NRPPD Discussion Paper

19

PRICE STABILISATION FUND FOR TEA – TOWARDS AN ALTERNATIVE APPROACH

Tanmoy Chatterjee
J. John

2012

PRICE STABILISATION FUND FOR TEA – TOWARDS AN ALTERNATIVE APPROACH

Tanmoy Chatterjee
J. John

2012

ABSTRACT

To assist the Small Tea Growers (STGs) during unrealistic price fall, the Ministry of Commerce and Industry has initiated Price Stabilization Fund (PSF), a participatory scheme where a price band is constructed around the average domestic auction price of made-tea, based on seven years, moving average of prices in international market. Though this scheme is in operation for the last 7-8 years, it has neither been able to reach the targeted number of STGs, nor to get popularity among STGs. To understand such poor penetration and low impact of PSF scheme, primary survey in major tea growing states in north east/ east India (Assam, West Bengal and Tripura) has been done. Based on the output of the survey and from the understanding of STG ecosystem and their need/ aspiration for a more dynamic PSF, a model has been designed that could have wider reach and acceptance among the small tea growers.

Introduction

Until 1980s, world tea prices showed a relatively stable trend when compared to other commodities (Friedhein, 1992) because world market of tea is fairly diversified in terms of production categories and consumer preferences and tea market is not undermined by the destabilising effects of speculation (future market). But there was a noticeable increase in volatility of tea market in the 1980s and 1990s. Since then, the price of made-tea has shown a long-term declining trend, while cost of production has increased consistently. This increased price volatility may be attributed to – exchange rate fluctuation, collapse of Soviet Union – a larger buyer of Indian tea etc. It has been estimated that not only the year on year auction prices, but the real price of tea has fallen consistently since 1980s (FAO, 2007). This has affected the farm-income adversely.

Table 1:Trends in Real Price of Tea (US$ - FAO Indicator Price)

Commodity	1970s	1980s	1990s	Average 2000-05	2003	2004	2005	2006
Tea	n.a.	3.14	1.96	1.52	1.41	1.51	1.44	1.67

Note: Base Year 2000.

Source: Annex Table 1 – Trends in Real Commodity Prices, The State of Agricultural Commodity Markets 2006, FAO, 2007.

Tea price are volatile and fluctuate from month to month and year to year with occasional spikes. There is no specific pattern of movements. Moreover, auction markets do not provide any hedging or risk management as prices are set only for goods that will be delivered immediately. Table 2 captures the domestic auction price:

Table 2: Yearly Domestic Price Movement of Made-Tea

Year	Avg. Domestic Price (Rs/ Kg)	YoY % Change
2006	66.01	
2007	67.27	1.90
2008	86.99	29.31
2009	105.60	21.39
2010	104.66	(-0.89)
2011	103.39	(-1.21)

Source: http://www.teaboard.gov.in/pdf/stat/Tea%20Prices.pdf

The volatility is very clear from Table 2. As green leaf is the only raw material for made-tea, price volatility of made-tea has a strong linkage with volatility of green leaf price at the farm-level.

There are several policy level mechanisms to reduce the risk of price uncertainty, like minimum support price, buffer stocks, futures and options, periodic intervention by government. But most of them haven't been able to address the volatility issue effectively. Hence, the producers at the lower level of the value chain remain vulnerable (Donald F. Larson, Panos Varangis and Nanae Yabuki 1998). Minimum support price is a price support scheme (floor price for procurement) set for major food-grain commodities (rice, wheat etc.) by the government. Tea does not have any floor price of auctioning, though tobacco has. There is also no derivative market for tea, though coffee has an established future market. Hence, there is no mechanism to cope with the volatility of tea prices, except Price Stabilization Fund set by the Ministry of

Commerce and Industry, Government of India that also had a very limited impact.

As the production scenario in India is changing from Estate based production system to Small Tea Growers (STGs) production system, reducing the vulnerability of these STGs is a policy priority. Presently 26.25% of Indian tea is produced by STGs (Tea Board 2011). As STGs are not having a manufacturing facility of their own, they rely on Bought Leaf Factory (BLF) for selling their green leaf. Most of the time, the STGs have limited choice regarding selecting BLFs. As green leaf is highly perishable, STGs often are forced to sell at the price quoted by BLFs or their engaged brokers. Along with the tea price volatility, this forced selling and involvement of leaf agents add to the vulnerability of STGs. The majority of STGs are concentrated in Assam, West Bengal and Tripura in North-Eastern India. Assam houses more than 70,000 STGs and they are mostly concentrated in Dibrugarh, Tinsukia, Golaghat, Jorhat. In West Bengal, STGs are concentrated in Islampur, Jalpaiguri, Darjeeling and Coochbeharand, their number is more than 25,000. Tripura is having more than 4500 STGs but it is a unique state in terms of STG empowerment through convergence of government policies. STGs are more vulnerable to the price shocks of made-tea as STGs get very poor price for their green leaf that sometimes doesn’t cover their cost of cultivation.

Price Stabilisation Fund (PSF)

Deeply concerned with the problems being faced by small growers, the Ministry of Commerce and Industry as a nodal ministry for plantation crops, undertook a study through National Council of Applied Economic Research (NCAER) that had submitted a report on September 2001 (Sharma (2001). After examining the report and various options suggested by NCAER, the department of commerce has established a Price Stabilization Fund (PSF), with a view to demonstrate Government’s commitment to safeguard the interest of the small growers. The objective of the PSF is to bring about price stabilisation in a given crop year within a Price Spectrum Band, defined by upper and lower price levels. The benefit of this fund is to participating small growers, who contribute through an initial contribution to the fund. This would mean moving away from the conventional practice of procurement operations for maintaining Minimum Support Price (MSP) by Government agencies like in the case of food grains and other commodities like cotton, jute etc. Interventions through PSF mean that when the lower end of the price band is pierced, the participating growers will be contributed to a specified limit through the fund. In case the upper level of the band is pierced, the beneficiaries under the scheme will have to contribute a specified amount to PSF.

The objective of PSF is basically to deal with random fluctuation in prices, rather than address issues originating from a secular decline in prices. Further, the fundamental principle governing the operation of the scheme is that the corpus of the fund remains undisturbed. Only, its interest earning is utilised for supporting growers in times of distressed prices together with participant's contribution. To a large extent, any argument for PSF must depend on the assumption that the fund can effectively store value over time, where the small grower can't and doesn't.

