Automating Without Accounting: Algorithmic Welfare Delivery, Administrative Accountability, and the Substitution Problem in India's PM-KISAN Scheme

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Abstract - India's Pradhan Mantri Kisan Samman Nidhi scheme disburses ₹6,000 annually to over 9.44 crore farmers through an automated algorithmic eligibility and payment architecture. This paper examines a structural accountability deficit that this architecture has produced: the Indian state has substituted algorithmic systems for human decision-makers in welfare delivery without transferring the accountability framework that once attached to those officials. Drawing on Max Weber's theory of rational-legal bureaucracy, Frank Pasquale's black box framework, and the constitutional standards established in Maneka Gandhi v. Union of India (1978) and Olga Tellis v. Bombay Municipal Corporation (1985), the paper argues that PM-KISAN's exclusion mechanism fails to satisfy the natural justice and livelihood-protection standards the Supreme Court has required. The argument rests on documented evidence: LibTech India's 2023 field study found 53,068 eligible farmers wrongly excluded across six Integrated Tribal Development Agency regions in Andhra Pradesh; RTI-sourced administrative data reveals that as of July 2025, over 48 lakh registered beneficiaries had payments withheld due to e-KYC failures; and Comptroller and Auditor General audits in Assam, Haryana, and Bihar confirm systemic exclusion errors with no proactive correction mechanism in place. The paper identifies this as the substitution problem — a governance design failure in which automated function has replaced human accountability without any institutional substitute being built — and proposes three targeted reforms: mandatory reasoned orders for algorithmic exclusions, a notified human redressal officer at the district level, and proactive correction obligations enforceable through audit.

Keywords: ***Algorithmic accountability, PM-KISAN, welfare delivery, natural justice, administrative law, India***

I. INTRODUCTION

In October 2023, a field team from LibTech India visited Kokkirapalli village in Andhra Pradesh and met V. Rangamma, a small farmer who had stopped receiving PM-KISAN payments from the thirteenth instalment onwards. The government had marked her ineligible. The stated reason — 'old district to new district transfer' - was not a category that appeared anywhere in the scheme's own official list of ineligibility grounds. Rangamma's land ownership was confirmed by the state's own Mee Bhumi portal. She continued to receive Rythu Bharosa, a parallel state welfare payment. Yet the Central Government's system had decided she did not qualify, and nobody - not the local volunteers she approached, not the village secretariat staff, not any nodal officer - could tell her why, or help her challenge it (LibTech India, 2023).

Rangamma's case is not exceptional. In the same survey across six Integrated Tribal Development Agency regions, LibTech India found 53,068 eligible farmers in the same position: excluded, without clear reason, and without a workable path to redressal. In another case from the same study, a farmer named G.S. Rao was recorded as deceased in the PM-KISAN management information system - his payments stopped accordingly - while he continued to collect rations from his Public Distribution System shop, very much alive. More recently, Suvvampudi Nageswarao of Mycharlapelam village completed the government's mandatory e-KYC facial authentication in July 2024, only to have his status revert to 'e-KYC not done' shortly after. Even a second biometric verification at a Common Service Centre did not resolve the issue. He too was eventually marked ineligible (Kishore and Buddha, 2026).

What connects these cases is not a technical glitch. It is a governance design problem. The Indian state has progressively automated its welfare delivery architecture - database matching, eligibility determination, payment processing - without simultaneously building the accountability infrastructure that consequential decisions about citizens' rights require. When Rangamma was excluded, no named human official had made that decision. There was no reasoned order. There was no forum she could approach that had both the access and the authority to reverse the algorithmic finding. This paper calls this the substitution problem: a function has been transferred to an automated system, but the accountability that attached to the human official who previously performed it has not been transferred to anyone or anything.

This paper argues that the substitution problem, as it operates in PM-KISAN, produces exclusions that violate two foundational constitutional standards: the natural justice requirement established in Maneka Gandhi v. Union of India, AIR 1978 SC 597, and the right to livelihood under Article 21 as established in Olga Tellis and Ors. v. Bombay Municipal Corporation, AIR 1985 SC 180. It grounds this

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 07 , July - 2026

argument in documented evidence from field research, RTI-sourced administrative data, and Comptroller and Auditor General audit findings. And it proposes three concrete reforms that would close the accountability gap without dismantling the efficiency advantages of automated delivery.

