



# Assessing the Operational Constraints of Direct Benefit Transfers: An Empirical Investigation of PM-KISAN Scheme of India

Bhaskar Ghosh <sup>a\*</sup>, Rajarshi Roy Burman <sup>a,b</sup>,  
Rabindra Padaria <sup>a</sup>, Girijesh Singh Mahra <sup>a</sup>,  
Pramod Kumar <sup>c</sup> and Arpan Bhowmik <sup>d</sup>

<sup>a</sup> Division of Agricultural Extension, ICAR-Indian Agricultural Research Institute, New Delhi-110012, India.

<sup>b</sup> Division of Agricultural Extension, Indian Council of Agricultural Research, New Delhi, India.

<sup>c</sup> Division of Agricultural Economics, ICAR- Indian Agricultural Research Institute, New Delhi, India.

<sup>d</sup> Division of Statistics, ICAR- Indian Agricultural Research Institute, Dhemaji, Assam, India.

## Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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## ABSTRACT

Direct Benefit Transfer (DBT) plays a crucial role in tackling widespread corruption and interference from middlemen, which often obstruct policy measures from reaching their intended recipients in developing countries like India. The PM-KISAN (Pradhan Mantri Kisan Samman Nidhi) scheme, a

\*Corresponding author: E-mail: [bumbadonbosco4201@gmail.com](mailto:bumbadonbosco4201@gmail.com);

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key initiative by the Indian government, aims to offer financial support to small and marginal farmers. However, the scheme encounters several implementation challenges that diminish its effectiveness. This study investigates the constraints faced by the beneficiaries of PM-KISAN scheme through research conducted in eight Gram Panchayats in Bihar and Uttar Pradesh. Data were collected from 120 small and marginal farmers and 30 state department officials using surveys and interviews. Employing Garrett ranking, the study analyzes and prioritizes the obstacles encountered in the scheme's execution. Major issues identified include discrepancies in land area records, a complex grievance resolution process, delays in fund disbursement, and inaccuracies in beneficiary data. These constraints critically affect the scheme's efficiency and reach. By systematically ranking these constraints based on their frequency and impact, Garrett ranking provides a clear understanding of the most pressing issues. The study offers practical recommendations for policymakers and implementers to improve the PM-KISAN scheme's effectiveness, ensuring that the benefits more accurately reach the intended beneficiaries.

**Keywords:** *Direct benefit transfers; PM-KISAN; Constraint analysis; garrett ranking; small; marginal farmers.*

## 1. INTRODUCTION

Cash transfers, a form of social protection, are non-contributory payments provided directly, regularly, and predictably to stabilize and increase income, with the aim of reducing poverty and vulnerability. The underlying assumption of such policy interventions is that when underprivileged individuals receive conditional or unconditional income transfers, they can be trusted and empowered to effectively utilize these resources to improve their living conditions [1]. The concept of cash transfers has a long history, dating back to the last century, with its origins traced to Brazil in the mid-1980s. Although many Latin American countries have implemented this approach to combat poverty, Brazil's initiatives are among the most recognized. The Brazilian government distributed income directly to households earning below a certain threshold, as determined by the federal government's unified social services registry, known in Brasilia as the Fome Zero plan. Initially, cash transfer programs were implemented locally to address specific challenges, but they were later unified under the "Bolsa Familia" program in 2004. Over time, this program has significantly reduced poverty and inequality in Brazil [2]. Inspired by the success of Bolsa Familia, numerous countries—including those in Latin America, the United States, Mexico, several African nations, and Southeast Asia—adopted the approach as Conditional Cash Transfers (CCTs). The Bolsa Familia Program remains the world's largest and most successful conditional cash transfer system. In 2010, CCTs in Mexico, such as Bolsa Familia and Oportunidades, covered approximately 12

million and 5 million low-income families, respectively [3].

Agriculture and allied sectors are the backbone of the Indian economy, supporting the livelihoods of nearly half of the country's population. Farming is the primary source of income for rural households, with small and marginal farmers (SMFs) playing a dominant role. SMFs are classified based on the amount of land they own or operate. The average size of small and marginal holdings at the national level is 1.41 hectares and 0.38 hectares, respectively [4]. These farmers represent 86 percent of the total farming population in India. It is clear that the sustainable growth of agriculture and the nation's food and nutrition security are heavily dependent on the performance of SMFs. However, challenges such as credit constraints, inadequate infrastructure, untimely input supply, poor market access, volatile market conditions, and climatic variability push them into poverty, preventing them from generating sufficient income to meet even the basic needs of their families. Therefore, to improve the conditions of SMFs, the government must make substantial investments in initiatives designed to enhance farmers' incomes.