Three Alternative Schemes has been studied by NCAER before deciding on the above scheme.

The first scheme, named as PSF scheme is based on the principle of pay-ins when prices move above the upper bound and pay-outs when prices move below the lower bound with reference to normal price of each of the commodities.

The second scheme, titled modified PSF scheme (MPSF) is based on the principle of regular contributions from the grower as well as from the government during normal/ boom/ distress periods and also a provision for withdrawal during distress.

The third scheme, titled, Multipurpose Loan Scheme (MLS) envisages providing access to multipurpose credit through commercial banks for small growers of 4 ha and below at subsidised rates of interest.

Among the three alternative schemes, Cabinet Committee on Economic Affairs (CCEA) has accepted the second scheme i.e.-MPSF for implementation during June 2002. In principle, the PSF scheme as proposed by Ministry of Commerce with a first corpus of Rs 300 crores to be supplemented by an annual contribution of Rs 125 crore by way of cess payment made by a respective crop, and also an amount of Rs 75 crore to be collected from beneficiaries interested in, and willing to participate under the scheme. But finally, it has been decided that government's contribution will be 482.88 cr. and farmer's contribution Rs 17.12 crores.

The PSF has been launched in 2003 for Tea, Coffee, Natural Rubber, and Tobacco to provide financial relief to the growers when prices fall below a specified level, without resorting to the practice of procurement operations by government agencies. The contribution to member's PSF savings bank account by the PSF fund trust, in a given year depends on the basis of categorisation of year as Boom/ Normal/ Distress year which is done on the basis of a Price Spectrum Band fixed and announced every year.

This is a participatory scheme and growers enroll to the scheme with an initial deposit. Years are classified as boom, normal and distress. If the average domestic price in a year, crosses the upper band of international price (seven year moving average), the year is termed as **Boom** year. If the average domestic price in a year is within the Price Spectrum Band, the year is termed as **Normal** year. But if the average domestic price in a year goes below the lower range of the Price Spectrum Band, it is known as **Distress** year. In case of distress year, Rs 1000 is paid to the PSF account of the grower and the grower can withdraw the amount. In case of boom year, similarly, the grower contributes Rs 1000 to the fund and he is not permitted to withdraw any amount. In case of normal year, government and grower contribute equally (Rs 500 each) and the grower is not permitted to withdraw any amount. Thus the growers are not permitted to withdraw any amount during boom and normal years.

Corpus:

As of March 2011, the fund comprises of Rs 435.17 Crores (Table 3), out of which Government contribution is Rs 432.88 Crores and that of growers is Rs 2.29 crores (13.4%). The corpus is deposited in the public account of Government of India. Only the interest (Rs 40 crores) per annum will be utilised for any pay-off to the farmers.

Table 3: Structure of PSF Funds

Year	Government of India Contribution (Cr)	Farmer's Contribution (Cr)	Total (Cr)
2003-2004	200.00	1.160	201.160
2004-2005	232.88	0.300	233.180
2005-2006	0.00	0.780	0.780
2006-2007	0.00	0.004	0.004
2007-2008	0.00	0.006	0.006
2008-2009	0.00	0.040	0.040
2009-2010	0.00	0.050	0.050
2010-2011	0.00	0.100	0.100

Source: http://commerce.nic.in/psft/progress_report.htm

Reach:

In case of tea, 15730 Small Tea Growers (STGs) have been registered in India i.e. – 39.9% of the targeted (42619 STGs). The state-wise beak-up is as given in Table 4.

Table 4: State-wise Target vs. Covered STGs under PSF Scheme (Till March 2011)

No. of STGs	Proposed	Covered	% Reached
Kerala	2250	12	0.53
Tamil Nadu	23245	11875	51.09
West Bengal	467	132	28.27
Himachal Pradesh	1380	46	3.33
North East	15277	3601	23.57
Others	0	64	
Total	**42619**	**15730**	**36.91**

Source: http://commerce.nic.in/psft/progress_report.htm

It is important to mention here that the higher percentage coverage in Tamil Nadu is primarily due to Tamil Nadu Government's initiative to pay the initial joining fee of Rs 500 per STG.

Tea Price Movement:

Table 5 captures seven years moving average of international price of tea. The upper and lower band calculated based on the range +/- 40% (range, 20% each way). Average domestic price is the weighted average of auction price of CTC tea in auction centres like Kolkata, Guwahati, and Coimbatore etc. As mentioned above, based on the average domestic price, a year has been termed as Boom, Normal or Distress years. Based on the position of average domestic price in the price spectrum, years are designated as above. It is very interesting to note that till date, this crop has only experienced normal and boom years. In normal year, both grower and government contribute Rs 500 each, irrespective of area under tea. But in boom year, the grower only contributes Rs 1000, irrespective of area under tea. In both the cases, the grower is not permitted to withdraw any amount from his PSF account.

Table 5: Construction of Price Spectrum Band, based on International Tea Price

Year	Seven Year Moving Average of International Price	Upper Band	Lower Band	Average Domestic Price	Type of year
2003	66.40	79.96	53.12	54.89	Normal
2004	66.14	79.36	52.91	62.42	Normal
2005	63.97	76.76	51.18	56.50	Normal
2006	64.02	76.83	51.22	63.62	Normal
2007	63.55	76.26	50.84	64.66	Normal
2008	66.85	80.22	53.48	84.35	Boom
2009	72.83	87.40	58.26	102.82	Boom
2010	79.70	95.64	63.76	100.31	Boom

Source: http://www.commerce.nic.in/psft/psb.htm

Scope and Coverage of the Study

As the percentage of STGs covered for PSF scheme is far below the STGs targeted, it has made us to study the reasons behind such low penetration of this scheme. This study has been conducted along with Baseline Survey conducted by the Centre for Education and Communication (CEC) towards capturing the Baseline variables for the EU project, "Sustainable Livelihood for Small Tea Growers". This study is having a focus on tea in major tea producing states in north-east India (Assam, West Bengal and Tripura). The scope of the study is limited, but the impact is wider as Assam, West Bengal and Tripura house more than 100000 STGs. Moreover, exploratory studies prove that penetration of PSF is much lower in NE states, compared to southern tea growing states.[1] This study tries to explore the reasons

1. The Price Stabilisation Fund Trust of Ministry of Commerce and Industry does not give a disaggregated figure of beneficiaries of PSF in the North East. The number of actual beneficiaries is too low compared to the proposed beneficiaries. (Please refer Table 4).

behind poor penetration and limited impact of PSF among small tea growers. This study also tries to suggest an operational model for better reach with greater impact.

