Insights on Demonetisation from Rural Tamil Nadu

Understanding Social Networks and Social Protection

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Drawing on survey data from rural Tamil Nadu, the effects of demonetisation are documented. Serious concerns arise with regard to the achievement of its stated goals. The rural economy was adversely affected in terms of employment, daily financial practices, and social network use for over three months. People came to rely more strongly on their networks to sustain their economic and social activities. Demonetisation has probably further marginalised those without support networks. In a context such as India, where state social protection is weak and governmental schemes are notoriously subject to patronage and clientelistic networks, dense networks of supportive relatives, friends and patrons remain key for safeguarding daily life. With cashless policies gaining currency in various parts of the world, we believe our findings have major implications, seriously questioning their merit, especially among the most marginalised segments of the population.

We thank Barbara Harriss–White, Xavier Oudin, Véronique Gille and Anne Hilger for their constructive comments and gratefully acknowledge the financial support for the Networks, Employment, dEbt, Mobilities and Skills in India Survey data collection from "Nopoor" project, IMTFI and Développement, Institutions et Mondialisation (French National Research Institute for Sustainable Development).

All errors and omissions are our own.

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The demonetisation process of November 2016 was presented by the Narendra Modi government as a pro-poor measure. The policy of curtailing black money, broadening the fiscal base, and promoting a cashless economy was supposed to encourage the formalisation of the economy, which in turn was expected to benefit the poor. Modi's initiative is not unprecedented. There were two previous instances of demonetisation in 1946 and 1978 in India, and there are many other examples, past and present, in various parts of the world. But the 2016 Indian experience was unparalleled in its size, scope and suddenness (Rajakumar and Shetty 2016).

This policy has already drawn much criticism.[1] The poor preparation and multiple technical disruptions, which led the country into chaos for over three months, have been severely criticised. Many doubts were voiced over the fight against fake banknotes. These only amount to a very small proportion of the cash in circulation. Strong doubts were also raised over the fight against corruption, in which cash is only a meagre factor, as published data from the Reserve Bank of India (RBI) has widely confirmed. Almost 99% of the currency notes demonetised in November 2016 indeed were returned into the banking system (Patnaik 2017). Strong concerns were also raised over the expansion of the fiscal base: a large proportion of lost state revenue stems from the tax evasion of multinationals and the super-rich. Last but not least, the digitalisation of payments was sharply criticised. This was presented as a collateral impact of demonetisation, but turned out to be one of its major objectives, as Modi himself stated in an official speech on 25 December 2016. The digitalisation of payment is in theory supposed to help the poor manage their irregular incomes. Not only is there still very little evidence for this, but unlike cash, users must bear the costs of digital payments as well (Mader 2016). Moreover, the immense pool of data that digital payments generate opens the door to new and problematic forms of control (Gabor and Brook 2016).

Most of these arguments, as relevant and stimulating as they may be, largely remain academic. This paper will contribute to the debate with innovative and quantitative and qualitative survey data. Data was gathered before, during and after demonetisation from 1,200 individuals in rural Tamil Nadu. This analysis of demonetisation, how it has been experienced, appropriated, translated, manipulated and at times circumvented, qualifies some of the criticism, while widely confirming the doubt as to its credentials as a "pro-poor measure." This empirical evidence confirms that demonetisation led the country into severe chaos, at least in the region under study. People have shown fascinating resilience, thanks to the very informal economic practices that allow for considerable adaptation. History has already shown that in times of cash scarcity, people manage to coordinate amongst themselves, but informal debt explodes (Muldrew 1998). This is precisely what happened here. But while informal networks can protect from shocks, they are based in social and hierarchical institutions. These are what have regulated the implementation of demonetisation. Those who were excluded, socially and economically, from these networks suffered the most.

Both the strength and plasticity of informal networks have allowed cash holders to get rid of their old notes quite easily, using a range of tactics and social relations. In the region under study, the fight against black money has been a failure, the price of which has partly been paid by the poor, although some of them have been able to take advantage of it.

Banking and digitalisation are still at an embryonic stage in terms of use. For various reasons, informal networks, as erratic as they may be are more attractive in terms of saving, borrowing or making payments.

It would be illusory to claim that demonetisation can solve the problems of illegality and informality. Technology, like the economy, consists of social, political and cultural fabric. In India in particular, the economy remains socially regulated (Harriss–White 2003). If the rule of law is weak or non-existent and cannot guarantee the enforcement of contracts, if social protection is weak or non-existent and cannot guarantee the protection of workers and their families, social networks, organised along the lines of social institutions such as caste, class, religion, kinship, gender and locality, are the sole mechanisms for filling the gap and providing a secure environment. But they often do so in partial, arbitrary ways that primarily serve their own interests. Demonetisation provoked an unprecedented shock and unparalleled uncertainty, thus further strengthening the informal ties it was supposed to counter.

Methodology and Context

Our findings rely on a socio-economic survey carried out in rural Tamil Nadu. It combines quantitative and qualitative data. The data collection was part of a broader, still ongoing research programme launched in 2003, based on questions on labour and finance behaviour in coastal/central Tamil Nadu. Quantitative data include the Networks, Employment, dEbt, Mobilities and Skills in India Survey (NEEMSIS) household survey,[2] which focused on all aspects of rural life, including in-depth modules on labour arrangements (including migration), financial practices (debt and saving), consumption, remittances, access to governmental schemes, etc. In total 2,692 individuals from 492 households were surveyed, spread across 10 villages in rural Tamil Nadu on the border of the two districts Vilupuram and Cuddalore.