Direct Benefit Transfer (DBT) in the form of cash transfers is a frequently discussed topic today. In a developing economy like India, DBT holds significant potential for curbing widespread corruption and reducing the interference of middlemen, which often hinders the effective delivery of policy initiatives to intended beneficiaries. Under DBT, subsidies are directly transferred to the bank accounts of

recipients. The positive impact of such conditional cash transfer programs has been observed in countries like Brazil, where inequality has decreased through their Conditional Cash Transfer (CCT) program "Bolsa-Familia," one of the largest CCT programs in the world [5]. This success has inspired many countries to adopt similar strategies to transfer social benefits, aiming to reduce inequality, poverty, and corruption while improving living standards. In India, there are currently 313 schemes across 53 ministries utilizing the DBT mechanism. These include pension schemes, maternity benefits, scholarships, the MGNREGS, and LPG cylinder subsidies, among others [6]. With the objective of doubling farmers' incomes by 2022, the Government of India introduced the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme. Launched by Prime Minister Narendra Modi on February 24, 2019, PM-KISAN is a central sector scheme under the Ministry of Agriculture and Farmers' Welfare (MoAFW), designed to supplement farmers' financial needs to ensure proper crop health and yields. The scheme provides an annual direct cash transfer of Rs 6,000 to all small and marginal landholding farmer families (SMFs) in three equal installments of Rs 2,000 each, disbursed every four months. On June 1, 2019, following a Union Cabinet decision, the benefits of PM-KISAN were extended to all farmers, regardless of landholding size.

Despite the government's outlined mechanisms for smooth direct benefit transfers to beneficiaries' accounts, numerous research studies have identified various constraints that hinder the effective accrual of these benefits. Bharathi [7] reported that beneficiaries face challenges such as a lack of formal education, inadequate training, limited social mobility, insufficient loans, and economic problems, as well as technical issues like the unavailability of spare parts, electricity shortages, and unskilled members within women's groups. Devereux and Guenther [8] studied the Productive Safety Net Program (PSNP) in Ethiopia and found that cash transfers to farmers were spent primarily on food, but also for purchasing seeds, fertilisers and livestock, setting in motion a virtuous cycle of productive investment, asset accumulation as well as employment multipliers. Badodiya et al. [9] found that a majority of beneficiaries (71.66%) reported that the process of obtaining credit was complicated, 65.83% felt that the program's benefits did not reach those in need, and 59.16%

stated that the loan approval process was excessively lengthy. Additionally, 51.66% of recipients faced difficulties in obtaining records from the patwari, and 46.66% reported a lack of adequate information or understanding of the program. Bryant [10] noted that while cash transfers have been crucial in reducing poverty in developed nations for over 50 years, they were considered too expensive or unfeasible for poorer countries until recently. Ghosh [11] argues that cash transfers should not replace but rather complement public provision of essential goods and services. In essence, cash transfers are effective and advantageous when used alongside other public expenditures on essential items and services that all citizens, especially the poor, are entitled to. Sapra and Khatter [12] explored the experiences of cash transfers in other nations and assessed the conditions for implementing such programs in India. They discussed the challenges, advantages, and limitations of introducing conditional cash transfers in India, concluding that the country is well-positioned to adopt and advance the concept of cash transfers. Kishore et al. [13] highlighted the challenges associated with implementing direct cash transfers for fertilizers, noting issues such as the large number of beneficiaries and fluctuating fertilizer prices. They emphasized the need for market price indexation and regulation of dealer market power, particularly in remote areas.

The constraints faced by beneficiaries of direct cash transfer programs like PM-KISAN in India have not been thoroughly explored, and research in this area is necessary. Understanding these constraints from the perspective of beneficiaries can offer valuable feedback to policymakers, which can be used to refine the existing policy framework, making it more attuned to the needs of farmers. Therefore, this study was conducted to investigate the perceived operational constraints faced by beneficiaries and the officials involved in the scheme's registration and cash disbursement processes.