Methodology:

The method adopted in the study involved the following steps as illustrated in Table 6.

Table 6: Broad Components of the Method Adopted in the Study

Analysis of Tea Price Movement	Secondary information search from websites of Tea Board of India, Ministry of Commerce & Industry, Working Paper
Information on PSF in relation to Tea and Progress Report & It's mode of operation	This is primarily secondary information search exercise where the documents related to PSF, published by Ministry of Commerce & Industry has been studied meticulously
Understanding STG eco system and Primary survey	Baseline Survey on PSF in Assam, West Bengal and Tripura, along with Focussed Group Discussions (FGD)
Suggesting an Improvised Process for Better Reach and Impact	Study on STG ecosystems, Brain Storming & Discussion with several stake-holders

The Small Tea Grower Ecosystem:

Small Tea Growers (STG) is a new phenomenon in India. STGs are the most vulnerable in the tea industry and receive less of the accrued value that accumulates up the tea value chain. For example, a STG gets, on an average Rs 8-9 per kilo of green leaf which is made into 250 gms of made tea. Made tea is sold at Rs 80-100 per kg, but Rs 180-200 per kg as branded tea. Although there are other factors like brand building etc. to substantiate the price premium, the difference is substantial and unfair.

Though the Tea Board definition considers any tea grower who is having upto 10.12 ha (25 acres) of land as STG, actually more than 75% of STGs are having land upto 4 ha. This segment is most vulnerable with no diversification or other fall-back options. Generally, a STG works in his own field and sells the green leaf to a Bought Leaf Factory (BLF) or Estate Garden through a leaf agent, who aggregate the leaf and pay to the grower at regular intervals (fortnight to monthly). The typical profile of a leaf agent is that of a money lender with enough disposable cash to provide advance/ loan to the STG at an exorbitant rate and adjusts the outstanding from the sale of green leaf. From 10th Five Year Plan the Tea Board of India is promoting Self Help Group (SHG) formation, and Non-state Actors (NGOs) are promoting formation of Primary Producer Societies (PPS) to help the STGs come together and engage in leaf trade directly with the BLFs, bypassing the exploitative leaf agents. There are several successful case-studies of PPS across India, but a lot of work is left towards sustainability and governance issues of these groups.

A Primary producer Society or Tea Producer Society (TPS) is generally a registered body under the Societies Registration Act and has a membership of minimum 50 members (based on economically viable quantity of green leaf produced) and has 7 Executive Members, along with the President and Secretary who are selected through a general body meeting. The members of the society come together to sell their plucked green leaf through this society. This process optimises cost through group purchase of inputs and sharing the transport cost for carrying green leaf. A society deducts a small amount per kg of leaf sold, towards meeting the operational expenses of the society. Some PPS have also become thrift societies where they deduct a mutually agreeable amount per kg of green leaf and the each member can withdraw the amount that has been accumulated against his account. Tea Board of India (TBI) provides different benefits and subsidies to the registered societies (e.g. – 50% subsidies for buying leaf carrying vehicle, Rs 10,000/ ha fund as revolving corpus, 100% subsidies for leaf carrying bags etc.).

Assam:

The tea cultivation has been closely associated with the socio-cultural and presently in the economic life of Assamese community. Assam is the natural homeland for tea. In olden times tea was cultivated only for household consumption and was processed using primitive methods. The commercial small tea cultivation was banned as per Indian Tea Act 1953.

According to Industries Minister of Assam, Mr. Pradyut Bordoloi, "*Assam has been witnessing a silent revolution for past 15 years as more & more people were taking up tea cultivation. Today, rural employment has almost ended in most of the upper Assam districts as tea cultivation gave the people a new avenue to earn livelihood* ". Official record states that there are 68465 STGs in 14 districts of Assam, but the unofficial record says it is double the number. Most of these STGs have taken tea cultivation during last 15 years. According to a recent survey in Assam, total land under tea cultivation by STGs is 117000 ha. But more than 87% of the STGs are holding size less than 3 acres and they have produced 400 million kgs of tea in 2008. Most of the bushes are below 10 years old and average productivity is around 2500 kg/ ha. The peak of this growth came during 1995 – 2005 in insurgency affected districts – Dibrugarh and Tinsukia. But despite such potentiality very less heed was given by the government to promote this most potential cash crop. Only 1,297 small growers are registered with Tea Board and only 1,055 small growers availed incentives from the board.

West Bengal :

Tea cultivation in the region began almost 125 years ago but then only estate gardens were there, but now in 2011, we have 21390 small growers (officially) spread across four districts of the state. Unofficially the number is around 30,000. Four districts where small growers are located are Jalpaiguri, Darjeeling, Uttar Dinajpur, and Coochbehar. Jalpaiguri has 6047 growers operating in several blocks and villages. Uttar Dinajpur consists of maximum number of small growers. Farmers operating in the district are 11386 in number. Darjeeling district tea being the most unique of its nature is called the 'Champagne' of Indian tea. Tea is cultivated in two parts of Darjeeling, that is hills and plains. Including hills and plains there are almost 3401 small growers operating in the district. Coochbehar is the new place where tea cultivation started 7 to 8 years back and almost 556 growers are there. There are 94 bought leaf factories situated in North Bengal and many are coming up. There are 54 Self Help Groups operating in the region out of them 15 groups are functional in Jalpaiguri district. Panbari Primary Producer Society is about to form their own factory, with assistance from TBI. Apart from that, most of the area is dominated by the leaf agents. Since 2007, Government has also stopped issuing NOC to the growers because of that, most of the growers have not registered with the Tea Board of India.