Households and villages were randomly selected, using a stratified sample based on caste and location in terms of agricultural intensity and distance to towns. The survey began in August 2016, and was then stopped at the time of demonetisation. This interruption was not related to the demonetisation shock, but to logistical survey constraints (enumerator payment and technical issues with the digital tablets we were using to collect the data). Hence, the constitution of pre- and post-demonetisation samples of households can be considered as rather exogenous to the shock. At the same time, it would have been inappropriate to hassle people with questions on labour and money while most were desperately struggling to access cash.

The survey started again in mid-January 2017, more than two months after the "note ban" policy. We used this as an opportunity to include an extensive module on demonetisation, in order to tackle how it had affected employment and labour organisation, financial practices, and social networks. Almost 30% of the households were interviewed post demonetisation. We also used this unexpected break as an opportunity to conduct qualitative field work: in-depth interviews were carried out with individuals and households. These sought to understand how the interviewees were dealing with their daily expenses and employment. We also carried out interviews with labour recruiters, employers, shopkeepers, moneylenders, politicians and managers of large corporates to understand the strategies and tactics they were choosing to get rid of old cash. We used semi-structured interviews, with a list of questions on the strategies they were using to cope with both a surplus of old notes and lack of fresh cash, to purchase raw material and commodities, pay salaries, etc. We also conducted open-ended interviews, simply by asking the respondents to describe how they had been affected by the demonetisation or, conversely, how they had benefited from it. We also spent time in villages, farming fields, markets and shops to observe the day-to-day implementation of demonetisation. This observation of financial transactions and negotiations between employers and labourers, moneylenders and borrowers, traders and clients, helped us understand the fascinating resilience of people, but also the range of cases and the highly uneven capacity of individuals and households to deal with the crisis.

The zone we studied is economically dynamic, featuring a high amount of irrigated agriculture, two industrial towns (Neyveli and Cuddalore) and a regional business centre (Panruti). Vanniyars and Paraiyars are the two major local groups across the region. Vanniyars can be qualified as "middle castes." They are a farming caste with a low ritual rank, but in the villages we studied, as in many places in north-east Tamil Nadu, they control much of the land and are politically dominant.[3] Paraiyars are one of the major Dalit communities in Tamil Nadu. There are also few Arunthathiyars among the Dalits in the studied zone. The upper castes of the local hierarchy are the Mudaliyars, Chettiyars, Naidus, Reddiyars, Settus and Yathavars, who account for only a small proportion of

EPW is grateful to Surinder S Jodhka and P S Vijayshankar who have been Guest Editors of this issue of the Review of Rural Affairs. The members of the advisory group of editors for the biannual Review of Rural Affairs are Ramesh Chand, Surinder S Jodhka, Duvurry Narasimha Reddy and P S Vijayshankar.

the village population. Christians and Muslims are in the minority in the area. Lower castes or Dalits make up 46.5% of the population, middle castes are 44%, and 9.5% of the post-demonetisation sample are upper caste. The region has seen many changes over the last three decades. The upper castes have mostly moved away from the villages to nearby towns, adopting urban jobs and lifestyles, and selling much of their land to Vanniyars. Overall, upper castes still have a hold over village life, but they are not as powerful as they used to be. The transfer of land to Vanniyars largely explains how they are now dominant. This dominance is constantly under challenge, however, including by Dalits (Pandian 2000). As for Dalits, although their situation has been improving thanks to the combination of short-term migration to nearby towns and industrial centres, and governmental schemes (reflected by subsidised housing, food, education, etc, Guérin et al 2015), inequalities persist. For instance, in our survey sample, while around half of the households are Dalits, a strong majority of employers (around 80%) are middle or upper caste. Some Dalit settlements have moreover benefited less than others, especially those specialised in seasonal migration (mostly for brick moulding and sugar cane harvesting).

No Change in Black Money

Demonetisation was supposed to drive out "black money," either by encouraging black-money holders to give up their holdings, or through detection by the tax authorities once the cash was deposited in the banking system. Data from the RBI has now shown that this failed (Patnaik 2017), which our observations clearly back up. None of the black-money holders we met really felt troubled by the measure. Of course, this has obliged them to use various strategies and tactics to get rid of their old cash.

We shall start here with qualitative data gathered from interviews we held with around 30 cash holders. Given the sensitivity of the subject, it was hopeless to try quantifying. Our discussions revealed that none of them had given up any holdings. Very few had deposited more than ₹2.5 lakh, the maximum amount before a tax receipt was requested. We shall discuss the case of Perumal (name changed), the manager of a brick kiln business in the Palar river basin, which recruits labour from the zone under study. Like many entrepreneurs in the region, his boss—the brick kiln owner—is also a big farmer and the secretary of the local brick kiln association. Like many other brick kiln owners—and big entrepreneurs—he is strongly involved in politics. Perumal only knows about a small part of his boss's revenues, but most are informal (unreported income from brick selling; commissions from coal importers, since he facilitates negotiations with the brick kiln association) and illegal sources (bribes from brick kiln owners in exchange for various sorts of protection; bribes for sand auctions, etc). After demonetisation, Perumal's boss handed over ₹12 crore to him and told him to make good use of it. At first, he was a bit confused, all the more so since the brick kiln workers had already received their seasonal advances, just a few weeks earlier. He then found out about various techniques and was able to get rid of the ₹12 crore quite easily. He gave us a few examples. About ₹70 to ₹80 lakh were given to two maistries to pay additional advances to the brick moulders for recruitment in the coming year. Rupees two crore were deposited in a finance company, but under strict conditions: the money was to be lent to Dalits to purchase a small transport vehicle on credit, and on the condition that Dalit drivers carry the bricks from the construction site to Chennai consumer market and carry sand (extracted illegally) from Palar Valley to the brick kiln construction site. Rupees one crore was given to three women self-help groups (SHGs),[4] here too under a strict condition: that they participate in the local sand extraction auction, given that Perumal's boss manages the entire process. The women did not get any commission, but were promised a new marriage hall. Not only did the brick kiln owner get rid of his old cash rather easily, but he actually used this as an opportunity to tighten his control over various illegal (and not only informal) economic networks.

