The heart rending news of death of three young children of a migrant family in Delhi has shaken the whole country. The reports suggest that Mangal’s family fell on hard times after he was evicted from his tea shop. Yet, somehow the family managed to enrol their eldest daughter in school. Mangal had turned alcoholic after losing his tea shop, and had an untreated chronic injury in his leg. Three innocent lives - Sukho, Paro and Manasi – were extinguished even before they could get a fair chance in the world.

It is grim reminder of the hardships migrant families face. Driven by poverty and dim prospects of earning in their native place, millions migrate to cities each year in search of employment. For some this is their only chance to bring their over-stressed lives back from the brink. A terminally sick family member back home or a mounting debt burden from a loan taken earlier for daughter or sister's marriage, make the migrants suffer the sub-human conditions of the slums in cities. While some migrate alone, some bring the whole family. Bihar, Uttar Pradesh, West Bengal, Chhattisgarh, Odisha and Rajasthan are the states sending the most blue collar migrants. The destination states are Gujrat, Maharashtra, Karnataka, Kerala and Tamil Nadu.

The estimates on number of migrants vary. While Census 2001 estimates some 40 Million people as inter-state migrants (Census, 2001), the 2017 World Economic Forum report “Migration and its impact on cities” estimates the number close to 9 million. The report identifies access to government run health, education and housing programs as key challenges for the migrants and suggests DBT (direct benefit transfer) as a way out. The report surprisingly, doesn’t mention food security as a challenge, whereas this should have been listed as the topmost challenge.

It appears that the untimely deaths of three children in Delhi could have been avoided had the family had access to Public Distribution System and Public Health Services. This was a family of migrants from West Bengal - father unemployed, alcoholic and with an untreated injury in leg, mother – illiterate, mentally disturbed, the eldest daughter - 8 year old Manasi studying in third standard in a government school and used to be absent for long periods at a stretch, two other daughters- aged 2 and 4. The post-mortem report, according to newspapers, confirms death due to starvation.

Why migrants are Invisible:

Migrants are the reason for much of the glitter around us. The new shiny malls, stores, apartment complexes, factories, IT parks, offices are the result of back breaking hard work of migrants. Many industries which require hard labour or long hours of work such as mining, metal industry, textile, hotel and food industry, and many medium and small enterprises depend upon migrant labour. In many states farming, food processing and horticulture activities would come to a standstill sans the migrant labour. By one estimate migrants contribute to about 10% GDP nationally. Then why are they invisible?

They are invisible and inaudible because in a democracy the citizen’s vote is his/her voice. Most migrants are not registered as voters in their destination state. The reasons could be many – circular migration, language barrier, illiteracy, lack of identity proof, high transaction cost (not having the time, energy or money to pursue registration in the voter list). Migrants as a result, are largely invisible to the people living around them. Challenges of daily survival and uncertainty stares them in the face every morning. Registration as a voter would never ever occur in their daily priority list.

PDS and Food Security of Migrants:

After National Food Security Act 2013, GoI (Government of India) has introduced TPDS (targeted Public Distribution System) which limits the subsidy support from center only to the BPL (Below Poverty Line) families. Moreover there is a prescribed ceiling for every state’s BPL population. States, unable to suddenly terminate subsidised ration eligibility for its excess BPL card holders beyond the prescribed ceiling, have taken on the extra subsidy burden onto their books. In some states this extra burden is as large as few thousand crore rupees. This is the key to understanding the issue of Food Security for migrants. Migrants having moved from another state, do not get access to the PDS system of their new state even if they hold BPL ration card of their home state. There are three reasons for this-

First, the destination State finds it difficult to include the migrants into their system because it would need to spend its own, already stretched, resources in supporting such population. Since each state’s BPL foodgrain quota is capped at a certain level (in all cases below 50% of urban population) and almost all states have claimants already over this level, any additional BPL numbers would directly impact the State’s subsidy burden. The GoI subsidy is capped at the foodgrain
quota fixed for the state and for any extra allotment from the center, state has to pay the economic price (typically a much higher price).