## 2. METHODOLOGY

### 2.1 Sampling

This research employed a multistage sampling technique to select respondents. Data were gathered from the Indo-Gangetic plains in Uttar Pradesh (U.P.) and Bihar, which were

intentionally chosen due to their significance, as these states account for 30% of all small and marginal landholdings in India and 75.2% of such holdings in the Indo-Gangetic plain (IGP) region [4]. In the second stage, four districts—Bahraich, Bulandshahr, Bhojpur, and Muzaffarpur—were selected using simple random sampling. In the third stage, two gram panchayats from each district were chosen through a simple random sampling procedure: Kataha and Ghasipur from Bahraich, Chhapna and Machad from Bulandshahr, Dhandiha and Bakri from Bhojpur, and Gavasara and Mohammadpur-Khaje from Muzaffarpur (Fig. 1). In the final stage, a sampling frame of PM-KISAN beneficiaries was established, and 15 respondents from each gram panchayat were selected using stratified disproportionate simple random sampling of small and marginal farmers. Additionally, 30 officials from various state departments were interviewed who were involved in farmers' registration and official block level operational cell of PM-KISAN. In total, 150 respondents were interviewed face-to-face.

scheme involved identifying and documenting these constraints. Respondents were then asked to rank the constraints by severity using the Garret ranking method. This approach was employed to capture constraints experienced by both beneficiaries and officials. By converting the rankings into numerical scores, this method offers a significant advantage over a simple frequency distribution, as it organizes constraints based on their relative importance to respondents. Consequently, even if multiple constraints receive the same number of responses, they may be ranked differently according to their significance.

$$\text{Percent position} = \frac{(R_{ij} - 0.5)}{N_j} \times 100$$

Where,

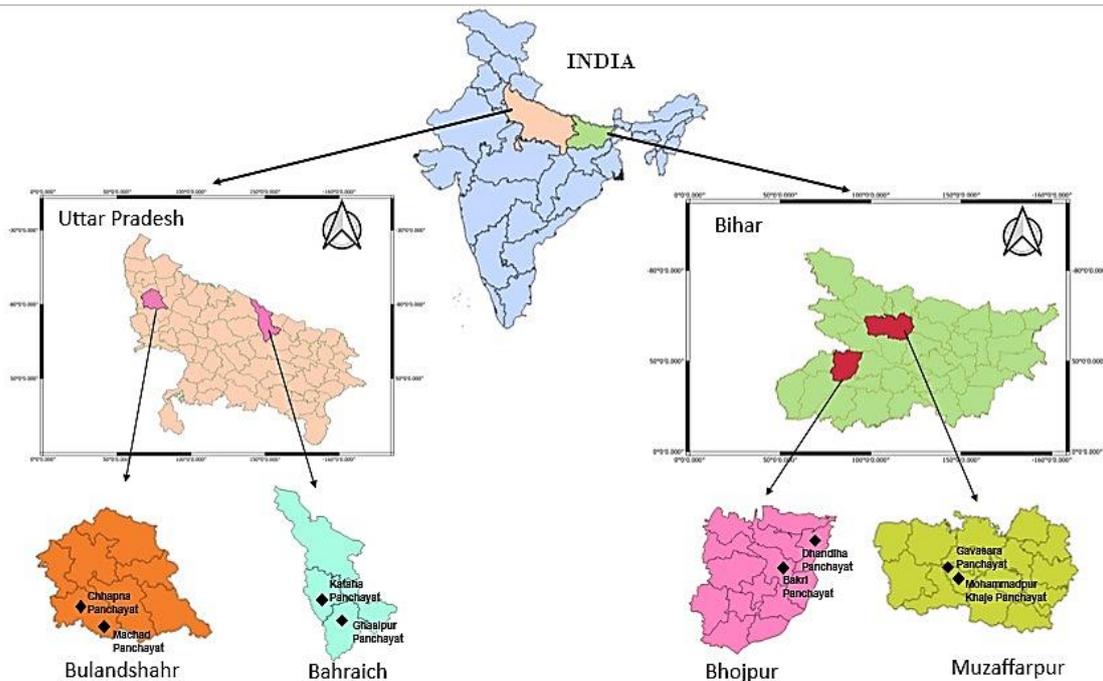
$R_{ij}$ = Rank given for  $i^{\text{th}}$  factor by  $j^{\text{th}}$  individual

$N_j$ = Number of factors ranked by  $j^{\text{th}}$  individual

Using Garrett's table, the percentage positions were converted into scores. For each factor, the individual scores were summed, and then the total and mean scores were calculated. Factors with the highest mean scores were deemed the most significant.

