

Towards a Targeted Basic Income Policy for India

By

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Abstract:

Most commentators have attributed the current agrarian crisis to two successive droughts and demonetization. While droughts do have an adverse impact on agricultural sector, disaggregated data categorically demonstrates that demonetization did not lead to acceleration in the decline of the rural sector. Given that there has been a decline in the rural sector along with the failure of the price policy, there is a growing consensus regarding farm linked cash transfers as an alternative policy choice to address the current rural crisis. However, a cash transfer in the form of a targeted basic income would be a better policy as it will cost the same as an extensive farm sized cash transfer program, but it will be targeted to cover all the poor across the country.

Keywords: Rural Distress, Targeted Basic Income, Universal Basic Income, Cash Transfers, Poverty Alleviation

JEL Classification: H23 I32 I38 O15

Introduction

For only the fifth time in rainfall history (since 1871), India experienced two successive drought years in 2014-15 and 2015-16. After that, there were two successive shocks to the Indian economy in the form of demonetization (November 2016) and GST (introduced in July 2017). However, 2016-17 was normal agricultural year and the negative effects of demonetization were largely negated as agriculture grew smartly at a 5.9 per cent, the highest since 2011-12 and the fourth highest since 2003-4. The fourth year of the Modi administration, 2017-18, was also a normal agricultural year and agriculture registered a 3.3 per cent growth rate. In the current fiscal year, the monsoon failed (especially in south India) with rainfall a few percentage points below normal. To date (till fiscal quarter 2019Q2) agricultural growth has been proceeding at an annualized rate of 4.5 per cent (5.2 per cent growth in fiscal 2019Q1 and at a 3.8 per cent rate in fiscal 2019Q2).

It should be emphasized, however, that this seemingly strong agricultural growth masks the reality of nominal farm incomes increasing at a very slow rate. For the last two quarters (2018Q3 and 2018Q4), wholesale prices for food have changed at the lowest rate ever (monthly wholesale food price data available since 1995). Indeed, for the last two quarters, the quarterly annualized rate in wholesale food prices has been -1.8 and -2.4 per cent, respectively. Never before has India experienced a successive two quarterly decline in food prices.

The Indian agricultural market is in dire need of reform. It is heavily tilted against the farmer as shown by the wholesale price data. The quarterly price for CPI food in the last two quarters has been at a respectable rate of 3.5 per cent and 2.2 per cent respectively. The government, for its part, recognized these price developments and announced large increases in the minimum support prices (MSP) for crops in August 2018. Essentially, the response was to implement the recommendations of the Swaminathan report of setting MSP's at one and a half times cost of cultivation. It is noteworthy that the Swaminathan recommendations had been eschewed by all governments despite its publication in 2006. It is possible that if the weather (and farm prices) had been normal, the Modi government would have refrained from following through with the MSP increase.

Somewhat to the surprise of the government (and possibly also the RBI and the Monetary Policy Committee), there has been no inflationary pressure from the MSP increase – indeed, as mentioned above, food price changes have been negative. On an average, MSP related crop prices increased by only 11 per cent after the implementation of the high MSP recommendations; however, because of monsoons, the quantity of marketable surplus of these crops declined by 8 per cent. The MSP increases were meant to significantly advance farmer incomes – this has clearly not happened.

In this paper, we examine the choices before the Indian government. Low growth in farmer incomes is a social, economic, and political reality. One response of the government is to follow up one bad recommendation (increase in MSPs) with another bad policy - loan waivers. In a recent interview to ANI, the Prime Minister has categorically stated that farm loan waivers benefit only select farmers. He's further stated that farm loan waivers have been done since the time of Devi Lal's time, a similar loan waiver was done in 2009 however it fails to resolve the issue of agricultural crisis. This demonstrates the admission within the government that farm loan waivers tend to have negligible impact while they come at great costs. Both singularly fail to help the farmers in distress, or farmers in need. Technology suggests a new viable alternative.

Identification of beneficiaries via a Targeted Benefit Transfer (TBS) scheme is now feasible, and is the main focus of this paper. TBS will get monies to the poor and deserving, and its political advantages should not be under-estimated. The political benefits were amply demonstrated in the recent state elections. The only incumbent to win again was the TRS party in Telangana; it had instituted an income transfer program for farmers- under the transfer program (Rythu Bandhu), the state provided for a cash transfer of Rs. 4000 per acre twice for the farming seasons. Madhya Pradesh too had a modified income transfer program, but one heavily dependent on prices realized by the farmers in the market under its Bhavantar Bhugtan Scheme. Under this scheme, the Madhya Pradesh government provides for the difference between the price realized and the MSP by transferring it directly to the bank accounts of the farmers. Rajasthan (and Chhattisgarh) are two states where no income support was given to the farmers and in both states the BJP lost a chunk of its political capital. We don't intend to be uni-causal but certainly, income support to farmers is an important factor in providing an explanation for the electoral outcomes across the assembly states.

The plan of the paper is as follows. Section 2 is a brief introduction to the determinants of agricultural growth in India, and the fact that aggregate agricultural output is still dependent on rainfall. We also discuss demonetization and its impact on the agricultural sector. Popular belief is that demonetization has led to a decline in the farm sector, however upon segregation of the data for the months of October and November, we find evidence to conclusively state that demonetization did not lead to the decline of the agricultural sector in 2016.

