1.8    | 0.07 | 46        | 28 | 28  | 14 |

Source: own compilation, 2010.

In regards to livestock commodity training outreach Tumuga is the second next to Selam-bikalis with 67 percent MHH and 14 percent FHH beneficiaries while it is the fourth with respected to NRM that covers 1.8 percent and 0.07 percent of the MHH and FHHs. Gerjalle FTC is the least in terms of crop and livestock technology training out reaches with 9 and 2 percent in crop and 30 and 2.1 percent MHH and FHH in livestock related technology beneficiaries, respectively while Gerjele is ranked third in terms of NRM trainings with 14 and 4 percent FHH and MHH out reaches.

### 3.3. The Role Played by Each FTC in Technology Dissemination

**Fertilizer:** During the 2009/2010 production season except Gerjalle three of the sampled FTCs have supplied fertilizer to their clients in collaboration with fertilizer supplier institutions. Of the total supplied amount for the 4 FTC Selambikalsi covers 61 percent while Tao and Tumuga supplied 23 and 16 percent. While fertilizer use data for Gerjalle were not available during the survey year.

**Commercial crop:** Onion is one of the newly introduced commercial vegetable crops in Alamata. From the total formally promoted onion seed technologies during the 2009/2010 production season S/bikalsi received 40 percent followed by Tumuga, Gerjalle and Tao. This is one of the indications for departing and success of the FTC from others in shifting in cropping system from food crops to market oriented commodities.

**Table 3. FTCs in technology dissemination**

| Technology dissemination  | Percentage share of the FTC in technology dissemination |        |           |     |
|---------------------------|---|--------|-----------|-----|
|                           | Gejalle   | Tumuga | S/bikalsi | Tao |
| Fertilizer                | -   | 23     | 61        | 16  |
| Onion seed                | 13  | 38     | 40        | 9   |
| Cereal(Maize and sorghum) | 51  | 22     | 18        | 9   |

Sources: AWARD, 2009.

### 3.4. Staple Food Crop Technology Adoption

In the 2009/2010 production season improved seeds of these commodities were supplied to each FTC. Out of the

total supplied seeds of these crops 51 percent of them were disseminated in Gerjalle followed by Tumuga, Slembikalsi and Toa. Diffusion/ dissemination of consumption crops could be also an indication for

weakness of introducing and influencing the farming community in commercial orientation which is also witnessed in the relatively poorly deviating FTCs like Tumuga and Gerjalle.

#### 4. Conclusion and Recommendations

Based on composite indicators of positive deviance like intentional behavior, departure from the norm etc., two successful FTCs were found for scale out. Based on the results of this finding the following recommendations have been forwarded so as to improve the relevance and effectiveness of FTC based trainings. Training outreach varies among FTCs. Therefore, there should be immediate attention in assessing these governing factors and resolving the shortfalls and creating alternative incentive/reward systems for successful DAs and FTCs. Besides, this study revealed that positive deviance FTCs are relatively better in disseminating commercial oriented commodities. Hence, there should be experience sharing mechanisms among FTCs so as to cross fertilize the successful results throughout the study area.

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#### List of Abbreviation

|       |  |
|-------|--|
| ATVET | Agricultural Technical Vocation and Educational Training |
| Das   | Development Agents                                       |
| FDRE  | Federal Democratic Republic of Ethiopia                  |
| FHH   | Female Headed Household                                  |
| FTCs  | Farmers Training Centers                                 |

|       |   |
|-------|---|
| IFPRI | International Food Policy Research Institute    |
| ILR   | International Livestock Research Institute      |
| IPMS  | Improving Productivity and Market Success       |
| MHH   | Male Headed Household                           |
| MoARD | Ministry of Agriculture and Rural Development   |
| NEPAD | New Partnership for African Development Program |
| NRM   | Natural Resource Management                     |
| UNDP  | United Nation Development Program.              |

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