Tripura:

Tripura is a unique state of India, surrounded by Bangladesh on all its three sides. Tea plantation in Tripura started in the beginning of the 20^{th} century. Tea cultivation was started by the people of East Bengal, unlike other parts of the country. Tripura Tea Development Corporation (TTDC) was started in the state for the development of tea industry and to support the STGs. Tripura is probably the only state in India where the STGs receives a lot of support from the state government and different departments are working together towards sustainable livelihood for STGs. Now, tea is grown in all districts of Tripura. About 15% of the state's total tea came from small and co-operative gardens. Small tea growers' area is estimated at 1600 hectares, comprising 4500 small growers spread over the state. Tea is also grown by the indigenous tribal population in the no-man's area of the country. The Tripura government has intended a new project of the tea cultivation by certain man days under the MGNREGA Scheme. The state government is encouraging small tea growers for cultivation of tea in small land holding to augment the production of tea in the state. In Tripura through MGNREGA, blocks (local administrative units) are making tea nursery. Gram Panchayat and Gram Shabhas (democratic grass root governance structure) decide who are the beneficiaries and then tea saplings are given to these beneficiaries. The STG can get a job card of MGNREGA and can work in his field and get paid for that. The Tripura government has made convergence of different schemes possible for popularising tea cultivation in an economic way.

Field Study:

As a part of baseline survey to understand the socio-economic conditions of STG in North-East India (as a part of EU project, Sustainable Livelihood for Small Tea Growers, implemented by CEC, New Delhi), Price Stabilization Fund Awareness survey, was conducted in September – October, 2011 in Assam, West Bengal and Tripura to assess the awareness, relevance and efficacy of the PSF scheme. It was a random sampling study in these three tea growing states of India, and was not focused on the STGs who have availed PSF. So, the sample base has been reduced progressively, based on the type of questions asked. The sample is proportionate to the number of STGs in each state. The sample distributison across different regions is presented in Table 7.

Table 7: Sample Size (PSF Awareness Survey)

State	No. of STGs Interviewed on PSF
Assam (inclusive of 70 from Bodoland)	720
West Bengal	200
Tripura	60
Total	**980**

These three tea growing states have been selected as they are major tea producing states in North- Eastern/ Eastern part of the country and the penetration of PSF is very poor.

PSF Awareness:

First, all the STGs mentioned in the sample were asked whether they have heard about PSF, and if yes, how they have heard about PSF (see annex-1 for the questionnaire) and the results are presented in Table 8 and 9.

Table 8: On Awareness about PSF

Awareness about PSF	No. of STGs	% of STGs
Heard about PSF	54	5.5%
Didn’t hear about PSF	926	94.5%

Source: Field Survey

It is very surprising to notice that only 5.5% of the STGs whom we have surveyed have heard about PSF. Moreover, only STGs in Tripura and Bodoland (Lower Assam) represent higher proportion of this affirmation (75.0% of the STGs who have heard about PSF are either from these two areas). So, our effective sample size reduced to 54 (new base) for further analysis.

Now, we checked the source of this awareness and the result is presented in Table 9.

Table 9: Source of Awareness

Where have you heard	No. of STGs	% of STGs
From Tea Board	38	70.4%
From PPS/ Fellow STG	12	22.2%
Workshop/ Training	4	7.4%

Source: Field Survey

Finally, in the awareness section, we put an open-ended question to capture their understanding on the purpose of PSF. The responses are presented in Table 10.

Table 10: Understanding of PSF

What is PSF	No. of STGs	% of STGs
Fund deposited for security	32	59.3%
Subsidy fund	18	33.3%
No Idea	2	3.7%
Not replied	2	3.7%

Source: Field Survey

PSF Accounts:

In the next section, we have asked questions on PSF account details, the results are in Table 11.

Table 11: Holding of PSF Account

Do you have PSF Account	No. of STGs	% of STGs
Yes	15	27.8%
No	39	72.2%

Source: Field Survey

Only 55.5% of the STGs, who are aware about the PSF, actually hold a PSF account. Moreover, the number of growers opening the account has not increased but declined (Table 12).

Table 12: Year of Opening of PSF Account

Year of Account Opening	No. of STGs	% of STGs
2004	3	20.0%
2005	2	13.3%
2006	4	26.7%
2007	5	33.3%
2008	1	6.7%

Source: Field Survey

It is interesting to mention here that only 15 STGs i.e. – 1.5% of our samples STGs are actually having a PSF account.

As mentioned earlier, PSF is a participatory scheme and the STGs need to open an PSF account with an initial deposit of Rs 500. Later, every year within June 30, the participating STGs need to deposit his contribution in case the year in question is a normal or boom year. If the required contribution is not paid for two consecutive years, the PSF account gets freezed. From the earlier announcement by TBI, 2008, 2009 and 2010 as boom years and 2007, 2006, 2005, 2004 as normal years, we enquired about the amount deposited, and we have found a mismatch in the year of enrolments and the amount deposited. We have found the PSF account has become non-operational for 26.7% of STGs who had opened a PSF account. So, an operational PSF account is the right estimate for analysing the impact of this scheme, rather than just the number of STGs with PSF account.

Finally, we have asked a question on PSF utilisation, and collected suggestions from all the 54 STGs, who have heard about PSF, to suggest on operational improvisation.

PSF Utilization:

We also explored why all the STGs who are aware of the PSF are not using the scheme. The responses obtained are tabulated in Table 13.

STGs have given multiple replies also, so the summation of percentages of STGs corresponding to these different responses will not add up to 100.

Table 13: PSF Utilisation Responses

Utilization Responses	No. of STGs	% of STGs
Using, but no fall in price recently	11	20.4%
Account got freeze	4	7.4%
Benefit is very small	22	40.7%
Not helpful in getting better price	35	64.8%
STG payment during good years should be removed	30	55.5%

Source: Field Survey

During our discussion, several STGs pointed out that though the name of the scheme is PSF, it doesn't stabilise the green leaf price and that they are interested for a product that mitigates the price risk. We can also see that though STGs are not having any problem with the initial entry load of Rs 500 per STG, they don't like to contribute during good years. They have also informed that till date, they only have deposited money as all these years are either boom or normal and they haven't received any money in their account. This is making them lose interest in PSF and most of them like to withdraw from this PSF scheme, if they get their deposited amount back.

Finally, we have asked their suggestion to improvise the operational efficiency of PSF and the responses are presented in Table 14. Here also we have received multiple responses from STGs.