Section 3 discusses income transfers in the form of in-kind transfers which have been tried in India for the last 50 years e.g. the Public Distribution System (PDS) of foodgrains. That this was a failed policy was acknowledged as early as 1985 by former Prime Minister of India, Mr. Rajiv Gandhi, when he famously stated that for every 1 rupee sent for poverty alleviation by the centre only 15 paise reached the poor. The facts have been known for long but it is a source (and sink) of corruption. Various studies have documented that only 50 per cent of the food housed in the Food Corporation of India gets delivered to consumers, rich and poor. Yet governments have persisted, because the PDS is likely a source of corruption money for bureaucrats, middle men, food processing firms (the mills receive some of the "stolen" PDS rations) and politicians.

To its credit, the Modi government decided early on to move to a cash transfer program. The first step towards implementation of a cash transfer was to achieve universal access to bank accounts, consequentially, the government launched the Jan Dhan Yojna in 2014. Through the Jan Dhan Yojna, the government managed to achieve universal access to bank accounts at the household level. The government then decided to resolve identification issues of beneficiaries using the Aadhar program as it created the JAM trinity; that is, Jan Dhan, Aadhar and Mobile. The JAM trinity has been the backbone of the cash transfer program initiated by the government post 2014 and government estimates that it has saved approximately Rs. 90,000 crores through the Aadhar and its integration with the direct benefit transfer programs.

Currently the government has approximately 430 schemes which use the Direct Benefit Transfer program for subsidy targeting. Given that food subsidies are a state subject, there has been some resistance from respective state governments to include the food subsidies under the Direct Benefit Transfer Program. However, the Centre decided to implement the cash transfer program in lieu of food subsidies in the three union territories of Chandigarh, Puducherry and Dadra Nagar Haveli (Union territories are administered by the Centre).

We then look at the argument *against* Cash Transfers, such as its impact on labour supply. Whatever empirical evidence exists on the subject indicates that the impact is small. Given that there's little evidence to suggest withdrawal from labour market due to cash transfers along with the fact that cash transfers are significantly more fiscally prudent than the current policies, it is evident that the major hurdle towards implementation of such a program is political will.

This is followed by section 4 where we highlight the importance of recognizing that besides poor farmers, there are other poor people in India. Indeed, non-farmer households constitute less than a third of the population that deserves income support- however, they've been kept out of the price policy for providing income support. It is both ethically and politically, criminal to ignore the other poor so we argue that a targeted income transfer must be designed to cover all poor rather than only the poor farmer. We present our method of estimation of income transfers in section 4 which is followed by our results which are presented in section 5.

We find that the cost of a *targeted* transfer program to cover all the poor is equal to the cost of extension of the Rythu Bandhu scheme to cover all of India's farmers. This illustrates that rather than a targeted farm linked cash transfer, a targeted individual-based cash transfer program would be a better idea as it would cover all the poor and not just rural poor. This is followed by a discussion on the fiscal space for such a cash transfer program where we discuss potential outcomes if state and central governments decide to share the burden of such a cash program. In section 6 we conclude our findings and recommend a targeted basic income program for the poor in India.

Section 2: Agricultural Output, Growth rate and the Price Policy

The agricultural sector in India has witnessed a significant decline in its importance since 1980s. This systematic decline from approximately 44.5 per cent of the sectors contribution to GDP in 1981-82 just around 15 per cent at present has not been accompanied by a large decline in the dependence on the agriculture sector for livelihood and employment. As per the National Sample Survey Office (NSSO) data, around 40-45 per cent of households are dependent on agriculture, a small decline from the 60 per cent level observed some 30 years ago.

Table 1: Share of Output from Agriculture in GDP
Share of Output from Agriculture in GDP

Year	Nominal	Real
1981	34.4	44.5
1991	29.7	35.9
1995	26.5	32.4
2001	23.0	28.0
2005	18.8	22.7
2011	18.5	18.5
2015	17.9	15.4
2017	16.9	14.7

Source: *Handbook of Statistics on Indian Economy, RBI*

Indian agriculture is still predominantly dependent on rainfall. Bhalla (2008) tries to quantify the impact of monsoon on agricultural and GDP growth rates. His analysis reveals that rainfall of the current period along with the rainfall in the previous period alone explain as much as a

60 per cent of the variation in the growth of agricultural output. The paper further decomposed the data into two different time periods, (pre and post 1978) and obtained the same result for both the periods. In a normal rainfall year, agriculture can be expected to grow between 3-3.5 per cent.

As mentioned earlier, there appears to be a disconnect between *agricultural output* growth as measured by GDP data, and *farmer incomes* in 2018-19. Output is increasing at a normal rate, but farmer incomes are not following through. In order to understand this phenomena, we collected the data for ten crops in 2018-19 (and for a decade earlier) to analyse the consistency of the output-price pattern observed in the October-November 2018 market for crops. The ten crops analysed consisted of eight food crops, namely Bajra, Groundnut, Jowar, Maize, Paddy, Soybean, Sugarcane and Wheat and two cash crops- Jute and Cotton. The source of the data was Directorate of Marketing and Inspection (DMI), Ministry of Agriculture and Farmers Welfare.