## 2.2 Garrett 's Ranking

The analysis of perceived constraints that could hinder access to benefits under the PM-KISAN



**Fig 1: Locale of study**

Source: Prepared by author through QGIS software

### 3. RESULTS AND DISCUSSION

#### 3.1 Operational Constraints as Perceived by Beneficiaries of PM-KISAN Scheme

The opinion of the beneficiaries of PM-KISAN scheme were analyzed using the Garret ranking Method and given in Table 1.

The most significant issue identified by the beneficiaries is the discrepancy in land area records mentioned in the land deeds. Accurate land records are crucial for the disbursement of funds under the PM-KISAN scheme, as the amount of aid is tied to the land area owned by the farmer. Errors or discrepancies in land records can lead to incorrect fund disbursement or even exclusion of eligible beneficiaries from receiving the benefits, causing considerable distress among farmers. This constraint is ranked as the most severe, with the highest average score of 55.108, indicating that it is the primary concern among the beneficiaries. The second most critical constraint identified is the complexity and time-consuming nature of the grievance resolution process under the PM-KISAN scheme. Beneficiaries facing issues with the scheme often find it difficult to get their grievances addressed efficiently. A complex and slow grievance redressal system can discourage beneficiaries from seeking help, leading to unresolved issues and dissatisfaction with the scheme. This can undermine the scheme's credibility and effectiveness. This issue is ranked second, with an average score of 52.492, reflecting its importance to the beneficiaries. Common Service Centres (CSCs) are vital for providing various government services, including PM-KISAN registrations and grievance redressal. The absence of CSCs in some villages or their distant locations creates a barrier for farmers who need to access these services. Farmers have to travel

long distances to access CSCs, which can be time-consuming and costly, particularly for those residing in remote or underdeveloped areas. This inconvenience is a significant issue for beneficiaries. This constraint is ranked third, with an average score of 50.192. The beneficiaries perceive a lack of transparency in maintaining and sharing records of PM-KISAN beneficiaries at the panchayat level. This lack of transparency can lead to mistrust and confusion among farmers regarding their eligibility status and the disbursement process. This constraint is ranked fourth, with an average score of 47.892. The delay in the crediting of PM-KISAN funds to beneficiaries' accounts is another notable concern. Delays can disrupt farming schedules, leading to financial strain and reduced agricultural productivity. The beneficiaries perceive this as a significant hurdle in the scheme's effective implementation. This constraint is ranked fifth, with an average score of 47.414. Arunkumar [14] reported that the members' problems included a lack of timely support from banks/other organisations. Some beneficiaries have reported that their PM-KISAN payments were diverted to settle outstanding crop loans with their banks, rather than being credited directly to their accounts. This diversion deprives farmers of the intended direct financial support from the scheme, limiting its effectiveness in providing timely relief to farmers. This issue is ranked sixth, with an average score of 44.575, indicating that while significant, it is considered less severe than other constraints.

#### 3.2 Operational Constraints as Perceived by Officials

The opinion of the officials involved in the implementation of the scheme were analyzed using the Garret ranking Method and given in Table 2.

**Table 1. Major operational constraints as perceived by beneficiaries (n=120)**

S. No.	Constraints	Average score	Rank
1.	Discrepancies in land area record in the land deeds.	55.108	1
2.	Lack of Common Service Centre (CSC) in the village and were located far away.	50.192	3
3.	No transparency of records of beneficiaries at panchayat level.	47.892	4
4.	Diversion of amount to crop loan of beneficiaries as interest payment	44.575	6
5.	Untimely credit of the fund.	47.414	5
6.	Grievance resolving procedure is complex and time consuming.	52.492	2

**Table 2. Major operational constraints as perceived by officials (n=30)**

S. No.	Constraints	Average score	Rank
1.	No provision to edit and correct details of farmers by District officials after it has been submitted in portal.	50.533	3
2.	Difference in time of payments in same village creates chaos among farmers.	41.867	8
3.	Aadhaar card name and UID number provided were faulty.	46.833	4
4.	Farmers are unaware about their eligibility criteria under the scheme.	43.200	6
5.	Dormant bank accounts and merging of banks created chaos in transferring benefits.	46.267	5
6.	Land records in PM-KISAN portal reflected differently than the title deeds of land under the farmer.	64.867	1
7.	Difficulty in checking farmer details submitted due to incomplete digitization of land records.	60.067	2
8.	Failed transactions are not credited even after correcting the details.	42.367	7