Section II reviews the constitutional and theoretical literature that frames the accountability standard. Section III presents the empirical evidence of exclusion at scale. Section IV applies the framework to the evidence. Section V sets out the proposed reforms. Section VI concludes.

II. LITERATURE REVIEW

A. Constitutional Foundations: Natural Justice and the Right to Livelihood

The procedural standard that governs adverse state decisions affecting citizens was established in Maneka Gandhi v. Union of India, AIR 1978 SC 597. The Supreme Court held that any procedure under which a person is deprived of life or personal liberty must be fair, just, and reasonable, and that the principles of natural justice - including audi alteram partem, the right to be heard before an adverse order takes effect - are constitutionally implied by Article 21. Critically, the Court held that Articles 14, 19, and 21 must be read together as a 'golden triangle,' such that a procedure cannot satisfy one while violating the others. A process that excludes a farmer from welfare without notice, without a reasoned order, and without an opportunity to respond fails this standard on all three counts simultaneously.

The substantive standard was established in Olga Tellis and Ors. v. Bombay Municipal Corporation and Ors., AIR 1985 SC 180. A five-judge bench of the Supreme Court held unanimously that the right to life under Article 21 encompasses the right to livelihood, since life cannot be sustained without the means to sustain it. The Court held that the deprivation of livelihood requires fair procedure before it can lawfully occur. For the marginal farmers who receive PM-KISAN - households for whom ₹6,000 per year represents a meaningful share of annual agricultural income - the withholding of that payment is not an administrative technicality. It is a deprivation of livelihood in the sense the Court had in mind.

Neither judgment was written with algorithmic systems in view. But neither is limited by the technology of its time. The Constitution does not distinguish between an adverse order made by a human officer and one generated by an automated system. What it requires is that the procedure be fair: that the person affected be told why, be given an opportunity to respond, and have that response considered by someone with the authority to act on it. The current PM-KISAN exclusion mechanism satisfies none of these requirements.

B. The Substitution Problem: Weber, Aristotle, and Pasquale

The theoretical roots of what this paper calls the substitution problem reach back to Aristotle's account of epieikeia - the capacity for practical wisdom or equity - in the Nicomachean Ethics (Book V, Chapter 10). Aristotle's argument was simple but profound: written rules, however carefully drafted, are necessarily general, and the general case cannot always do justice to the particular one. A human decision-maker can recognise when the rule produces an unjust result in a specific situation and correct it. Rangamma's case is a precise illustration: no reasonable human official, presented with her land records and her continued receipt of state welfare payments, would have marked her ineligible on a ground that does not exist in the scheme's own categories. The algorithm has no such capacity for recognition. It applied the rule; the rule produced an injustice; no correction followed.

Max Weber, whose theory of rational-legal bureaucracy in Economy and Society (1978) built on this tradition, identified the institutional mechanism through which modern states had tried to make administrative authority both efficient and accountable: the human official, acting within a defined sphere of competence, bearing personal responsibility for decisions made in that sphere. This personal responsibility - the fact that a named person can be questioned, overruled, disciplined, and held answerable - is not a secondary feature of Weber's bureaucratic model. It is what makes the exercise of delegated state power legitimate. When an algorithm replaces the official at the moment of individual decision, this chain of personal responsibility is cut. Nobody decided that Rangamma was ineligible. A system did. And a system cannot be questioned, disciplined, or held answerable in the way a person can.

Frank Pasquale, writing nearly a century after Weber in The Black Box Society (2015), identified the contemporary form of this problem. Algorithmic systems used by powerful institutions - and welfare delivery is among the most powerful of state functions - produce decisions through processes that are deliberately or structurally opaque to those affected. The reason given for Rangamma's exclusion - 'old district to new district transfer' - cannot be verified against any published criterion, appealed to any identifiable authority, or corrected through any documented pathway. It gives the appearance of a reason while functioning as a barrier to any meaningful challenge. This is Pasquale's insight applied to a welfare database: opacity does not mean silence. It means the production of outputs that look like explanations but cannot be engaged with as explanations by any actor - citizen, auditor, or court - with the power to act on them.