In Table 2 and 3 we provide the real and nominal growth rate of the total value of marketable surplus (as observed in the price and quantity marketed in the *mandis* in each state for the months of October and November). Because of weather dependence, the marketable surplus data are volatile.

Table 2: Real Growth Rate of Total Value of Marketable Surplus

Year	October and November	October	November
2006	-9	0	-21
2007	-1	8	-14
2008	44	34	60
2009	18	13	24
2010	-14	-15	-14
2011	-9	-20	3
2012	5	25	-19
2013	10	0	22
2014	-10	-11	-10
2015	-12	3	-32
2016	-20	-25	-13
2017	40	30	53
2018	5	18	-12
Total	4	5	2

Source: Directorate of Marketing and Inspection (DMI), Ministry of Agriculture and Farmers Welfare.

It has been argued repeatedly by several commentators that the decline in the growth rate of agriculture in 2016 was largely because of demonetization. The combined data for October and November 2016 shows a real decline of 20 per cent while a nominal decline of 18 per cent. This would lead one to the conclusion that demonetization did lead to the decline in agricultural production, however this conclusion is incorrect. Demonetization occurred in the month of November, so to evaluate the impact of demonetization it is imperative that we look at the disaggregated data for October and November before drawing such conclusions.

For the real growth rate of the value of marketable surplus, October witnessed a decline of 25 per cent against a decline of 13 per cent, meanwhile nominal growth rates for October saw a decline of 22 per cent as against a 11 per cent decline in November [refer table 3]. This indicates that there was a systematic decline in the rural income even before demonetization and data conclusively shows that demonetization did not accelerate this decline in income as the month of November, the quantum of decline in the value of marketable surplus reduced

Table 3: Nominal Growth Rate of Total Value of Marketable Surplus

Year	October and November	October	November
2006	0	10	-12
2007	4	13	-9
2008	56	45	72
2009	31	25	40
2010	-3	-1	-4
2011	0	-10	11
2012	14	34	-8
2013	27	17	40
2014	-9	-9	-9
2015	-10	5	-29
2016	-18	-22	-11
2017	45	34	59
2018	3	17	-15
Total	11	12	9

Source: Directorate of Marketing and Inspection (DMI), Ministry of Agriculture and Farmers Welfare.

It is also interesting to note that the weighted average price for the month of October for these crops in 2016 saw an increase of only 1 per cent while in November there was an increase in the price by 11 per cent [refer to table 4]. Therefore, a closer look at the disaggregated data conclusively demonstrates that demonetization did not lead to an acceleration in the decline of agricultural sector.

Data also shows that both 2013-14 and 2017-18 were good weather years and show large increases in marketable output. For the years 2014-15 and 2015-16, a major reason behind the decline in the total value of marketable surplus (both real and nominal) is the two successive droughts which had an adverse impact on the agricultural production.

In the 2018-19 Union Budget, the government decided to increase the Minimum Support Price as per the Swaminathan Committee's recommendation. Under the Swaminathan Committee (2006) recommendations, the minimum support price should be at fifty per cent above the cost of farming for that crop. The move, despite being well intentioned has failed to improve the situation of farmers as our analysis reveals a significant slowdown in both the nominal and the real growth rate of total value of marketable surplus to 3 and 5 per cent respectively. Additionally the nominal growth rate of total value of marketable surplus was 45 per cent in 2017-18 as against 3 per cent in 2018-19.

Table 4: Weighted Average Price

Year	October and November	October	November
2006	18	6	37
2007	9	16	0
2008	21	21	16
2009	12	12	10
2010	11	12	10
2011	-9	-7	-11
2012	22	20	27
2013	19	16	20
2014	-8	-3	-13
2015	-14	-11	-17
2016	5	1	11
2017	12	14	8
2018	11	13	10
Total	8	9	8

Source: Directorate of Marketing and Inspection (DMI), Ministry of Agriculture and Farmers Welfare.

A closer look at the data for 2018 reveals that there has been a 11 per cent increase in market prices of crops post the new MSPs came into effect, however, there has been a drop in the quantity of marketable surplus by 8 per cent. It is this drop in the quantity that is largely responsible for dragging down the total value of marketable surplus. Moreover, in 2017 the growth rate of weighted average price was 12 per cent as against 11 per cent in 2018. This implies that the new MSP formula has had no impact on not just the value of total surplus but also on the market prices. This finding is significant as it highlights the failure of price policies in providing income support to farmers.

Section 3 – Price Policy, Food Subsidies and Loan Waivers: Failed Policies

Several authors have documented the decline in farm income with limited expansion in non-farm sources of income as the major source of the chronic nature of rural distress in the country. This puts in question the price policy that was enacted by the government in mid 60s to provide for income support to farmers. The price policy was to achieve the twin objectives of income stabilization for producers and price stabilization for consumers while it had to simultaneously ensure parity between agricultural and industrial sector and prevent erosion of agricultural income (Krishnaji 1990). Thus, it is imperative to ask whether the price policy has been successful in achieving either as its importance has increased since the 1980s as successive governments have used the strategy of high food prices as a tool to address rural crisis.