Major points that came out during different discussions is that this PSF is not linked with his area or leaf production. It is a flat support irrespective of holding or production. As mentioned earlier, due to the lack of STGs interest to contribute to the fund during good years it is

Table 14: Suggestions for Improvement

Responses	No. of STGs	% of STGs
Support should be based on acreage or on leaf production	22	40.7%
Ease in account opening	18	33.3%
No burden on STGs to pay during good years	30	55.5%
Should be replaced with crop insurance	8	14.8%
Support should be given based on cost of cultivation	25	46.3%

Source: Field Survey

making the account non-operational. While probing, we also came to know that though TBI registration is needed for opening a PSF account, the TBI insists on land documents also. As few of the STGs are having their land documents, most of the STG's are not in a position to open a PSF account.

Overall Assessment and Suggestions for Improvement on Operational Model:

This section is the most important section of the paper as it is having implication on policy redesigning with focus on operational improvement. This section will start with different points as suggested by the interviewed and we will analyse each of these from the policy angle. Later, we will try to establish an operational model that will be more dynamic and will have better impact in case of fall in green leaf prices.

Benefit should be based on acreage or production of green leaf

Presently the benefit from PSF is flat, irrespective of his land holding or the green leaf s/he produces. Each STG opens a PSF account with a local bank, in consultation with TBI and deposits Rs 500 as account opening fees. Based on announcement of the year, the STG receives Rs 1000 in a distress year. In case of boom year, the STG deposits Rs 1000. In case of normal year, the deposit is Rs 500. The reason for providing this kind of flat benefit is for two reasons – this PSF has been introduced to reduce vulnerability of STGs and only STGs up to 4 ha of land have been targeted. So, there is no logic to pay based on their land holding under tea or quantum of green leaf production. Moreover, keeping track of green leaf will increase the operational cost exorbitantly high and it will lead to an enforcement problem. So, keeping in view the limited fund size, flat payment each year, in case of a boom or normal year, the government can foresee the expenditure and manage it well, rather than keeping it open-ended.

Support should be given based on cost of cultivation

Determining normal price based on cost of cultivation is extremely difficult. Moreover, there is no single estimate for cost of production and cost vary according to size of farm, variety used for cultivation, type of soil, region etc. Through a detailed exercise on cost of cultivation and arriving at an average cost of cultivation may not reflect the true cost, especially for a crop like tea where quality of tea is primarily dependent on the plucking cycle and plucking quality.

Waive paying during good years

This is an unrealistic suggestion, as already mentioned earlier, selecting the MPSF has its root in the participatory scheme and payment of STGs during boom and normal year is mandatory. But from the estimates presented in Table 15 we can prove that the corpus will not be depleted (with the target set), even if there is no participation from STGs in normal and good years as interest income from the fund can support the targeted small growers, even if there is outlay of Rs 1000 per small grower for all four crops simultaneously, though it is extremely unlikely.

Table 15: Estimation of Inflow & Outflow through PSF

Commodity	No. of Growers to be covered	Entry fee @ Rs 500 per grower (Cr)	Annual outgo @ Rs 1000 per grower
Coffee	71949	3.60	7.19
Tobacco	30317	1.52	3.03
Rubber	197461	9.87	19.75
Tea	42619	2.13	4.26
Total	342346	17.12	34.23

Source: Report on PSF, http://commerce.nic.in/psft/psft.htm

Here it may be mentioned that the interest income from the corpus of Rs 500 Cr is Rs 36.25 Cr per annum (7.25% interest rate per annum). Please see annex-2 for type of years for all crops, except tobacco as no grower has opted for PSF scheme in tobacco.

Replace PSF with crop insurance

Unlike for coffee, where the rainfall insurance has helped the small grower to insure their crop against unexpected and uneven rainfall, there is no crop insurance scheme available for the north-eastern small tea grower. In Southern India, there is crop insurance for death of tea bush, but it has not been popularised. Unlike field crops, it is extremely difficult to design an insurance product for a perennial plantation crop like tea. It is extremely difficult to design a product based on loss in yield as tea yield is a function of cultivar, age of bush, good agronomic practices, and cold operation (like pruning etc.), amount of agri-input use, plucking cycle and plucking quality etc. Moreover, there could be a moral hazard issue if the insurance product is based on yield. Also, distributed rainfall is a prerequisite for good yield of tea, a rainfall insurance, similar to that of coffee can be designed. But it will not suffice the need for the PSF.

Model Improvement for Better Reach and Impact – Proposed Model

The success of any policy is judged on its reach and impact. From the secondary data and primary survey; it has been proved that neither this PSF scheme has reached its targeted growers, nor has STGs perceived the scheme as useful due to the above said factors. Under such circumstances, based on the survey output and field visits to STG ecosystems in Assam, West Bengal and Tripura, we have tried to establish the operational link that can help to reach the targeted STGs and can help them to overcome their vulnerability.

Assumptions:

A variable PSF will be more impactful and it is very unlikely that the fund will not be sufficient for pay-off as this fund is for all four crops (tea, coffee, rubber and tobacco) and as the portfolio is diversified, it is extremely unlikely that all four crops will get a distress year simultaneously (see annex -2). Hence the unsystematic risk is inherently mitigated.

1. Average Green leaf price movement should be the basis of PSF

2. Different auction price for North and South Indian tea will be used for determining the price band

3. Though final benefit will reach individual STGs, it should be channelised through Primary Producer Society (PPS). Each PPS maintains books of account for green leaf sale, price realisation etc. Each society does all business transactions through their bank account. Members in PPS are homogenous in nature that means STGs with less land holding come together and dispersion of land holding area among members is very less within a group

4. TBI has manpower and infrastructure to enforce Price sharing formula (60:40) or (65:35) in all regions

5. Though tea market is integrated globally, taking average domestic price of made-tea (weighted average CTC price in selected auction centres) as a base and create a range around that will reflect international trend also.

A new Small Tea Growers Directorate is going to be operated from the beginning of the Twelfth Five Year Plan (April 2012) and already 95 posts have been created to serve exclusively the STGs. There will be a cadre of Factory Inspectors who will be monitoring procurement quality of green leaf, enforcement of price sharing formula, quality of tea manufacturing etc. Another cadre termed as Development Officers will help in forming people's collective (PPS) as TBI wants the STG societies to come in direct contract with BLF and receive their share, without being exploited by the leaf agents. So, we can see a positive bias towards PPS in policy designing also.

