IT enabled delivery of Social Security Benefits in India

A case of Agricultural Income Support through Direct Cash Transfers (PM-KISAN)
Agriculture in Indian economy

• Largest provider of livelihood in rural India
• 2nd Largest Producer ($375.61 Billion, 7.39% of global agricultural output)
• 15% to India’s GDP
• Largely dependent on the monsoon
• Growth in production has been stagnant for several years

Source: Centre of Management in Agriculture, Indian Institute of Management Ahmedabad
Rural/Agricultural Distress in India

86% Small & Marginal Holdings

Land holding 1.08 Ha pp

1/3 Households take loan from Non-Fin Institutions

Area ~ 157 M Ha (Reduced by 2 M Ha in last decade)

Per Capita Income of Farmers Rs. 8,931 (USD 130)

41% Indebted Households

Source: NABARD All India Financial Inclusion Survey, 2016-17
Farmers’ Distress

Over 12,000 Maharashtra farmers committed suicide in 3 years: Government

More than 12,000 farmers have committed suicide in Maharashtra between 2015 and 2018, the Legislative Assembly was informed on Friday.

OECD-ICRIER report: Gross farm revenue reduced over 6% year by year during 2014-16

ENS ECONOMIC BUREAU
NEW DELHI, JULY 5

INDIA’S FOOD and agriculture policies have an aggregate effect on reducing gross farm revenues, a new OECD-ICRIER report has said, and estimated that during 2014-16, the reduction was over 6 per cent a year. Even as farmers got large subsidies for inputs like fertilisers, power and irrigation, low market prices for their produce — which are below global levels — resulted in overall negative producer support, the report highlighted, and reckoned that for 2000-10, overall producer support estimate was around —14 per cent on average.

At a time the government has pledged that minimum support price (MSP) for crops would be 50 per cent above the paid-out costs at the minimum (on Wednesday, the CCEA announced kharif 2018-19 MSPs for 14 crops under this policy), the report proposed a rather contrarian approach. Calling for a system where market signals determine the production choices, it asked for a review of the process where MSPs are set in relation to production costs. This, it said, is necessary to avoid “locking in inefficient high-cost production and raising prices for consumers”.

‘Agri export: Govt working on mechanism’

New Delhi: As India aims to double its farm exports by 2022, Commerce Secretary Rita Tiwari Thursday said the government is working on an institutional mechanism to deal with sanitary and phytosanitary issues hampering agricultural shipments. “We would double our agricultural exports by 2022. We are trying to focus on high value products,” she said.

rease for suicides

In all these states, major crops grown are cash crops mainly cotton and sugarcane requiring sizeable financial input

Cases of farmers’ suicides have been reported from Maharashtra, Telangana, Karnataka and Punjab

Outstanding loans, rising debt, low crop yield, poor procurement rate of crops and successive crop failure have mainly been reasons for suicides

Money lenders continue to offer loans at interest rates between 24% to 50% while income generating potential of the land remained low

NEW: A new feature that allows you to save pages from your favorite newspapers and magazines. Available on the Sunday Times app.

DEATH COUNT MOUNTS

Farmers’ Suicides

(includes those by farm labourers)

<table>
<thead>
<tr>
<th>State</th>
<th>2015</th>
<th>2016</th>
<th>% Chg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punjab</td>
<td>124</td>
<td>271</td>
<td>118.0</td>
</tr>
<tr>
<td>Haryana</td>
<td>162</td>
<td>250</td>
<td>54.32</td>
</tr>
<tr>
<td>Karnataka</td>
<td>1,569</td>
<td>2,079</td>
<td>32.50</td>
</tr>
<tr>
<td>Gujarat</td>
<td>301</td>
<td>408</td>
<td>35.5</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>1,290</td>
<td>1,321</td>
<td>2.4</td>
</tr>
<tr>
<td>Telangana</td>
<td>1,400</td>
<td>645</td>
<td>-54.0</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>4,291</td>
<td>3,661</td>
<td>-15.0</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>916</td>
<td>804</td>
<td>-12.2</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>954</td>
<td>682</td>
<td>-28.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12,602</td>
<td>11,370</td>
<td>-9.8</td>
</tr>
</tbody>
</table>

Israel (Israel Press): "In Maha, 601 farmer suicides in 3 mths; Sahibha, 8 forced to sell cucumbers instead of studying Rains in March 1970."