There's evidence to suggest that the strategy of high food prices is actually responsible for the systematic decline in the rural sector rather than it is providing any form of income support to farmers. Patnaik (1983) mentions how there's a significant class differentiation that exists within India's cultivators. Most small farmers produce limited amount of agricultural surplus and have to lease out their labour services to obtain additional income. This implies that a major share of India's cultivators are net buyers of food grains and thus, high food price inflation has a negative impact on the real income of these cultivators. This implies that the choice of price

policy as an instrument for income support will only lead to greater inequality within the rural economy. Krishnaji (1990) too resonates similar concerns while arguing that given the highly skewed distribution of land and assets while disparity in terms of access to irrigation, the price policy was bound to lead to inter- and intra-regional inequalities.

The price policy has been a subject of criticism over the years as such policies tend to distort production decisions. A direct criticism of India's price policy comes from Dev and Rao (2010) who've argued that the reduction in non-price interventions through public investments have pushed up the cost of production. As a result of the increased cost of production and the slowdown in yield growth, there's a need for higher support prices. However, they also mention that high support prices tend to hurt consumers significantly while it has an adverse impact on poverty reduction. They observe that the sole focus on price policy for subsequent decades is largely responsible for the systematic decline in agricultural sector.

Another similar finding comes from Parikh et al (2003) where they provide an estimate that suggests that a 10 per cent increase in MSPs of wheat and rice leads to a reduction in overall GDP by approximately 0.33 per cent while it leads to an increase in the aggregate price index by 1.5 per cent. Their findings also suggest that there's a reduction in investments by 1.9 per cent for every 10 per cent increase in MSPs of wheat and rice. They also mention that the increase in MSP has only a minuscule impact on the incomes of farmers while the bottom 80 per cent of the rural population along with the entire urban population is worse off by higher MSPs.

It appears that price policy as an instrument has failed to provide adequate income support to the farmers as it benefits only a small proportion of farmers that produce adequate marketable surplus. However, there's another aspect to the price policy that aims at stabilization of prices through distribution of subsidized food grains for the poor and the marginalized. As discussed, the conflicting nature of the twin objectives of income and price stabilization was resolved through the system of government procurement and subsequent distribution of subsidized food grains through the Public Distribution System. Under this system, the government procures food grains from the farmers, stores them and distributes them through the Public Distribution System. The Public Distribution System has come to severe criticism due to the rampant corruption and leakages that are inherently present during the distribution of subsidized food grains.

Several estimates have quantified the extent of corruption that is prevalent under the PDS system. For instance, Radakrishna et. al. (1997) estimate that the extensive Public Distribution System has historically had a minimal effect on India's poor as it led to a meagre per capita gain of Rs. 2 per month for the rural consumers from all consumer subsidies and this accounted for only 2.7 per cent of their per capita expenditure. Planning Commission (2005) reports a similar finding as it estimates that for a Rs. 1 transfer worth of food, it costed the government approximately Rs. 3.65. Bhalla (2014) further highlights the inefficiency of the PDS system as he mentions that half of the food is "lost in translation" and another sixth is lost in storage (rotten food). Thus, only one third of the food procured by the government is available for distribution through the fair price shops.

Thus, these studies suggest up to 70 percent leakages in the Public Distribution System. Therefore, on one hand, the price policy is failing to provide income support to the rural poor; on the other hand, to transfer subsidized food grains to poor households, the state incurs thrice the cost of the worth being transferred. This shows the extent of inefficiency under the current

system thereby suggesting that the price policy is an ineffective tool to provide income support to the farmers and hence, it may fail to resolve the current agricultural crisis.

Loan Waivers – Not to the Rescue

The failure of price policy in resolving the current agricultural crisis has made policy makers look for convenient alternatives such as farm-loan waivers. However, the choice of farm loan waivers is not the best possible policy intervention to address the current rural crisis as farm loan waivers tends to benefit only a small fraction of farmers. Such loan waivers always come with conditions attached such as upper limits to the loan size and they focus on institutional borrowers. Most small farmers, landless cultivators and share croppers tend to borrow from money lenders or informal sources and these cultivators are often outside the eligibility conditions of the farm loan waivers. Moreover, farm loan waivers only remove debt of the borrowers while they fail to address the critical issue of providing income support to the farmers.

Additionally, farm loan waivers tend to have a long-lasting impact on the behaviour of the borrowers as it amplifies the problem of Moral Hazard. For those who do benefit from farm loan waivers, repeated waivers from time to time only encourage them to avail the loans only to default in anticipation of an upcoming farm loan waiver. Shylendra (1995) provides similar findings for the Agricultural and Rural Debt Relief Scheme of 1990 highlighting how the scheme benefited select and relatively better off households while it had a negative impact on the repayment behaviour of the borrowers. Thus, farm loan waivers prove to be costly not just in the short term, but they also sow the seeds for a potential crisis due to an alteration in the repayment behaviour of borrowers.