We also met up with small entrepreneurs. Roughly, 20 interviews with financiers, traders and entrepreneurs with cash surpluses (from ₹5 to ₹85 lakh), mostly from middle and upper castes, led us to understand that lending was one of the most common strategies. This was sometimes, but not always, being done at lower than usual interest rate costs. Finance companies and well-established private lenders were extending their business to new clients, sometimes discovering new market niches. Others were opting to loan out increased amounts to their usual clientele. Traders and sellers were offering cash loans to their buyers. Some had already been doing so, and were now offering larger amounts, while others had taken up the practice for the first time. Rather than lending out money themselves, some entrepreneurs had invested in financial companies (like the aforementioned manager), sometimes with a reduced share as it was old cash (10% in the cases we encountered). When it came to smaller amounts, women's SHGs were approached to recycle old cash, which they were free to use as they wished (in contrast to the case discussed earlier) and at a low rate of commission (3% to 4%). Wage advances were also a common option for employers, as we shall see later. Some entrepreneurs meanwhile chose to invest. For instance, a restaurant owner decided to renovate his building (while paying a 10% commission to the building supplies company). Others invested in land (usually at a high rate, since the demand for land had risen sharply, up by 40% in the cases we encountered), or invested in other businesses. For instance, an entrepreneur specialising in recycling gunny bags invested in a construction company. Settling old loans was also commonplace.

Of the actors we met, very few in fact complained about demonetisation. Although recycling old cash had a cost, many had been able to use demonetisation as an opportunity to broaden their clientele, discover new market niches, strengthen pre-existing business relations or build new ones, or set up new projects. Some trader networks even used the demonetisation to boost their sales by accepting old cash, while using their network to recycle it. This was not only to increase sales, but to strengthen their clientele's loyalty. We even encountered a merchant who was offering discounts for payments in old cash. As a house building supplies retailer, his wholesaler had offered him a 50% discount, and he in turn was offering a 30% discount to his customers for cash payments (whereas the products were usually sold on credit). Apparently, the wholesaler, who is part of a nationwide network, had absolutely no problem recycling the old cash. In two months, the retailer made a ₹50 crore turnover, which is usually his annual turnover.

The only individuals we met who had been obliged to pay tax on deposits were financial companies of a certain size (with a capital higher than ₹5 crore) offering large amounts. We came across two instances of failure. A Muslim wood contractor had handed out large advances to farmers but was struggling to get the wood in return. An upper-caste vegetable shop manager had been requested by its owner to recycle ₹8 lakh of old cash. He had lent money to several individuals who were then supposed to sell vegetables, but who had never done so or had failed. He lost half the capital.

We shall now turn to our quantitative data. The old cash recycling process involved individuals in many ways. In the zone under study, 25% of the households we interviewed after the demonetisation had been asked to exchange old notes or deposit old notes into their own accounts for a commission. The percentage was higher among upper castes, which certainly shows how upper castes had more surpluses to exchange, and had found mutual assistance among their caste fellows. As a matter of fact, 11% of the households we interviewed stated that at least one person in their household had acquired additional income as a result of the demonetisation. This included commission for exchanging, depositing old notes and queuing at ATMs for other people. Such income totalled ₹30,000 among middle-caste households, who benefited the most from these arrangements, while for Dalits the maximum income capped at ₹2,500. The amount of income/commission earned seemed to vary a lot depending on caste. Some SHG women, as discussed above, were approached to recycle old cash, but at a substantially lower price than for other intermediaries (3% to 4%, in contrast to 10% to 40% elsewhere).

Table 1: Preliminary Descriptive Statistics of Households Surveyed

	Pre-demonetisation Sample	Post-demonetisation Sample
Caste		
Middle caste (%)	37.5	44
Scheduled Caste (Dalits) (%)	51	46.5
Upper castes (%)	11.5	9.5
Total	100	100
Sex		
Male (%)	50.9	50.7
Female (%)	49.1	49.3
Total	100	100
Mean age (years)	31.7	32
Demonetisation and main financial variables		
Savings amount in bank account (median) (₹)	500	800
Number of loans contracted	1,303	391
Loans contracted since demonetisation (%)		9.1
Nature of loans since demonetisation (%)		
Informal loans[a]		72.7
Semi-formal loans (moneylenders)		27.3
Total		100
Number of individuals[b]	1,963	729
Share of households lending money (%)	5.2	11
Number of households	346	142

a: Relatives, colleagues, employers, "maistries," private moneylenders;
b: all household members.
Source: NEEMSIS (2016–17); authors' computations.

While the qualitative evidence suggests that many people with cash surpluses managed to get rid of them by lending, the quantitative data does not support this finding. As borrowing in old notes had become a taboo—by and large, the demonetisation had wide public opinion support—the disparity here certainly suggests that our interviewees underreported any borrowing of old cash.