C. Accountability Theory: Bovens and Koppell

Bovens (2007) defines accountability as a relationship in which an actor bears an obligation to explain and justify conduct to a forum capable of posing questions, rendering judgment, and imposing consequences. Applied to PM-KISAN: the forum that could demand an explanation for why Rangamma was excluded does not currently exist. The Comptroller and Auditor General audits financial flows, not individual algorithmic decisions. Parliament receives aggregate exclusion statistics, not individual case reasoning. The Right to Information Act produces data, not decision logic. The PM-KISAN grievance portal receives and counts complaints but cannot access or override the algorithmic determination that produced the complaint. Bovens' forum - the one that can pose the right question, receive a meaningful

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 07 , July - 2026

answer, and impose a consequence - is missing from the architecture entirely.

Koppell (2005) adds a further dimension. He argues that organisations subject to accountability demands from multiple, competing forums can develop what he calls multiple accountabilities disorder - a condition in which the existence of many oversight mechanisms paradoxically produces no effective oversight, since each actor in the system can point to another as primarily responsible. This describes PM-KISAN's accountability landscape precisely. UIDAI is responsible for Aadhaar authentication. The Ministry of Agriculture is responsible for scheme administration. State nodal officers are responsible for beneficiary registration. Common Service Centres are responsible for e-KYC processing. Bank correspondents are responsible for payment delivery. When Nageswarao's e-KYC completion failed to register, every one of these actors had grounds to point elsewhere. None bore clear, primary accountability for his exclusion. The farmer's wrong was absorbed by the system rather than attributed to any part of it.

III. EVIDENCE OF ALGORITHMIC EXCLUSION

A. Field Research: LibTech India 2023

The most detailed ground-level account of PM-KISAN's exclusion failures comes from LibTech India's October 2023 field study across six Integrated Tribal Development Agency regions of Andhra Pradesh. The study documented 53,068 eligible farmers whose PM-KISAN payments had been stopped, with over 80,000 distinct issues requiring resolution and no clear grievance pathway accessible to affected farmers (LibTech India, 2023). The cases of Rangamma and G.S. Rao were among those documented directly. A targeted investigation of 300 Adivasi farmers marked ineligible found that approximately 40 per cent were in fact eligible under the scheme's own norms. The study also confirmed that ground-level officials, facing pressure to meet data processing targets, had in a number of instances marked unresolved cases as ineligible rather than pursuing the underlying verification failures with the agencies responsible for them (Kishore and Buddha, 2026). This last finding is significant: it shows that the substitution problem does not eliminate human discretion entirely. It displaces it - from the point of individual decision, where it could be exercised in the citizen's interest, to the point of data entry, where it is exercised under institutional pressure and in the system's interest.

B. RTI-Sourced Administrative Data

The scale of exclusion that LibTech India documented in six districts is confirmed nationally by the government's own administrative records. According to data obtained through the Right to Information Act and reported by Kishore and Buddha (2026), more than 48 lakh of the 10.64 crore registered PM-KISAN beneficiaries had not completed e-KYC as of 11 July 2025 and were having their annual payments of ₹6,000 withheld as a result. Among the 1.12 crore farmers currently marked ineligible in the national database, a significant proportion appear to be genuine entitlement holders wrongly categorised through administrative error or system failure rather than actual ineligibility. The RTI data is important not just for its scale but for its source: it is the state's own administrative record confirming that what field researchers documented in Andhra Pradesh is a national pattern, not a regional anomaly.

C. CAG Audit Findings Across Three States

Three separate Comptroller and Auditor General audits confirm that PM-KISAN's exclusion failures are systemic and that correction mechanisms are not functioning. In Assam, the CAG found that 35 per cent of surveyed applicants were ineligible, while only 0.24 per cent of erroneously disbursed funds had been recovered - a recovery rate that suggests the state had neither the capacity nor the institutional will to correct its own errors (CAG, 2024). Critically, the Assam audit noted that the State Nodal Officer had not analysed the reasons for the reduction in beneficiary numbers, meaning no one in the administrative chain had been tasked with establishing why people were falling off the rolls. In Haryana, the CAG found that 66 deceased beneficiaries were still marked active in the system and continuing to receive payments, while living and eligible farmers were simultaneously excluded by the same database (CAG, 2023) - a finding that illustrates the bidirectional failure of algorithmic administration: the system protects nobody's interests consistently, not even the government's fiscal interest. In Bihar, the CAG found that Grievance Redressal Officers - the human officials who are supposed to provide a point of accountability for affected farmers - had not been notified in the state, meaning the formal redressal structure existed on paper but had never been operationalised (CAG, 2022).