Table 5: Cost of Farm Loan Waivers announced since 2017

State	Amount Allocated for Farm Loan Waivers (In Rs. Thousand Crores)
Uttar Pradesh	36.3
Maharashtra	34.0
Punjab	2.7
Karnataka	34.0
Madhya Pradesh	35.0
Rajasthan	18.0
Chhattisgarh	6.1
Total	166.1

Since 2017, the state governments of Uttar Pradesh, Maharashtra, Punjab, Karnataka, Madhya Pradesh, Rajasthan and Chhattisgarh have announced unprecedented farm loan waivers that cost more than Rs. 1.6 lakh crores which indicates the states have spent a significant on announcing farm loan waivers while there is adequate evidence to suggest that such waivers have historically failed to resolve any agrarian crisis. Vaidaynathan (2008) further strengthens our argument by stating that the 2008 farm loan waiver it is at best a temporary palliative that would fail to resolve the complex problems that the rural economy faces. Thus, farm loan waivers are not the solution to the current agricultural crisis.

Section 4: A move towards Cash Transfers

The limited impact of price policy, systemic subsidy leakages and the slow growth of farm income suggest a need to move towards a new approach towards providing income support to farmers. Given that the ultimate objective of several instruments of welfare policies and poverty alleviation schemes is to provide a minimum level of income support to the poor, there is a very strong case to be made for a systematic shift towards a cash transfer approach for providing income support rather than the current policy of price support combined with entitlements for subsidized food grains.

The idea of cash transfers is not new as Bhalla (2000) mentions the need to reform India's PDS using food stamps and cash transfers. Since then several authors such as Kapur, Mukhopadhyay and Subramanian (2008) have demonstrated that cash transfers would be significantly more efficient than the conventional mechanism of providing subsidies. Bhalla (2014) provides an early estimate that with perfect targeting, India needed less than 0.5 per cent of GDP to achieve zero poverty according to the Tendulkar poverty line. Obviously, there will be leakages but income support measures in 2011-12 exceeded 4.3 per cent of GDP. In Table 9 we provide a breakdown of the central government expenditure on such income support measures a percentage of GDP for various years.

This included a 1.52 per cent of good subsidies (Infrastructure, education and health) and 2.9 per cent of GDP of bad subsidies (food, employment, fuel and fertilizer). A cash-transfer scheme would be significantly better than the current policy interventions which follow the "rights" based approach towards food grains and employment. The Economic Survey (2016-17) also talked about the benefits of a universal basic income as a better policy instrument for poverty alleviation than the current schemes and subsidies. Given that a "universal" basic income would meet significant resistance on the grounds of distributive justice (and we are also opposed to a UBI), a targeted basic income is the best choice for income redistribution.

One could argue that the NDA-II's push towards the Direct Benefit Transfer for over 400 schemes is a precursor towards implementation of a Targeted Basic Income as the government has already rolled out Direct Benefit Transfer for the Public Distribution System in the three union territories of Chandigarh, Puducherry and Dadra and Nagar Haveli. A major reason behind the success of the DBT under NDA-II has been the earlier efforts spent by the government to achieve universal access to bank accounts at the household level under the Jan Dhan Yojna. The Jan Dhan Yojna- India's financial inclusion scheme along with the Aadhar-India's unique identity program has combined to form the JAM trinity. It is this JAM trinity, that has led to significant improvements in targeting of beneficiaries and providing them cash transfers directly into their bank accounts.

The success of DBT has resulted in states looking for alternative policy measures such as cash transfers as a potential solution for the current agrarian crisis. For example, the state of Telangana implemented a cash transfer of Rs. 4000 per acre twice during the farming season under the Rythu Bandhu scheme for which the state has already provisioned 12,000 crores per annum. Jharkhand recently announced the Mukhya Mantri Krishi Yojna under which it will provide farmers with land holdings of less than five acres Rs. 5000 per annum to assist them in purchasing inputs for farming activities. The Jharkhand government has estimated the cost for this scheme at Rs. 2250 crores and has indicated that the scheme would be rolled out in the coming financial year. Odisha government has also announced a Rs. 10,180 crore scheme spread over three years termed as the Krushak Assistance for Livelihood and Income

Augmentation (KALIA). Under the scheme, farmers would be provided an annual income assistance of Rs. 10,000 in two instalments for rabi and kharif seasons and the scheme will also be extended to share-croppers and agricultural labourers.

An extension of the Telangana's Rythu Bandhu Scheme to cover all of India's farmland with an annual transfer of Rs. 8000 per acre will cost around Rs. 2.8 trillion. A back of the envelope calculation is as follows: India has 350 million acres under cultivation. A cash transfer of Rs. 8000 per annum would cost the economy Rs. 2.8 trillion or 2.1 per cent of India's. However, given that the transfer under such a policy is linked to size of the farm holding it may result in sharpening rural inequality and exclusion of landless farmers from such a subsidy.

An income transfer for all the poor

A targeted income support program needs a definition of the poor. According to the Tendulkar poverty line, only 13 per cent of the population was poor in 2011-12. This is based on per capita consumption measured according to the Type II recall method. This method estimates per capita consumption of perishables (fruits and vegetables) according to the internationally acceptable procedure of a recall period of 7 days, rather than the (traditional) Indian practice of a recall period of 30 days. The latter traditional method indicated a poverty level of 23 per cent in 2011-12 i.e. just the procedure of collecting more accurate data in 2011-12 resulted in a redefinition of poverty of 10 percent of the population.