It is also worth noting that aside from a few service providers such as hospitals,[5] which were authorised to accept old denominations until mid-December, many other traders continued to accept them illegally, including for durable consumer goods (as discussed earlier), at jewellers, currency exchange offices, alcohol retailers, etc, most often on commission (up to 20% in what we came across). This had the effect of curbing any of the anticipated benefits of demonetisation. As ever, these informal arrangements also had a dark side. Intermediaries sprouted up, offering high-cost services to queue at ATMs, deposit cash at bank branches, exchange the ₹2,000 notes nobody wanted, or simply to advance cash. They were often to be found at pesticide shops, petrol stations, pharmacies, hospitals or taxation departments.

Failed Confidence in Banking and Digitalisation

Demonetisation, by forcing people to deposit their holdings in bank accounts, and in line with a number of measures over the past decade, was also supposed to promote bank savings, especially among the poor. In the wake of various measures and governmental schemes over the past decade, the banking among Indian citizens has made a lot of progress but is still largely incomplete. In our survey field area, almost every household had a bank account (95%), but many mostly used them as a funnel for their welfare benefits (a quarter of the Dalits had an account solely for this purpose). Mass openings of bank accounts were indeed for these purposes (Table 3, p 49). While 41% of bank account holders used it only for saving purposes—24% of women and 57% of men, and 56% of upper castes as opposed to only 36% of Dalits—the median level of bank savings remained negligible (₹500). These medians were slightly higher (₹800) among post-demonetisation interviewees (Table 1) and demonetisation could be the explanatory factor. Households may have been obliged to deposit cash they had previously hoarded, or act as nominees for relatives, friends or patrons.[6] It should be noted that no bank accounts had been opened after demonetisation.

Mutual distrust between bankers and villagers, especially among the most marginalised, was already tangible before the demonetisation (Guérin et al 2013; Kalpana 2017). Over the past decade, both public and private banks have been obliged to open accounts for all, without being equipped to do so. Women, as the recipients of many welfare benefits and as SHG members, have been at the forefront of the banking movement. And yet many women feel denigrated, especially if they are Dalits (Garikipati et al 2017; Kalpana 2017). They feel they are treated like "goats" or "dogs," which we heard many times. The many difficulties rural banks faced in delivering cash during the demonetisation obviously heightened such mistrust. Of the villagers interviewed after demonetisation, almost a quarter (24%) said their trust in banks had gone down (Table 2). This drop was the greatest among women (32% of women as opposed to 21% of men). The men proved to have consistent, or an increased trust in banks than women (71% of men, 58% of women). Perceptions of banking institutions are not only gendered but also based in caste. For Dalits, trust in banks has fallen twice as much as among middle castes (30% as opposed to 14%). Individuals who "still trust" banks are chiefly to be found among the middle castes (75%), in contrast to Dalits (48%). None of the upper-caste interviewees replied "Still don't trust," that is, not to have trusted banks before or after demonetisation.

Another interesting aspect of trust is how most individuals who "still trust" or "trust more" use their bank accounts for saving purposes (96% and 92% respectively). Of those who "trust less," only 66% use them for saving purposes (34% had accounts exclusively for welfare payments or the receipt of credit). Individuals who had not relied on banks for savings before demonetisation trusted banks even less two months after demonetisation.

Besides the long queues that people were forced to wait in to deposit or withdraw cash, they also reported the exasperation of bankers, who were themselves completely overwhelmed by the events. A group of women explained that when they arrived at 8 am in front of the branch, around 100 people were already waiting. The manager only arrived at 10 am and asked everyone to leave, since the bank was running out of cash. As usual, it seems that well-connected people were able to deposit large amounts of cash, to access cash and easily and were even dispensed from queuing. As a rural resident ironically commented:

Table 2: Demonetisation, Employment and Use of Network[a] Employment

Worked in the past year (15 years and above) (%)	61.1
Share of individuals having one or several occupations	
One occupation	75.6
Two occupations	19.1
Three and more occupations	5.3
Total	100
Demonetisation and employment	
Main occupation (%)	
Work less	37.1
Same	56.8
Stopped occupation	6.1
Total	100
Dalits	50
Middle castes	43
Upper castes	7
Total	100
Male	62
Female	39
Total	100
Male	28
Female	72
Total	100
Secondary occupation (%)	
Work less	49.3
Same	17.3
Stopped occupation	33.4
Total	100
Dalits	42
Middle castes	50
Upper castes	8
Total	100
Share of wage job in total employment (excludes MGNREGA) (%)	49.8
Demonetisation and wage (%)	
Less salary	54
Delay in wage payment	52
Both	9.5
Several impacts (including less salary or delay)	6.4
No impact	26.7
Total wage job	100
Total number of individual respondents[b]	683

Individuals' perception on...	
People in my neighbourhood can be trusted	
Almost always/quite often	78.6
Sometimes/rarely/never	21.4
Total	100
Change in trust in neighbours since demonetisation (%)	
More trust	11.1
Less trust	13.4
No change	75.6
Total	100
Trust in banking institutions since demonetisation (%)	
Still don't trust	8.8
Less trust	23.7
Still trust	60.5
More trust	7
Total	100
Help needed due to demonetisation (%)	
Yes (either received or not received)	31.3
No need	68.7
Total	100
Perception of demonetisation policy (%)	
Bad/Quite bad	30.2
Neutral	15.4
Good/Quite good	27.6
Don't know/No response	26.8
Total	100
Total number of individual respondents[c]	262
Demonetisation and Consumption	
Change in consumption practices (%)[d]	
Buy less often in less/ same quantity	52.6
Buy less often bigger quantity	21.9
Buy more on credit	10.5
Buy less on credit	18.1
More payment by card	6
No significant change	21.8
Total number of households	133

a: Post-demonetisation sample only; b: All household members; c: Household head and another younger household member in each household; d: Total is more than 100 since respondents can pick several answers.
Source: NEEMSIS (2016–17); authors' computations.