D. The Government's Response: More Automation

The government's response to these documented failures has been to add further layers of automated process rather than to restore the human accountability that the existing layers have removed. During 2024–25, 24,605 grievances were recorded on the PM-KISAN portal (Ministry of Agriculture and Farmers Welfare, 2026). The government's answer was to launch Kisan-eMitra, an AI-enabled chatbot designed to handle farmer queries in real time (Ministry of Agriculture and Farmers Welfare, 2025). A chatbot can tell a farmer that their payment is pending. It cannot tell them why the algorithm marked them ineligible, cannot accept their representation, and cannot reverse the determination. It provides the surface of redressal without its substance. In 2026, the government has added Farmer ID registration under the AgriStack initiative as an additional mandatory requirement for receiving instalments. This means that a farmer who has already failed the e-KYC requirement must now also complete a new identification process before they can receive a payment they are entitled to. The response to verification failure has been more verification, not accountability for the failure itself.

IV. ANALYSIS: WHERE ACCOUNTABILITY BREAKS DOWN

A. The Missing Actor

Weber's framework asks a simple question: who bears personal responsibility for this decision? In PM-KISAN's exclusion architecture, there is no answer. The algorithm

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 07 , July - 2026

matched Rangamma's record against a criterion that did not exist in its own published categories and produced an ineligibility finding. No human being reviewed that finding before it took effect. No human being was tasked with explaining it to Rangamma, or with verifying whether the criterion had been correctly applied. The State Nodal Officer did not, per the CAG audit, analyse why beneficiary numbers were falling. The Grievance Redressal Officer, per the Bihar audit, had not been appointed. The Ministry, per the RTI data, received aggregate statistics, not individual case files. Weber's chain of personal responsibility, in which a named official within a defined sphere of competence can be held answerable for an individual decision, is absent from the architecture at every level.

The Maneka Gandhi standard requires that before this kind of deprivation takes effect, the affected person must receive notice, must have an opportunity to be heard, and must have their representation considered by someone with authority to act on it. None of these three requirements is met by the PM-KISAN exclusion process as it currently operates. Notice is not given in intelligible terms. The Kisan-eMitra chatbot, which is the government's current answer to farmer queries, cannot receive a representation. And there is no institutional mechanism through which a farmer's challenge to an algorithmic determination can be considered by a human being with the access to the relevant records and the authority to reverse the finding.

B. The Forum That Does Not Exist

Bovens' accountability framework requires an identifiable forum capable of posing questions about specific decisions and imposing consequences for wrong ones. The oversight mechanisms that exist in relation to PM-KISAN - the CAG, Parliament, the grievance portal, the RTI Act - are all capable of producing aggregate accountability. They can establish, at the level of audit findings and parliamentary debate, that tens of thousands of farmers are wrongly excluded and that the grievance system is not functioning. What they cannot do is access the decision logic applied to Rangamma's individual case, demand an explanation from the official responsible for that specific determination, or impose a consequence on that official proportionate to the harm Rangamma suffered. The opacity that Pasquale identifies as the defining feature of black box governance is what immunises the individual exclusion decision from every available forum simultaneously.

Koppell's disorder completes the picture. The diffusion of responsibility across UIDAI, the Ministry, state nodal officers, Common Service Centres, and bank correspondents means that every actor in the PM-KISAN delivery chain has institutional grounds to point elsewhere when an individual farmer's entitlement is wrongly withheld. The result is not that nobody is accountable in a formal sense - there are accountability relationships on paper at every level - but that the accountability for any specific wrong, affecting any specific farmer, falls into the gaps between those relationships and disappears.