The 2017-18 NSSO consumption survey has not been released as yet, but when it does, based on consumption growth over the last seven years, it is likely to show absolute poverty at around 5 per cent of the population. What needs to be recognized is that an absolute poverty line is not absolute, especially for developing economies undergoing a rapid transformation. According to the World Bank, India is now no longer a poor low-income economy; rather, it has moved up to the level of lower middle income. The corresponding poverty line according to this new middle-income stature is PPP\$ 3.1 per capita per day, rather than the \$1.9 level for poor economies. This means that the Indian poverty line (the Tendulkar poverty line is identical to the World Bank \$1.9 poverty line) needs to be raised, in real terms, by 63 percent (ratio of 3.1 and 1.9).

All of our estimates of cash transfers are based on this new poverty line. We assume the consumption distribution to be identical to that obtained according to the 2011-12 NSSO survey – any errors in this estimate are likely to be marginal because of the large increase in the poverty line. Nominal per capita consumption has been assumed to grow at the implied growth in per capita nominal consumption, national accounts data (such consumption has risen by approximately 96 per cent between 2011-12 and 2017-18). All estimates are according to the 2017-18 consumer prices.

We have a consumption distribution, and a poverty line, all in 2017-18 prices. From this basic estimate of consumption and poverty we derive the compensation needed to yield a zero percent poverty – i.e. everyone is at, or above, the poverty line. We find that, on average, a compensation level of Rs. 550 per capita per month (or Rs. 6600 per year) will be sufficient to achieve this goal, with perfect targeting. Perfect targeting means that we know the consumption level of the average person with some accuracy and that we can identify individuals at some distance way,

Based on lower middle-income World Bank poverty line, we find that India has 33 per cent of its citizens as poor or 430 million people. A TBS scheme will cost Rs. 2.84 trillion (430 million multiplied by Rs. 6600 per person per year) which is near identical to the cost of the Rythu Bandhu scheme for income support for only farmers.

An individual based “Targeted Basic Income” program could be tailor made to cover specific beneficiaries such as only rural poor, or only marginal and landless farmers. To arrive at the costs of such different target groups, we first segregated the number of poor people in rural areas across states on the basis of their land holdings. We’ve defined landless individuals as those that don’t own any land (cultivators and non-cultivators), marginal farmers as those who own less than one acre and small farmers as those who own more than one acre of land.

We then computed the amount of transfer for the rural poor and urban poor population while ensuring that the real value of transfer in rural and urban areas is the same. As a consequence, for the rural poor population we get a monthly cash transfer of Rs. 520 per while for the urban poor population we obtain Rs. 630 per month.

Based on our computations, the total cost of a transfer program to small and marginal landless farmers comes approximately Rs. 1.48 trillion annually which amounts to 1.1 per cent of India’s GDP. This is assuming perfect targeting of the beneficiary and this transfer program would cover 17 per cent of India’s population. If we were to include the entire rural poor irrespective of their land holdings, then we cover approximately 27 per cent of India’s population and the cost of such a transfer program comes out to be Rs. 2.2 trillion annually or approximately 1.7 per cent of India’s GDP. The detailed computations of the same are provided in table 6.

Table 6 also shows that the cost of a cash transfer to the urban poor is just Rs. 55 thousand crores and a major reason behind this is that the number of urban poor individuals are just one third of the total poor in India. The total cost for a cash transfer program comes out to be Rs. 2.7 trillion which amounts to 2.1 per cent of the GDP. Such an extensive cash transfer program covers 33 per cent of India’s population or around 430 million people however, the cost of a cash transfer program for the poor would cost the same as an extension of the Rythu Bandhu scheme across India.

Table 6: Cost of a Targeted Basic Income program for the Poor

State	Number of Poor (In Million)		Total Cost of Transfers for Poor (In Rs. 000 Cr.)			
	Farmers	Urban	>1 acre of land	<1 acre of land	All rural	Urban
	>1 acre of land		>1 acre of land			
Andhra Pradesh	3.9	3.2	2.4	5.2	7.6	2.4
Assam	5.3	0.9	3.3	4.0	7.3	0.7
Bihar	8.7	4	5.4	24.5	29.9	3.0
Chhattisgarh	7.6	1.9	4.7	2.9	7.6	1.4
Delhi	0.0	1.7	0.0	0.1	0.1	1.3
Gujarat	7.3	4.5	4.6	5.4	9.9	3.4
Himachal Pradesh	0.2	0.1	0.1	0.8	0.9	0.1
Haryana	0.6	1	0.4	2.1	2.5	0.8
J and K	0.9	0.3	0.6	0.9	1.4	0.2
Jharkhand	4.0	2	2.5	5.1	7.6	1.5
Karnataka	7.9	5	4.9	4.9	9.8	3.8
Kerala	0.1	1.1	0.1	3.4	3.4	0.8
Madhya Pradesh	14.6	5.8	9.1	8.7	17.8	4.4
Maharashtra	12.0	7.6	7.5	9.9	17.3	5.7
Odisha	7.5	1.8	4.7	6.2	10.9	1.4
Punjab	0.1	1.8	0.1	2.1	2.2	1.4
Rajasthan	8.9	3.5	5.6	5.4	11.0	2.6
Tamil Nadu	1.6	3.5	1.0	7.1	8.0	2.6
Uttar Pradesh	25.8	17.2	16.1	33.4	49.5	13.0
Uttaranchal	0.3	0.8	0.2	1.0	1.2	0.6
West Bengal	2.3	5.7	1.4	15.0	16.4	4.3
Total Cost of Transfers			74.6	147.8	222.4	55.5