Modus Operandi:

Primary Producer Society:

Each STG within a society sells leaf through the society. The secretary of each society keeps records and the price realised each week as payment by BLF is mostly weekly. Society has a bank account and after receiving payments from BLF, the society pays it to the member STGs as per the leaf traded and price realised, after deducting a marginal amount for society operational expenditure. At the end of the plucking season (November), each society submits the document on leaf traded and average realised price (weighted average), buyer detail etc., to TBI officials.

Tea Board of India:

The Factory Inspector of TBI verifies the submitted document with the respective BLFs. As TBI is making it mandatory for all BLFs to disclose quality-wise green leaf price offered, verifying this information will not be difficult. The TBI official can also randomly check the bank transaction details of each society randomly. TBI also ensure that the price sharing formula[2] (60:40) or (65:35) is implemented properly. The calculation of per kg ideal price of green leaf is dependent on the out-turn percentage of tea. The accepted state-wise out-turn percentage are as follows:

Table 16: Turn-out Ratio in Different States

State	Out-turn Percentage
Assam	21.5
West Bengal	21.5
Nilgiris	23.0
Kerala	21.5
Himachal, Uttaranchal	26.4
Tripura	21.5
Bihar, Rest of India	21.5

Source: Ref No. 12(23) LC/ 2003/XII/3317 on January 19/20, 2004, Tea Board of India, Kolkata.

Trend in North & South Indian Tea:

North Indian CTC tea is sold always at a higher rate than South Indian CTC tea as there is a difference in the consumer's perception regarding taste of tea from these two regions. As a result, green leaf price is generally low in South compared to green leaf price in North East India. Hence, considering a uniform PSF range for both these regions will have a bias and we can't totally ignore the market forces. Hence,

---

2. Price Sharing Formula is notified by Tea Board under Tea Marketing Control Order, 2003. This formula was notified in order to ensure that net sale price is shared in equitable manner between the bought leaf factories (BLF) and small tea growers (STG). To give an example, if Made Tea price by a BLF is Rs 100/ kg, minimum green leaf price should be Rs 13.34 (considering 4.5 kgs green leaf is needed to prepare 1 kg of made-tea that means an out-turn percentage of 22.2 and price sharing formula is implemented as 60:40).

Coonnoor auction price can determine the price band of green leaf for South Indian tea and Guwahati and Kolkata auction prices can determine the price band for North Indian tea.

Table 17: Domestic Price Realisation of North & South Indian Tea

	Real (Factored to Inflation) Domestic Price (Rs/ Kg)	
Year	North India	South India
1991	48.80	40.70
1992	43.00	36.50
1993	50.50	43.70
1994	38.00	28.70
1995	40.00	34.30
1996	39.30	33.00
1997	51.00	45.20
1998	55.70	49.50
1999	53.90	39.70
2000	43.20	29.20
2001	41.30	28.50

Source: http://commerce.nic.in/psft/fs_tea.htm

Note – the nominal price has been deflated against wholesale price index for all commodities (1993-'94).

Determination of Green Leaf Price – Cluster Approach:

To reduce the risk of sacrificing quality to increase production, average price of individual society will not be considered, but a cluster approach should be undertaken. TBI will be in-charge on deciding the clusters based on similar climatic conditions and production possibilities. Moreover, PPS within a cluster should be geographically contiguous. After receiving the information from each society, TBI will take a weighted average and declare the average price received in each cluster.

The Formula:

Every year, TBI will release the weighted average domestic auction price for selected grades of CTC for north and south Indian tea separately and then a price sharing formula should be implemented on the average domestic price to come to an average supposed green leaf price in north and south India. As per the earlier example, if the average domestic price of made tea is Rs 100/ kg in North India, the average green leaf price should be **Rs 13.34**. Now, as earlier a range (+/- 20%) will be developed around this average. In our example, the upper bound will be **Rs 16.00** per kg and lower bound will be **Rs 10.67**. In case, the average price of green tea announced for a cluster (after calculating through weighted average for all the societies within a cluster) is within Rs 10.67 and Rs 16.00 in a given year, neither government nor the society pays anything to the PSF account held by the society. We need to remember that individual average green leaf price received by each PPS will not be considered.

In case the cluster price falls below Rs 10.67, then only the societies within the clusters will be eligible for receiving PSF benefits. In this case, not all societies within that cluster can claim for the benefits. Societies where the average leaf price received is below Rs 10.67 per kg can claim. There the claim amount will be the 20% of the difference between lower bound of price spectrum; in this case it is Rs 10.67, per Kg, minus the prices received by a society.

Amount of benefits received in case of poor green leaf price realisation through a society,

Amount Received = 20% * (Lower Bound of Green Leaf Price Spectrum - Average Green Leaf Price realised by the PPS) * Amount of Leaf Traded through the Society

In case the average cluster price in a year is more than the upper bound of the price spectrum (Rs 16.00 in the above example), only the societies within the clusters pay to their PSF account.

Amount paid by a PPS to PSF fund, in case of higher price realisation,	
Amount Paid =	20%* (Average Green Leaf Price realised by PPS - Upper Bound of Green Leaf Price Spectrum) * Amount of Leaf Traded through the Society

A 20% range gives enough scope for the market mechanism to operate. Moreover, given the recent domestic price of the last few years (exact price movement mentioned earlier), this 20% range gives a spread of a minimum of Rs 6.00 between upper band and lower band for green leaf prices. Farmers contribute in all boom years and government contributes in all distress years. But boom and distress years are not universal (within a given year) in this model. In a year, some societies may receive money, while others may pay money. Hence, maintaining quality of green leaf is an important attribute towards proper implementation of this model. So, deciding the average minimum fine leaf percentage needs to be fixed for claiming this PSF.

Example:

Let's us consider, the average domestic auction price for North Indian CTC tea is Rs 120/ kg in 2012. This information has been announced in January 2013. Based on this announcement let's see whether the following two clusters will get benefit from PSF.