‘Nitin Chowdary Pavuluri’

FARMER SUICIDES:

I NTERNATIONAL COSTS FOR INDIAN SOCIETY, AS A RESULT OF POLICY CHANGES OF 1990.

N信用 is growing at a double digit GDP. But the same time there are thousands of farmers committing suicide every single year. This is an abjectly bad state of affairs. And it is not just the farmers committing suicide – it is their children, their grandchildren, their nieces and nephews. And this is happening in the country. I feel that, for every farmer who commits suicide, there is one step down.

As we look at the various causes for these suicides and the structural changes that are taking place during the 1990s that have created such a state of affairs. And it is not just the farmers committing suicide – it is their children, their grandchildren, their nieces and nephews. And this is happening in the country. I feel that, for every farmer who commits suicide, there is one step down. As we look at the various causes for these suicides and the structural changes that are taking place during the 1990s that have created such a state of affairs. And it is not just the farmers committing suicide – it is their children, their grandchildren, their nieces and nephews. And this is happening in the country. I feel that, for every farmer who commits suicide, there is one step down.
Impact of Farmers’ Distress

• **Low income** for farmers, incidence of poverty among farm households

• **Detrimental to the interest in farming and farm investments** due to low and highly fluctuating farm income

• **Disguised employment**

• Cultivators, particularly from younger age groups, **leaving farming**

• Sharp increase in the number of **farmers suicides** in the last decades.

• Adverse effect on the future of **food security** and the state of agriculture in the country
Major Reasons for Farmers’ Distress

• **Varied Policy and Planning:** Government strategy primarily focused on raising agricultural output and improving food security rather than recognising the need to raise farmers’ income

• **Absence of direct measure to promote farmers welfare**

• **Declining average size of farm holdings:**
  • Increasing demographic pressure,
  • disguised employment in agriculture, and
  • conversion of agricultural land for alternative uses
Major Reasons for Farmers’ Distress

• **High Dependence on Rainfall and Climate:** ever-increasing global temperatures have made agriculture more prone to extreme weather events

• **Collapsing farm prices:** Low global prices have affected exports and the cheaper imports have hurt domestic prices in the country

• **Lack of easy credit** to agriculture and dependence on money lenders.

• **Fragmented supply chains:** Large gaps in storage, Cold chains
  • Limited connectivity
  • Absence of marketing infrastructure
  • Profiteering by middlemen
Objectives: Federal Scheme for an assured income support to the small and marginal farmers (SMFs)

- **Supplement the financial needs of SMFs** in procuring inputs to ensure crop health and yields, commensurate with the anticipated farm income at the end of each crop cycle
- **Target Beneficiaries:** Vulnerable landholding farmer families, having cultivable land up to 2 Hectares
- **Direct income support** of Rs. 6,000 per year, transferred directly into the bank accounts of beneficiary farmers, in three equal instalments of Rs. 2,000
- **145 million SMF families** are covered
Typical Social Benefit Delivery Process: Pre DBT

- Long channel of intermediaries before cash reaches beneficiary
- Leakages due to fake/duplicate beneficiaries + Practices of rent seeking
- No Confirmation about actual receipt of benefits by the beneficiary
Social Benefit Delivery Process: DBT

Beneficiary List (Aadhaar + Non-Aadhaar seeded)

PFMS

Approving Authority

Sponsor Bank

NPCI

Beneficiary Bank

Beneficiary Bank

Beneficiary Bank

Beneficiary Bank

Beneficiary Bank

Beneficiaries
Why DBT for PM-KISAN?