Source: Authors Computation using NSSO Consumption Expenditure Survey, 2011-12

In Table 7 we summarize the costs of different transfer programs along with the number of beneficiaries and transfer amounts in each such transfer programs. The table clearly shows that the cost of a transfer program is between 1.1 per cent of the GDP till 2.1 per cent of the GDP and the different kinds of transfer programs can benefit between 17 per cent to 33 per cent of India's population. Thus, the table indicates that there is a strong case for a cash transfer program as the policy instrument towards poverty alleviation.

Table 7: Cost of different transfer programs

Scenario	Transfer Amount	Population Covered	Cost of Transfer Program	Cost as percentage of GDP
Extension of Rythu Bandhu	Rs. 8000 per acre per annum	350 million Acres	Rs. 2.8 Trillion	2.1
Small and Landless Farmers	Rural Transfer- Rs. 520 per month	17 per cent of India's population	Rs. 1.48 Trillion	1.1
All Rural Poor	Urban Transfer- Rs. 630 per month	27 per cent of India's population	Rs. 2.2 Trillion	1.7
All Poor (World Bank)		33 per cent of India's population	Rs. 2.7 Trillion	2.1

Source: Authors Computation using NSSO Consumption Expenditure Survey, 2011-12

Despite the cash transfers being a significantly efficient mechanism for providing income support, a major criticism of such programs has been its impact on the labour supply decisions of the poor beneficiaries. Some argue that such cash transfer programs tend to negatively impact the choice of workers in the labour market. There is little evidence of a reduction in labor supply due to cash transfer programs. Banerjee, Hanna, Kriendler and Olken (2015) conducted a meta-analysis of cash transfers and found no significant reduction in labor supply caused by the provisioning of cash transfer. A similar study by Alzua, Cruces and Ripani (2010) found non-significant and small and negative effects of three Latin American cash transfer programs on employment.

The Fiscal Space for a Targeted Basic Income

Implementation of a Targeted Basic Income to cover the entire population would cost approximately Rs. 2.8 trillion so a natural question that's asked is if there's fiscal space to implement such an extensive transfer program. At the onset it must be stated that the targeted basic income would be significantly more cost effective than the current income support schemes. Bhalla (2015) for instance mentions how the annual cost of making an individual non-poor under the PDS Scheme in 2011-12 was Rs. 24,076 while for MNREGA it was Rs. 40,477. Under the proposed targeted basic income scheme, for urban areas the annual cost is Rs. 7,560 While for rural areas the cost is Rs. 6,240. Therefore, clearly there is fiscal space to replace the current policies with a targeted basic income program.

The recent loan waivers announced by state governments amount to Rs. 1.6 trillion, and all the states have not yet announced such waivers that are known to have no significant impact in addressing the rural crisis. This shows that the states too have fiscal space to contribute towards an extensive targeted basic income program.

In Table 8 we provide the cost to be borne by the state if the state and the centre have the same share in the cost for providing the targeted basic income. Under the cash transfer program whereby we cover all poor, Jharkhand would have to contribute Rs. 4500 Crores while Odisha would have to contribute Rs. 6140 Crores. However, the cash transfer program would significantly cover more beneficiaries as the transfer program is not just limited to rural India.

Table 8: Cost to Centre and States under equal sharing of the cost of Cash Transfer Program

State	Number of Beneficiaries In Millions	Cost of Cash Transfers In 000 Cr	Cost Centre In 000 Cr	Cost State In 000 Cr
Andhra Pradesh	15.4	10.0	5.0	5.0
Assam	12.7	8.0	4.0	4.0
Bihar	51.9	32.9	16.5	16.5
Chhattisgarh	14.0	9.0	4.5	4.5
Delhi	1.8	1.3	0.7	0.7
Gujarat	20.4	13.3	6.7	6.7
Himachal Pradesh	1.6	1.0	0.5	0.5
Haryana	4.9	3.2	1.6	1.6
Jammu and Kashmir	2.5	1.6	0.8	0.8
Jharkhand	14.0	9.0	4.5	4.5
Karnataka	20.8	13.6	6.8	6.8
Kerala	6.5	4.2	2.1	2.1
Madhya Pradesh	24.4	16.0	8.0	8.0
Maharashtra	35.4	23.1	11.5	11.5
Odisha	19.3	12.3	6.1	6.1
Punjab	5.3	3.5	1.8	1.8
Rajasthan	21.0	13.6	6.8	6.8
Tamil Nadu	16.3	10.6	5.3	5.3
Uttar Pradesh	96.4	62.4	31.2	31.2
Uttaranchal	2.6	1.7	0.9	0.9
West Bengal	32.0	20.7	10.4	10.4
Total Cost of Transfers		271.3	135.6	135.6

Source: Authors Computation using NSSO Consumption Expenditure Survey, 2011-12

The total annual burden of such a program on Indian states comes to Rs. 1.3 trillion which is significantly lower than the loan waivers that have been announced by 7 states since last year. With a cash transfer program in place, there would be stability in farm incomes and thus, the requirement of such frequent farm loan waivers would drastically reduce.