"to fight corruption, that sounds like a good start." People complained that the rules changed every day and often differed from official media announcements. Many women explained that they had literally been begging bankers for information on when cash could be delivered, sometimes verging on hysteria. Many SHG leaders who had been granted loans were unable to access cash, and yet were requested to pay interest, thus heightening mistrust of the banking system.

Distrust in a bank is also related to issues of confidentiality and anonymity. Many householders, especially women, juggle various hidden financial circuits that aim to maintain some sort of control over their finances. The following two testimonials are a good example of what we heard from many women of various backgrounds. Bank deposits, and more broadly digital payments, due to their traceability and transparency, give them a feeling of dispossession from control over their wealth:

> If money were at the bank I would have to ask my husband, and would have to explain everything and justify. I cannot afford waiting like that, and I don't want to justify. Everybody can question me. I am not happy with these e-payments. I am happy only with cash and my own saving practices. (S, Dalit, housewife, February 2017)
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> Women were affected a lot because of that [demonetisation]. I will tell you the example of L. Her husband is not a responsible person. He does not even go to work; even if he goes to work he drinks alcohol with that money. He never gives the money to his family and he does not care about his family. So she is taking care of the entire family. She was keeping ₹50,000 on her without the knowledge of her husband to take care of the children's future. Now it's public money. Because of demonetization all the money came out and everybody knows that. There are two issues because of that. One is her husband. Once he knows she has 50,000 rupees he starts making problems and fight with her to get that money. Number two, if she deposits this 50,000 at the bank, in any emergency the bank refuses to give all that amount at the same time ... Even if you go to the bank or ATM you have to wait for long time in a big queue. Sometimes the bank says no cash, so we have to go again and again. I am not exaggerating. This is happening every day. Sometimes we stand in the queue for 2 hours in ATM centre, when we get close to the ATM machine it says no cash. The same happens at the bank. At 12 o'clock they say "no cash." (P, middle-caste, shopkeeper, February 2017)

We came across numerous examples of women complaining about digitalisation, not only to protect themselves against irresponsible, lazy and alcoholic husbands, but more generally to preserve some control over spending-related decisions. In a context where the very idea of women's financial autonomy goes against social norms, transparency—what banking and digitalisation of payments offers—is perceived more as a source of dispossession than empowerment.

Villagers, men and women, have other means of saving. Gold purchases, chit funds, informal loans to others and reciprocal gifts (mostly through ceremonial exchanges) continue to be the most popular ways of saving and guarding against everyday knocks. Gold has the advantage of combining prestige and liquidity (pawnbrokers are available in every nearby small town) and possibly speculation (Goedecke et al 2017; Joseph forthcoming). In our sample, 97% of households owned gold, at an average amount that was more than 100 times greater than their bank savings (₹54,287).

Of individuals owning gold, 9% had bought gold since demonetisation; half had done so to get rid of old notes and 22% for gifting purposes (Table 3). Our data suggest that although buying gold is a common reaction, here again there are caste and gender differences: the amount of gold bought varies by caste (on average, middle castes had almost doubled the amount of gold they owned after demonetisation, while Dalits had increased the amount by 30%, and upper castes by 7% only). Only women had bought gold since demonetisation, confirming the above arguments of a gendered response to demonetisation.

Few villagers could expect bank loans: in our sample, only 7% of the loans came from banks, 16% from "semi-formal" lenders like pawnbrokers, microcredit, SHG and finance companies (that is, who are not necessarily registered and regulated, but operate through an organisational structure), while the remainder (77%) is contracted purely through interpersonal ties (patrons and local elites, employers, moneylenders, neighbours, relatives and friends). Loans taken out after demonetisation are only semi-formal (27%) and informal (73%) (Table 1). Of these loans, 70% were due to a lack of cash following demonetisation (only 11% of these loans are not related to demonetisation). Dalits are over-represented as borrowers, while upper castes are over-represented as lenders which, as mentioned earlier, illustrates how upper castes had surpluses, while Dalits needed loans to offset the reduction in

Table 3: Non-financial Savings and Networks (Informal Channels)[a]

	Household Level	Individual Level Total	Females	Males
Savings in formal banks				
Has a bank account (%) (above 15 years old)	95.4[a]	61.9	59.2	64.5
Purpose of bank account (%)				
Savings only		40.8	23.6	56.7
Welfare schemes only		19.5	28.1	11.5
Savings and welfare schemes		32.3	44	21.4
Many purposes (including savings/schemes)		6.1	3.5	8.5
Many purposes (excluding savings/schemes)		1.4	0.8	1.9
Total		100	100	100
Median amount savings (₹)		500	500	750
Contracted loans over the past year (%) (or contracted before and not settled)				
"Formal" loans (banks, cooperative banks)		6.9	46.1	53.9
"Semi formal" loans (moneylenders, SHG, etc)		16.3	59.9	40.1
"Informal" loans[b]		76.8	22.8	77.2
Total		100		
Possession of gold (%)				
Owning gold	96.9[a]	34.5	93.7	6.3
Value of gold owned (average in ₹)	54,287	57,957	59,062	40,754
Annual spending in ceremonies/festivals outside household				
	₹14,500 (median)			
	₹20,857 (mean)			
	€206.5 (median)			
	€297 (mean)			
Marriage, total cost	₹2,50,000 (median)			
	₹265,202 (mean)			
	€3,561 (median)			
	€3,778 (mean)			
Total (Households/Individuals)	484	2,650	1,305	1,345

a: Total sample (pre- and post-demonetisation); b: Includes loans from private moneylenders, relatives, friends, employers/ "maistries," colleagues, shopkeepers, sugar mill loans.
Source: NEEMSIS (2016–17); authors' computations.

activity, contraction in credits from other sources, etc. Last but not least, while women represented half of our sample, only 20% of post-demonetisation loans were issued to women. Although our sample is quite small if one is looking to draw conclusions, it gives a good sense of the social segmentation of informal lending networks.