Case I	Case II
Name of the Society - Lakshmi PPS Location - Jorhat, Assam Cluster Identity as per TBI - AS_22 Average Green Leaf Price - Rs 14.50 per Kg Volume of Green Leaf Traded - 65000 Kg Cluster Average - 17.25 per Kg	Name of the Society - Prajapati TPS Location - Islampur, West Bengal Cluster Identity as per TBI - WB_07 Average Green Leaf Price - Rs12.25 per Kg Volume of Green Leaf Traded - 48000 Kg Cluster Average - Rs12.55 per kg

If the average price of domestic tea is Rs 120/kg, by applying the price sharing formula of 65:35, the society should get Rs 78 and the BLF should get Rs 42 per kg of green leaf. Now as out-turn percentage in Assam is 21.5, it means 4.65 kg of green leaf is needed to produce per kg of made-tea. So, ideal green leaf price should be Rs 78/4.65 = Rs 16.77. Hence, the upper band of green leaf price spectrum is 20.12 and lower band of green leaf price spectrum is 13.42.

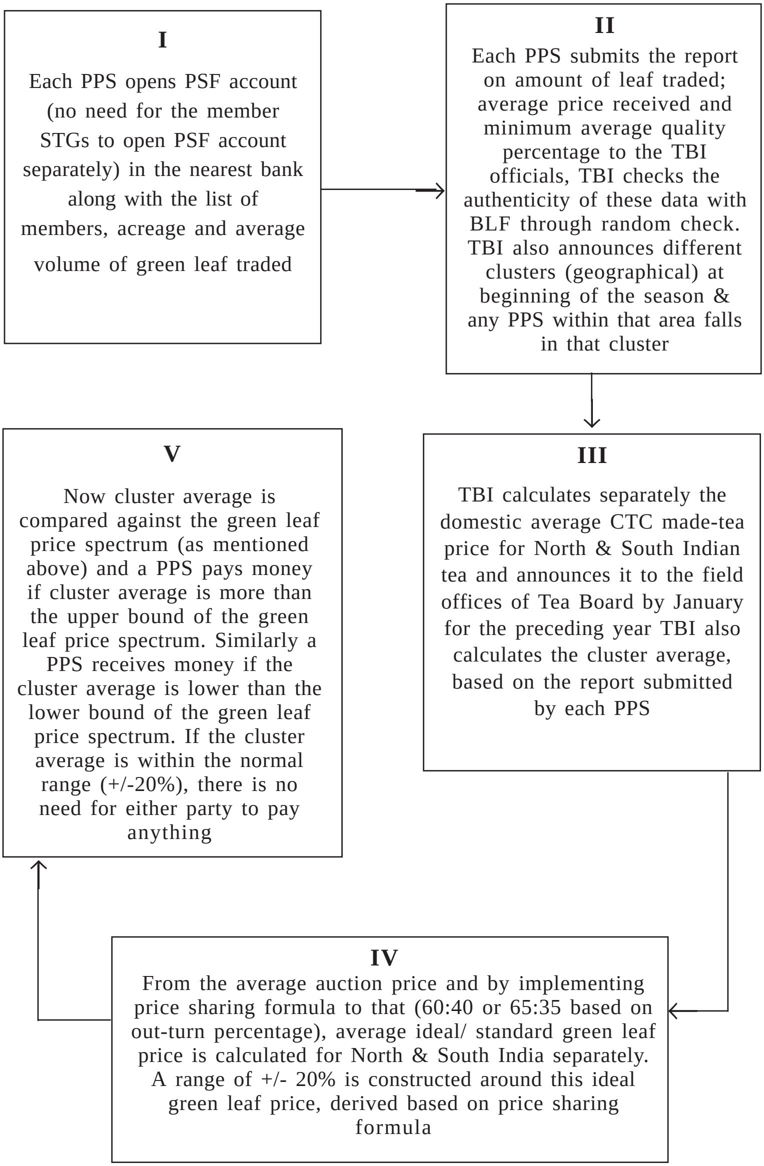
Upper Band	Average. Green Leaf Price	Lower Band
Rs 20.12	Rs 16.77	Rs 13.42

Regarding contribution to the PSF, the decision based on the new model is as follows:

Case I	Case II
Name of the Society - Lakshmi PPS Type of Year - Normal (as cluster average is within upper & lower band) Amount of benefits received or contributed - Nil	Name of the Society - Prajapati TPS Type of Year - Distress (as cluster average pierces the lower band) Amount of benefit received = 20% *48000 kg (13.42-12.25) = Rs11232

The Process Flow:

The following flowchart will capture all the activities succinctly.



Residue Utilization:

This PSF can be implemented with a block of 10 years each. At the end of the 10th year, the residual interest amount (that is not disbursed) can be transferred to Tea Board of India for developmental work for the STGs.

Benefits of this model over the existing model:

1. Price spectrum is prepared around green leaf price. As PSF is to reduce the vulnerability of STG, considering green leaf price in deciding the price spectrum will have better impact

2. PSF account is maintained as a group (PPS), so there is less chance getting the account non-operational. Transaction cost of bank will come down as the operations will be through groups. Initial joining fee can be reduced as more STGs can participate through this model

3. Reaching the STGs through PPS will have better reach for PSF among STGs. This model will also encourage group (PPS) formation and TBI can channelise several benefits through these PPS

4. The price range is determined separately based on North and South Indian average auction prices. Hence, this modified model will truly reflect the market dynamics

5. This model has taken into consideration another important aspect, i.e. - Price-Sharing Formula

6. The model is dynamic and having a link through amount of leaf traded. So, STGs will be benefitted as per their traded amount and not flat benefit (as provided now)

7. The decision to average green leaf price-based on cluster approach will reduce the risk of compromising on quality

8. This model has in-built insurance mechanism i.e. - spread across geographical location (North and South India) and across clusters. So, unsystematic risk of fund crunch can be mitigated easily. So in a year some cluster may receive money from PSF, while some other PSF pays money to the PSF fund.