The fiscal costs of current central government programs are approximately 4.5 per cent of India's GDP. In Table 9 we show the expenditure of the Central Government and provide the classification of the subsidy as either good subsidy or as bad subsidy. Based on this classification, we find that approximately 2.21 per cent of the expenditure of the government in 2017-18 was on bad subsidies or doles. Thus, clearly there's fiscal space with the central government to accommodate an extensive cash transfer program by reallocation of funds from these bad subsidies to the targeted cash transfer program.

Table 9: Good and Bad Government Spending in India, 1999-00- 2017-18

	Year				
	1999-00	2004-05	2009-10	2011-12	2017-18
GDP (in 000 crores)	1952	3242	6550	8354	13010
As per cent of GDP					
Central Government Expenditure	15.6	15.6	15.6	15.8	12.7
Good Subsidies	0.81	0.86	1.19	1.52	2.82
<i>Infrastructure</i>	0.27	0.21	0.32	0.42	1.85
<i>Education & health</i>	0.54	0.65	0.87	1.10	0.97
Bad Subsidies - Dole	1.11	1.58	2.72	2.88	2.21
<i>Food & Employment</i>	0.66	0.99	1.40	1.25	1.48
<i>Fuel & fertilizer</i>	0.45	0.59	1.33	1.63	0.73

Source: Union Budget, various years

However, with the recent announcement of State Governments implementing their own forms of Cash Transfer programs indicate that there's space with states to provide some resources to fund such an extensive cash transfer program. For instance, the current cash transfer programs announced in Telangana, Odisha and Jharkhand are not specifically financed by the Central Government. Thus, if States and Centre decides to contribute, the fiscal burden on the central government would be lower than what has been projected and the direct income support can be launched with a 3-year period to do away with food, oil and fertilizer subsidies.

Table 10: Cost to Centre and States under different cost sharing arrangements

Scenario	Cost of Transfer Program	Equal Cost Sharing		Centre Pays 55 per cent		Centre pays 60 per cent	
		Centre	State	Centre	State	Centre	State
All values in Rs. Trillion							
Extension of Rythu Bandhu	2.8	1.	1.	1.5	1.2	1.6	1.1
Small and Landless Farmers	1.4	0.7	0.7	0.8	0.6	0.8	0.6
All Rural Poor	2.2	1.1	1.1	1.2	0.9	1.3	0.8
All Poor	2.7	1.3	1.3	1.4	1.2	1.6	1.0

(World Bank)

Source: Authors Computation using NSSO Consumption Expenditure Survey, 2011-12

There may be different scenarios of cost sharing arrangements between the centre and the state for the roll out of a comprehensive targeted basic income for the poor in India. The potential cost sharing scenarios could be where the state decides to pay half of the cost, where the states

contribute 45 per cent of the cost and where the states contribute 40 per cent of the total cost. We've presented the three scenarios in Table 10.

It is evident that in either of the three scenarios, the burden on the centre reduces significantly. This makes it possible to initiate a cash transfer program for providing income support to the poor in India while centre scales down the food, fertilizer and oil subsidies over the next three years. Once the oil, food and fertilizer subsidies are rolled back, the central government can increase its contribution towards the program and states can ultimately reduce their contribution. Thus, the burden on states would be only temporary but it will be instrumental in the initiation of a cash transfer program that would benefit all households that are currently below the poverty line.

Conclusion

The growth rate of agricultural incomes has been modest over the last four years. A major reason behind this has been two successive droughts and poor rainfall. The paper demonstrated how the modest growth of agricultural income highlights the limitation of price policy in terms of providing agricultural income. We also demonstrate how demonetization did not lead to an acceleration in the decline of the total value of agricultural surplus. However, there is a decline and this decline is a cause of concern as agrarian crisis does exist in 2018. Consequently, there's a need to revisit alternative mechanisms for providing income support to Indian farmers. Our computation suggests that rather than a simple extension of the Rythu Bandhu scheme, a Targeted Basic Income to the poor would be a better approach. The cost of both the programs is same, however, the Targeted Basic Income would cover urban poor as well as rural poor and it will also ensure a uniform real transfer of value to those below the poverty line. The Targeted Basic Income program is therefore a systematically more efficient mechanism and it has the potential to replace and consolidate a major share of India's poverty alleviation schemes. Given the renewed interest of states in implementation of a cash transfer program as under Telangana's Rythu Bandhu scheme, a Targeted Basic Income is highly plausible through contribution of both the central and the state government and it will ensure that the burden of the cost of such a program is adequately distributed.

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