C. A Rights Failure, Not an Administrative Error

The Olga Tellis standard requires that this analysis be understood not merely as a governance design problem but as a constitutional one. For the 48 lakh farmers whose payments are currently withheld, and for the 53,068 documented by LibTech India in six districts alone, the ₹6,000 annual payment is livelihood in the sense the Supreme Court intended: income that sustains agricultural households at the margins of subsistence. The Court in Olga Tellis did not hold that the right to livelihood is absolute, but it held that its deprivation requires fair and reasonable procedure. The PM-KISAN exclusion mechanism does not provide fair and reasonable procedure. It provides an automated determination, an opaque reason, and a chatbot. On the standard the Constitution requires, this is not an administrative inconvenience awaiting correction. It is a rights failure.

V. RECOMMENDATIONS

A. Mandatory Reasoned Orders for Every Exclusion

Every decision to exclude a farmer from PM-KISAN, or to withhold a payment pending verification, should be accompanied by a reasoned order in plain language. The order should state the specific ground for exclusion, the specific data point that triggered the determination, and the specific database or verification step at which the disqualifying finding was made. It should be delivered to the farmer by SMS in their registered language, communicated through the village secretariat or gram panchayat, and made available for inspection at the Common Service Centre. This is what the Maneka Gandhi natural justice standard requires: notice that is intelligible enough to respond to. An exclusion reason that does not appear in the scheme's own published categories - as in Rangamma's case - does not meet this standard and should be treated, for administrative purposes, as a nullity pending correction.

B. Notified District-Level Human Redressal Officers

Every district in which PM-KISAN is implemented should have a notified Grievance Redressal Officer with genuine institutional authority: access to individual exclusion records in the PM-KISAN MIS, the power to override algorithmic ineligibility determinations on the basis of documentary evidence, and a statutory obligation to process re-enrolment within thirty days of a complaint being received. The CAG audit of Bihar confirmed that this requirement exists on paper and has not been operationalised. It should be made a condition of state-level fund release under the scheme, creating a direct institutional incentive for compliance. This is not a new mechanism - it is the activation of one that already exists but has been allowed to remain dormant.

C. Proactive Correction as a Legal Obligation

The most fundamental reform is also the simplest to state: the state should be legally obliged to correct its own errors in welfare delivery without requiring the wrongly excluded farmer to first discover the exclusion, understand its cause, and successfully navigate a grievance process that, as the evidence reviewed in this paper demonstrates, does not

International Journal of Engineering Research & Technology (IJERT)
ISSN: 2278-0181
Vol. 15 Issue 07 , July - 2026

reliably function. The IndiaAI Governance Guidelines (MeitY, 2025) already commit the government to 'clear allocation of responsibility' and to AI systems that are 'understandable by design.' These commitments should be given legal force through amendment to the PM-KISAN operational guidelines, which currently place the burden of error correction on the excluded beneficiary rather than on the system that produced the error. A proactive correction obligation, audited annually by the CAG against the gap between registered beneficiaries and actual payment recipients, would make the accountability that the IndiaAI Guidelines articulate as a principle into an enforceable administrative standard.

VI. CONCLUSION

India's PM-KISAN scheme offers a particularly clear view of a problem that will only become more consequential as algorithmic governance deepens across welfare, taxation, law enforcement, and other domains of state power. The problem is not that automation fails - though it does fail, in the ways this paper has documented. The problem is that the state has not designed its accountability architecture to match its administrative architecture. When welfare was delivered by human officials, those officials could be questioned, overruled, disciplined, and held responsible for individual decisions. When welfare is delivered by an algorithm, no equivalent mechanism currently exists.

The three reforms this paper proposes - reasoned orders, district redressal officers, and proactive correction obligations - are not radical departures from the state's existing obligations. They are applications of constitutional standards that the Supreme Court established in 1978 and 1985 to an administrative context that did not exist then but exists now. Maneka Gandhi requires fair procedure. Olga Tellis requires that livelihood not be taken without it. Weber tells us why a named, responsible human being is indispensable to any system that claims to exercise legitimate state authority over individual citizens. Rangamma asked a simple question: why was she excluded, and who could help her? The current PM-KISAN architecture has no answer to either part of it. These reforms are the beginning of one.

VII. ACKNOWLEDGMENTS

The author acknowledges the use of Claude (Anthropic) as an AI writing assistance tool in the preparation of this manuscript, specifically for structural organisation, language refinement, and citation formatting. The intellectual content, arguments, analytical framework, empirical focus, and conclusions of this paper are the author's own. All citations have been independently verified against primary sources by the author.

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