Conclusion

To address the need of STGs towards receiving the benefit of PSF, a new model has been developed through input from primary survey in three major tea growing states of India. This new model proposes a group approach (Primary Producer Society - PPS) towards PSF and the ideal green leaf price will be determined from yearly domestic average auction price for CTC tea in North and South India separately. Then the Price Sharing Formula will be applied on this domestic average price to arrive at the ideal green leaf price. Simultaneously, Tea Board of India (TBI) should divide the entire tea growing area into different clusters (based on geographical contiguity, similar production possibilities, climatic condition etc.) and will calculate the average realised green leaf price for each of these clusters from the documents submitted by each participating society within a cluster. The authenticity of the information should be judged by factory inspectors of TBI through random checks from PPS bank transactions and Bought Leaf Factory (BLF) books of accounts. Finally, the benefit outlay should be as follows - If the average green leaf price of a cluster falls below 20% of the ideal/ standard green leaf price (determined based on domestic price realised in that year), government transfers PSF benefit to the respective societies within that cluster to the PPS PSF account, once in a year. Similarly, if the cluster average is more than 20% of the ideal/ standard green leaf price, the respective PPS in that cluster contributes to the PSF account, once in a year.

Acknowledgements:

We acknowledge Dr. K.J.Joseph, for giving us this opportunity to write this paper and the members of the Research Advisory Committee of NRPPD for their feedback. An earlier version of this paper was presented at the National Conference on Plantation Development held in CDS and we thank the discussants and other participants for their helpful comments. We also thank the project staffs of Centre for Education and Communication (CEC), New Delhi (Sandip Dowerah, Kaustav Roy, Minto Goswami, Pijush Goyary and Dayananda Pashi) of the EU project, "Sustainable Livelihood for Small Tea Growers", for spending their quality time doing field survey among Small Tea Growers in Assam, West Bengal and Tripura. We also like to thank the members of Confederation of Indian Small Tea Growers of India (CISTA) and the members of different state Small Tea Growers association, for sparing time during brain storming sessions and that has helped us to understand the issues associated with Price Stabilization Fund.

Tanmoy Chatterjee *is Project Manager at Centre for Education and Communication (CEC), New Delhi,*

J. John *is Executive Director, Centre for Education and Communication (CEC), based in New Delhi since 1994. His areas of specialisation are unorganised labour and small producers. He also edits the bimonthly Labour File. He is also the Project Director of the EU project, "Sustainable Livelihood for Small Tea Growers".*

Annex-1

Questionnaire on Price Stabilization Fund (PSF)

Basic Information

District		Name of STG	
Village		No. of acres (tea)	
No. of family members		Age of bush	

Awareness

Have you heard about PSF? Yes…………....... No…………….......

If yes, from where ……………………………………………………..

Can you explain what PSF is ………………………………………………

Operations:

In case, you have PSF account, answer the following, from the time of account opening:

Period of Account Opening		Name of the Bank	
Amount Deposited		Amount Withdrawal	
No. of Good Years		No. of Bad Years	

Utilization

In case, you have a PSF account, but don't use it, answer the following

Account Freeze	Benefit of Very Small Account
Not Helpful in Getting Better Price	Claim is Difficult
No fall in Price Recently	Why to pay in Good Years

Any other …………………………………………………….....................

Suggestions:

What will make you to use this PSF in future?

Support based on acreage/ production ……………………..

Ease in opening procedure & Claim ………………………..

No burden on STGs to pay during good years ……………..

PSF should control fall in price …………………………….

PSF should be replaced with Crop Insurance ……………....

Subsidy should be given in price falls below a level ……...

Any other ………………………………….................................

Annex - 2

Type of Year till Date for Tea, Coffee and Rubber

Year	Coffee-R	Coffee - A	Rubber	Tea
2010	Boom	Boom	Boom	Boom
2009	Boom	Boom	Normal	Boom
2008	Boom	Boom	Boom	Boom
2007	Boom	Boom	Boom	Normal
2006	Boom	Boom	Boom	Normal
2005	Boom	Boom	Boom	Normal
2004	Normal	Normal	Boom	Normal
2003	Distress	Distress	Boom	Normal

Price of Green Leaf (ideal) as per realised domestic auction price & after applying Price-sharing Formula

Year	Avg. Domestic Price	Acc. To PSF (STG Share)	Price of Green Leaf/ Kg.
2010	100.31	60.19	13.37
2009	102.83	61.70	13.71
2008	84.35	50.61	11.25
2007	64.66	38.80	8.62

References

Sharma, Anil (2001) Price Stabilisation of Selected Commodities: An Analysis of Alternative Policy Options. New Delhi: NCAER.

Centre for Education and Communication (2011) 'Study on Existing Policies on Small Tea Growers in India,' New Delhi, 2007. Working Paper. CEC. September 15. <http://www.cec-india.org>.

Centre for Education and Communication (2011) Socio-Economic Survey Report of Small Tea Growers in India. Sustainable Livelihood for Small Tea Growers, New Delhi: CEC.

Donald F. Larson, Panos Varangis and Nanae Yabuki (1998) 'Commodity Risk Management and Development,' Roundtable Discussion on New Approaches to Commodity Price Risk Management in Developing Countries. Washington, DC: Development Research Group, World Bank.

Galtier, F.(2009) How to Manage Food Price Instability in Developing Countries? Working Paper No.5, Montpellier: CIRAD, UMR MOISA.

FAO. (2007) The State of Agricultural Commodity Markets 2006. Rome: FAO, 2007.

Ministry of Commerce and Industry (2011) 'Price Stabilisation Fund Scheme - Gazette Notification, Ministry of Commerce & Industry (Department of Commerce), New Delhi, the 24th July 2003, Resolution,' New Delhi, Government of India. September 10. <http://commerce.nic.in/psft/resolution.htm>.

Ministry of Commerce and Industry (2012) 'Price Stabilisation Fund Trust,' New Delhi, Government of India. January 28, 2012. <http://commerce.nic.in/psft/psft.htm>.

Trust, Price Stabilisation Fund (2012) 'Progress Report.' Ministry of Commerce and Industry, Government of India, 25 January. <http://commerce.nic.in/psft/progress_report.htm>.

Wal, Sanne van der.(2008) Sustainability Issues in the Tea Sector - A Comparative Analysis of Six Leading Producing Countries. Amsterdam: SOMO.

Tea Board of India (2012) 'Small and Big Growers Production of Tea in India,' Ministry of Commerce and Industry, Government of India. April 22. <http://www.teaboard.gov.in/pdf/stat/Production.pdf>.

Tea Board of India (2012) 'Tea Statistics,' Kolkata, Ministry of Commerce and Industry, Government of India. February 20. <http://www.teaboard.gov.in/inner2.asp?param_link_id=410>.