Inadequacy of Social Networks as Safety Net

During demonetisation, and for over three months, the scarcity of cash significantly slowed down the economy. According to various estimates, the Indian economy lost 0.5 points of growth[7] as a direct result (Rao and Kotian 2017), but the official statistics cannot capture the negative growth effects on the informal sector (as the official numbers are largely based on formal sector data). It would seem that the official gross domestic product (GDP) statistics are significantly underestimating the impact of demonetisation on growth.

Among the villagers interviewed after demonetisation who had been working over the past year, more than a third declared to have worked less in their primary occupation owing to demonetisation (50% were from lower castes, 43% were from middle castes). About 6% had to stop completely (Table 2). As for their secondary occupation, almost half of the villagers had worked less (42% of lower castes and 50% of middle-caste workers), and one-third had to stop (only lower and middle castes). Agricultural wage workers seemed to have been most affected (70% work less, 22% had to stop their occupation), alongside the self-employed (68% were working less, 11% had to stop). Most non-agricultural wage workers (industry or service sectors) were working as many hours as before demonetisation (68%) and 23% were working less. Middle castes seem to be more affected in their secondary occupation, while Dalits were most vulnerable when it came to their primary occupation. Men, more frequently than women, were forced to work less in their primary occupation (62% as opposed to 38%) but more women had to stop their first means of employment because of demonetisation (72% as opposed to 28%). However, both men and women seem to be affected in their secondary occupation.

We encountered dramatic cases where workers had completely lost their livelihood because of the temporary cessation of their activity. The first was a case of an entire Dalit settlement: most of the men had been used to commuting to Kerala for coconut harvesting over the past few decades. The work was relatively well paid and monthly paid (thus allowing for cash saving). As orders stopped at the time of demonetisation, Tamil workers decided to wait until the end of the demonetisation period before commuting again. But they had in the meantime been replaced by "Hindi workers" (workers from the North East of India). Since then, most struggled to find alternatives. Small transporters are another example, here too, found among Dalits. As they had been unable to carry out orders during the demonetisation, they were replaced by large transporters. Since many of them were heavily in debt for their vehicle purchases, the cessation of their activity has had dramatic consequences. The third case is of a group of upper-caste vegetable vendors who used to source their vegetables in Chennai. Since they stopped their activity for a couple of weeks, they lost the market and now have to restrict their supply to local vegetables, with a much lower margin.

Effect on Wages and Consumption

As for consumption, many of our interviewees stated that they had consumed less during the demonetisation (53%), or in the same quantities, but less frequently (Table 2). Many economic transactions, however, continued on the basis of mutual trust and credit, through deferred wage payments and consumer good purchases. The very strength and dynamism of the informal economy were what allowed actors to soften the impact of the shock. In certain sectors, as discussed above, owing to the quick circulation of old cash, demonetisation even boosted economic transactions.

Various arrangements were found for wages, often combining payment in kind (for instance, rice for landowners, free meals at restaurants) and delayed payments. Among the post-demonetisation interviewees, wage jobs accounted for 50% of their occupations (Table 2).[8] More than half of these jobs experienced delayed payments. In a few cases (5%), wages decreased, and one in 10 workers suffered from both a decrease in salary and delayed payment. Pay cuts happened only for middle castes and Dalits. Delayed payment mostly affected Dalits (51%) and middle castes (46%) as opposed to upper castes (less than 3%). The unequal impact on wages across castes stands out more with regular jobs.[9] Upper castes—who generally occupy the most prestigious and sustainable positions[10]—were less sensitive to the harmful effects of demonetisation on employment. The most vulnerable social groups—mainly Dalits, and to a lesser extent middle castes—experienced payment delays (half of them) and a greater shrinkage in their activity (Table 2).

Delayed payments, which affected castes unequally, in turn reinforced informal channels of wage payments, such as wage advances, rather than formalising them. In our region of study, many workers are seasonal migrants in cane cutting and brick moulding. They are used to receiving large wage advances (between ₹60,000 and ₹70,000 for a pair) which are distributed during the off-season. Much of it is given at Deepavali, which fell a few weeks after the demonetisation. Indeed, our data show that advances on wages after demonetisation were mostly received by lower castes working in brick kilns, but also by upper and middle castes with salaried positions (operators, supervisors). In brick kilns, where employers provide the advances, many tried to use this as an opportunity to get rid of part of their old cash surplus. Labour intermediaries, usually in charge of distributing advances and managing labourers, had to negotiate with workers. Various scenarios were observed. Some families accepted the old cash, deposited it slowly in the bank to avoid any suspicion, and withdrew it slowly. Given the liquidity scarcity all the rural banks faced, they had to go there many times in vain, spending considerable time and money to convert their employers' old—and certainly black—cash. Some families asked labour intermediaries to take care of the transactions. Some had to bribe bankers who then refused to deliver cash to the workers, and maistries were then pushed to beg the employers for new cash. Some families started the season without any advances, hoping to receive them a few months later. Since in many cases wage advances are used to pay off past debts, we suspect they had to postpone debt repayment, which may have incurred additional costs. Some accepted considerable amounts of old cash—up to ₹1.4 lakh in the cases we encountered, which is the equivalent of around two seasonal wages for a household—with the idea of not turning up the following year.