- Assurance of **timely release of payments**
- Ensuring correct funds are transferred to **correct beneficiaries**, reducing corruption & leakages
- **Reduction in delays** for funds transfer (improving programme performance, instilling trust and confidence in the Beneficiaries)
- Strong focus on **security, tracking and monitoring of funds** (through use of digital sign and convergence/interoperability)
- **Reconciliation** between intermediate agencies involved in funds transfer (near real-time tracking, accountability and transparency)
STEP 1: Flow of Beneficiary Details

There are 3 ways through which a State can feed details in the PM KISAN Portal:

1. Direct Upload of Existing List:
   • If State has village/district wise list of SMFs in the predefined format

2. Edit/Update Existing List:
   • Existing data of farmers from other schemes/projects already available at the Portal may be used and edited to finalize the SMF list.

3. Fresh Registration:
   • If State wants fresh entry of a farmer, in a defined/standardized format
Beneficiary Identification

**Village Level**
- Preparation of draft list
- Eligibility checks/Exclusion Criteria
- **Essential Attributes:** Identity, Location, Bank Account
- **Optional Attributes:** Age/DOB, Mobile

**District / Block Level**
- Compile, Verify & Approve SMF List compiled through village data
- Upload of Beneficiary Details on PM KISAN Portal
- Editing of existing Beneficiary Details

**State Level**
- Verify the District wise list
- eSign and submit for release of funds
- Monitoring the status of data submission by lower levels and release of funds by bank
STEP 2: Beneficiary Authentication

1. PFMS shares back the Status of A/Cs Validation with PM KISAN
2. PM KISAN shares the failed status with State Govt. & get it rectified for re-validation

PM KISAN shares Beneficiary data with PFMS

PFMS applies Internal Validation

PFMS Shares A/Cs with Banks for Validation

Bank provides status to PFMS as per KPI

PFMS shares back:
1. A/Cs Failed internal Validation
2. A/Cs with Non-integrated banks
STEP 2: Beneficiary A/C Validation by PFMS

PM-KISAN Portal → PFMS Portal → BizTalk Server → SFTP Server → Bank’s CBS

Dept./Users → PFMS Portal → BizTalk Server → SFTP Server → NPCI

Aadhaar Mapper
STEP 3: Payment – Process Flow of PFMS

PFMS Portal → BizTalk Server → SFTP Server → Bank → Beneficiary Bank → State Nodal Bank

- Ack / NAck
- INI
- e-Scroll (Reconciliation)
- Cr Success/
  Failure
- Cr Success/
  Failure
PM KISAN Achievements

Amount Disbursed
₹27,060 Cr.

Number of Transactions
13.53 cr.

Beneficiaries Paid
6.68 cr.

Top 10 Districts by Number of Beneficiaries:
- SITAPUR: 4,07,146
- HATHRAS: 5,91,507
- KHERI: 4,02,178
- JAUNPUR: 4,06,725
- HARDOI: 4,94,097
- AZAMGARH: 4,65,912
- KURNOOL: 3,95,590
- EAST GODAVARI: 3,95,630
- SOLAPUR: 3,90,198
- ANANTAPUR: 4,61,088

PM KISAN INDIA
ICGFM Winter Training Conference 2019
Issues Identified

1. Beneficiary identification
2. Infrastructure Scalability Issue
3. Non-integrated small regional banks, Inability to validate 100% of the Beneficiaries’ Bank Accounts
4. Several layers of intermediaries in DBT process
5. Data discrepancy due to manual interventions
6. Technology struggled to deliver, within time and accuracy, translation of data from vernacular to the official language
Lessons Learnt: Technological Solutions

1. Scalability needs of IT system due to fluctuating/sudden demands are a fit case to migrate to the Cloud.

2. Changing the Banking arrangement by removing middle level banks.

3. Special Bank Integration drive to facilitate 100% A/C Validation.

4. Blockchain for reconciliation and information sharing with stakeholders.

5. Use of Fuzzy logic to rectify errors in manual Beneficiary data collection.

6. Use of Data Analytics to monitor timelines, assess performance of each stakeholders & fixing responsibilities.

7. Gradual reduction of time for KPIs by adopting latest industry standards.
Thank You

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