The most severe constraint identified is the inconsistency between land records reflected in the PM-KISAN portal and the actual title deeds held by farmers. Accurate land records are essential for determining eligibility and the amount of benefit under the scheme. Discrepancies in land records can result in incorrect or delayed disbursement of benefits, or even exclusion from the scheme. This issue is of utmost concern to the beneficiaries and is ranked as the most critical constraint. This issue is ranked first, with the highest average score of 64.867, indicating its significant impact on the beneficiaries. The incomplete digitization of land records presents a challenge in verifying and checking the details submitted by farmers under the PM-KISAN scheme. The lack of comprehensive digital records increases the likelihood of errors and delays, making it difficult for both officials and farmers to ensure accurate submissions. This constraint is ranked as the second most severe with an average score of 60.067. Once farmer details are submitted in the PM-KISAN portal, district officials cannot make corrections or edits, even if errors are detected later. This inflexibility can result in incorrect information being permanently recorded, affecting the beneficiaries. This issue ranks third, with an average score of 50.533, indicating its critical impact on the scheme's effectiveness. Errors in the Aadhaar card details, such as incorrect names or UID (Unique Identification) numbers, present a significant challenge in the implementation of the PM-KISAN scheme. Since Aadhaar verification is a critical step in the process, any discrepancies can lead to failed transactions or disqualification. This constraint is ranked fourth, with an average score of 46.833.

The issue of dormant bank accounts and the recent merging of banks has complicated the process of transferring PM-KISAN benefits to farmers. Dormant accounts may not be eligible for fund transfers, and changes in banking details due to mergers can lead to delays or failed transactions. It is ranked fifth, with an average score of 46.267. A significant portion of beneficiaries are unaware of the eligibility criteria for the PM-KISAN scheme. This lack of awareness can lead to confusion and misunderstandings about whether they qualify for the benefits. This issue is ranked sixth, with an average score of 43.200. There are instances where failed transactions under the PM-KISAN scheme are not credited to the beneficiaries even after they have corrected the necessary details. This issue undermines the trust in the system and causes financial distress to the affected farmers. It is ranked seventh, with an average score of 42.367. Payments under the PM-KISAN scheme are not always credited simultaneously for all beneficiaries within the same village. This variation in payment timing can lead to confusion and dissatisfaction among farmers. It is ranked eighth, with an average score of 41.867, indicating a lower level of concern among the beneficiaries.

The constraints identified in Table 1 highlight the challenges faced by the beneficiaries of the PM-KISAN scheme, with discrepancies in land records and a cumbersome grievance resolution process being the most pressing issues. The constraints identified in the Table 2 highlight various challenges related to administrative processes, technology integration, and beneficiary awareness under the PM-KISAN

scheme. The majority of recipient farmers were satisfied with the crop insurance plan, according to Rathore et al. [15], but they were dissatisfied with the delay in processing of claims, the current methodology for determining compensation, and the inadequate payment of compensation. The discrepancies in land records and the incomplete digitization of these records are the most pressing issues, followed by the inability to edit farmer details post-submission. Addressing these constraints is essential to ensure the smooth and effective implementation of the PM-KISAN scheme, thereby enhancing its reach and impact among the farming community. Benefits are linked to land records hence, landless labourers are kept out from the scheme benefits. [16]

#### 4. CONCLUSION

Cash transfer programs like PM-KISAN are fundamentally development initiatives aimed at enhancing the social status of farmers, particularly small and marginal farmers (SMFs), who face numerous challenges, including credit constraints, inadequate infrastructure, untimely input supply, poor market linkages, volatile market conditions, and climatic variability. These challenges often lead to poverty, preventing these farmers from generating sufficient income to meet their families' basic needs. Therefore, adopting a comprehensive approach that considers the livelihoods of SMFs is crucial for evaluating the performance of the PM-KISAN scheme and informing future policy decisions. The PM-KISAN scheme has emerged as a significant intervention aimed at alleviating the economic challenges faced by small and marginal farmers across India. However, the constraints perceived by the beneficiaries reveal critical areas where the scheme falls short in delivering its intended benefits. Key challenges include delays in fund disbursement, lack of awareness about the scheme's provisions, inadequate infrastructural support, and difficulties in accessing complementary services. These constraints undermine the effectiveness of the scheme, limiting its potential to uplift the socio-economic status of the targeted farmers. Addressing these issues is essential to ensure that the scheme meets its objectives and effectively contributes to the improvement of farmers' livelihoods.

#### DISCLAIMER (ARTIFICIAL INTELLIGENCE)

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generators have been used during writing or editing of manuscripts.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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