Second, the BPL list is prepared by each state independently and there is no centralized list of BPL families. Moreover, the socio economic variations across the states are just too many to even attempt formulating a central list. A particular group or community could be in the lowest socio economic strata in one state whereas they may not even find a mention in the disadvantaged list of another state.

Third, even if the destination state wanted to support BPL migrants from other states, it doesn’t have a reliable way of verifying their BPL status. Allowing other state’s BPL families to draw subsidised food could lead to misuse and leakages in the PDS system of the destination state. The records from home state would, in all probability, be in a different language and a different format. Even in today’s on-line world it would be highly unreasonable to expect that every tiny PDS outlet in a city would be technically equipped to reliably verify other State’s BPL ration card, issued in a different language and different format. This function could possibly be done at some central office in a State but then it serves no purpose as it just puts the whole design out of the reach from those for whom it is designed.

Blockchain to help:

If every migrant labourer’s data such as his/her ‘aadhar number’, BPL status, existing ration card (PDS card), along with his/her monthly PDS transaction data is built onto a blockchain, it could potentially open all the closed doors for the hapless migrant in the destination state. This would need be backed by a multiparty agreement between GoI and all state governments, allowing PDS access to each other’s BPL migrants.

This would work beautifully because it would be a trusted undisputed PDS transaction record for all the parties. The Govt of India can aggregate the migrant’s foodgrain allocation by the destination state and they can debit the respective home state’s allocation to that extent resulting in no extra financial burden on the destination state. The home state can pause the foodgrain allocation on the migrant’s ration card till the migrant is back; the destination state can allocate foodgrains without having to worry about eligibility, misuse and extra financial burden; and the migrant gets his/her much needed subsidised foodgrain from the nearest ration-shop wherever he goes without having to fill any forms or visiting any government offices. A blockchain supported smart card in the hands of a migrant family would be their insurance against all adversities. Come what may they would certainly not starve!

This kind of a blockchain based system would be completely transparent and fool proof. No state would have to use any extra resources, neither would there be any extra subsidy burden on the GoI. Migrant would just need to show up to the nearest PDS outlet, wherever he/she is, and present his/her smartcard. Today most states have connected their PDS shops to a centralised state server and all transactions get captured there. This migrant’s smart card data would go to the destination state’s central server, which would verify the details using blockchain technology, and would authorize the transaction for the PDS shop.

Blockchain for Education & Health of Migrants:

The blockchain can incoporate the migrant children’s school record allowing them to seamlessly transfer and get admission in Govt run schools wherever their parents’ job takes them, even mid-session. Instruction language could still be an issue but children pick up the language like a sponge soaks up the water, and in any case it would always be a superior solution than having them out of school. This system would create other safety nets for the family as well. The school going children would automatically enrol in the Mid-day-Meal program of the new school. Their scholarships can continue without break. A pregnant mother could access the Janani Suraksha Yojana’s monetary and health incentives across the country. The family’s medical history can also be stored onto it. All social welfare schemes such as old age pension, or infirmity pension etc can also be brought onto this platform.

Why Blockchain:

**First, Data Protection and Privacy:** Most blue collar migrants are semi-literate at best, and possibly unaware of data theft. Their data protection and privacy can only be ensured if it is encrypted on blockchain. They could easily give out all their details to an unscrupulous agent who could misuse this information.

**Second,** migrants and gypsies wouldn’t be capable of carrying multiple documents like their children’s birth certificates, school enrolment details, aadhar cards, ration cards, driver’s license, medical records. Let alone carrying these records they would have lost many of these due to frequent shifting across cities and states. This solution safely keeps it all together for them.

**Third,** transparency, reliability and verifiability of transactions which all governments can trust and accept. This system would protect against any misuse or leakages in the PDS system.