It also seems that new forms of temporary bondage emerged. For instance, some contractors were desperately trying to get rid of old notes: they did so by handing out large advances—up to ₹30,000—to casual workers, while advances are rather unusual in this sector. Later on, the workers were obliged to work for the same contractor, while covering the cost of the sale of the old notes. Conversely, some brick kiln migrants, being unwilling to support their employers by laundering money or simply not wanting to receive advances in old notes, accepted a smaller advance and negotiated their salaries in exchange. This unusual negotiation over wages in a well-oiled system, where advances are a strong way to control and bond the labour force, may to a certain extent increase bonded labourers' bargaining power.

Beyond wage workers, small businesses have also had to adapt in various ways. Shopkeepers were already used to selling on credit, as a major source of client loyalty. Of our post-demonetisation interviewees, 18% stated they were buying less on credit, while 10% declared the opposite (Table 2). Qualitative analysis confirms this range of scenarios, both with regards to consumers and shopkeepers. Behaviours are closely related to the issue of trust and the wider networks in which people are embedded. Some shopkeepers, being unable to access credit from their wholesalers, had to reduce their sales and could not afford to sell on credit. Others, by contrast, have considerably extended their repayment periods thanks to their credit facilities, but usually only to their most faithful customers. We assume that Dalit shopkeepers were hit much harder, since they usually enjoy far fewer credit facilities than non-Dalits. In the region under study, the entire value chain, from wholesalers to retailers, is controlled by Chettiars, Nadars and to some extent by Vanniyars. This gives them privileged access to quality products at preferential rates, but also and above all to credit without additional cost. We encountered households who had not paid their shopkeepers for the past two months. Consumers who had cut down on their purchases on credit had done so either forcibly—no longer being eligible for credit—or out of choice, thanks to their increased access to other sources of cash locally. Informal local moneylenders explained to us that demonetisation had pushed them to repatriate their activities locally, as it was considered safer.

Some financial circuits have sprung up due to demonetisation, as we have shown earlier, while others have fallen foul of it. This has been the case for some door-to-door moneylenders, who ceased collecting repayments to help their clients (but who then had to wait before disbursing new loans). The same was observed among some microfinance organisations and banks. As they were running out of cash, they refused to disburse microcredit loans and gave priority to savers. This may also explain partly why, in our quantitative data, the average number and amount of loans per household has not increased since demonetisation. Similarly, chit funds (local rotating credit and savings associations or ROSCAS) were at a standstill for a while, and started again slowly in January.

At the same time, the lucky ones who were managing to get cash were able to lend to others. This was the case, for example, for government employees, who are usually paid by cheque or wire transfer. In the wake of several public demonstrations, public administrations organised cash payments for their staff. In our survey area, administrative jobs are rather limited, but money lending still increased after demonetisation: the proportion of households declaring to lend money to others more than doubled, from 5% to 11%.[11] Half of the lenders work in brick kilns. It is likely that they used their large advances to lend the money. The others are self-employed (in sculpture, grocery shops, contractors), or farmers. Although our data are limited in terms of number of observations, they suggest that there is a high level of intra-caste and gendered mutual help, in line with our results above on the exchange of old notes.

While networks have probably been instrumental in coping with the demonetisation shock, not all households were equally equipped for it. One of the effects of demonetisation has probably been to strain pre-existing networks. By and large, and even if our data should be taken with caution, it seems that trust in close circles has strengthened: 63% of individuals had expressed strong trust in their neighbourhood before demonetisation, and this increased to 78% after demonetisation (Table 2). This seems to confirm our previous argument of intra-caste mutual help. Among those interviewed only after demonetisation, 11% expressed more trust, 13% less trust. There was no change for the remainder.

This may suggest that some people have been able to activate their networks, while others have failed. Other figures confirm this finding. Among the post-demonetisation respondents, almost one-third needed some help during the demonetisation: 10% asked for help and got it, 18% had no one to ask, while 3% asked for help but were refused. This suggests that interpersonal relationship networks helped partially mitigate the harmful aspects of demonetisation, while excluding those without anyone to count on. In one Dalit settlement where one of the authors spent time during the demonetisation, out of 90 families, 20 were able to get regular items on credit and on the basis of trust. The remainder (70) were not trusted and really struggled to access staple food, petrol, etc. Women spent considerable time and energy bargaining, persuading, exchanging, and often putting their self-respect aside, in order to assure their households' survival.

Similar observations can be made for ceremonial transactions. As elsewhere in India, ceremonial transactions make up a large share of household expenses. In our sample, households declare a median amount of ₹14,500 per year, which represents 39 of annual household expenses (Table 3). During demonetisation, ceremonies involved various informal arrangements, especially for marriages. The average amount spent on household members' marriages was ₹2,65,200. Qualitative observation suggests that some events were cancelled because of cash shortages, often with serious consequences for the reputation of the family. Events that went ahead were often scaled down (for instance, having the wedding at home instead of renting a hall), but multiple chains of debt allowed the event to go ahead. Instead of bringing the traditional cash—gifts represent a major source of funding—guests simply gave a pledge document to be honoured once cash became available. Others promised to give more at the next ceremony. Here too, social relations were truly put to the test. Merchants or service providers, be they for catering, jewellery, sarees, music, photography, film, agreed to be paid later if they were able to afford to wait. Ceremonial organisers borrowed from financial companies and negotiated for direct wire transfers to merchants and providers (and were themselves paid back later in cash).

Conclusions

Demonetisation of November 2016 was supposed to contribute to the formalisation of the Indian economy, which in turn was expected to benefit the poor. However, as no extra effort was put into formal social protection, the policy mostly caused a rise in the informal economy, especially—but not only—informal debt. Indeed, historical forms of inequality in Indian society have probably been reinforced, while new ones have emerged. One could argue that this was only temporary and that digitalisation will gradually bring about formalisation. But our paper gives some grounds to doubt this.

Our analyses, based on quantitative and qualitative fieldworks conducted before, during and immediately after this policy shock in rural Tamil Nadu, is a strong reminder that most Indian villagers are embedded within complicated webs of rights and obligations that ensure their daily survival through the constant circulation of cash, goods and services. While state social protection is weak and governmental schemes are known to adhere to patronage and clientele networks, having a dense network of relatives, friends, acquaintances, and patrons ready to help when needed, indeed remain the key way of securing everyday life and the future in rural India. This social regulation of the economy has given rise to a form of social protection, which is, however, flawed, hierarchical and unequal.

Following demonetisation, resistance to banking, which was already in evidence before the policy shock, seems to have further intensified. Freezing wealth in bank accounts makes little sense for the most vulnerable segments of the rural population, barring the willingness to cut oneself off from one's social surroundings.

Hence, while social networks have probably been instrumental in coping with the demonetisation shock, not all households were equally equipped to do so. Interpersonal relationship networks have partially helped mitigate the harmful effects of demonetisation, but excluding those without anyone to count on. There was for instance a gendered and caste-based response to demonetisation, as evidenced in our analyses above. Monetary surplus were thus injected into networks through gifts, loans, or wage advances. In fact, saving is traditionally first and foremost relational, taking the form of investment "in people" (Guérin et al 2016). The nature of these networks however is very diverse. Some are clearly based on hierarchy, that is, on caste, patriarchy or social class, and any new loan or wage advance strengthens the borrower's inferiority, whether through high interest payments, free services or new features of labour bondage. Other financial transactions are instead based on solidarity and reciprocity, the so-called redistributive nature of social networks (Nordman 2016), and are most often found within caste and kinship (although caste and kinship do not preclude market-based transactions and the payment of interest).

Such unequal network access and use, in a context of a monetary policy shock, is an interesting aspect to have emerged from our data from rural Tamil Nadu. Although, further confirmation is needed through supplementary fieldwork and long-term observations, perhaps in other contexts and locations in India, our observations highlight the unanticipated impacts of demonetisation. Hence, what really seemed to have happened, instead of clear movement towards more formalised economic transactions, has rather been a reinforcement of the informal economy, which is the very thing that allowed actors to temper the violence and harmful consequences of the shock.

The policy implications in this are crucial. It is fully justified to think about measures for formalising the economy, but expecting that technology—the digitalisation of payments—could solve the problem is an illusion. In Europe, banking emerged at the same time as social protection, but banking did not come first, and was absolutely not the fundamental cause of social protection. In present-day discourse on digitalisation, the link to formalisation often remains illusive, as if it were automatic. Yet formalisation requires much more than transparency of payment. While cashless policies flourish in various parts of the world, we believe our findings have major implications, and seriously question the merit of such policies, especially for the most marginalised segments of the population.

NOTES

1 See, for instance, interviews given by Amartya Sen (Bagchi 2017), the interview given by Barbara Harriss–White (2017), and the interview given by Prabath Patnaik (*Hindu* 2016). See also Kohli and Ramakumar (2016) and Kumar (2017).

2 NEEMSIS (https://neemsis.hypotheses.org/) has been implemented in 2016–17 by the authors of this paper. NEEMSIS follows a first household survey wave conducted in 2010, thus constituting a panel of households and individuals, but for a matter of space comparison between 2010 and 2016 will not be undertaken here.

3 There are also a few Padayachis, Gramanis, Navithars, Nattars, Kulalars and Asarai, who have a similar position in the caste hierarchy.

4 Self-help groups (SHGs) are groups of savers and borrowers (composed of 15 to 20 women), which enable people who are usually excluded from the formal credit market to access bank loans.

5 Petrol stations, highway tollgates and government cooperative stores have also been authorised to do so.

6 By "patronage," we mean a system of distributing resources based on personal and hierarchical relationships.

7 Indian GDP growth fell to 5.7% in the April–June quarter of 2017–18 from 6.1% in the preceding quarter and 7.1% in the corresponding quarter last year. The latest quarter available, that is, the second quarter of 2017–18 saw growth of 6.3%, which is lower than the 7.5% recorded in the same quarter of the previous year.

8 This figure excludes NREGA scheme.

9 By "regular job" we mean continuity in terms of tasks undertaken and employer. "Regular jobs" do not imply any formal protection, which remains scarce in our study area.

10 Caste inequalities in access to "quality jobs" were discussed in another study (Guérin et al 2015).

11 Because of the stigma associated to money-lending, these data are likely to underestimate the true importance of lending among villagers, either before or after the demonetisation. But the comparison is interesting and shows an increase.

REFERENCES

Bagchi, S (2017): "'Serious Job Losses Are Taking Place'," *Hindu*, 17 January, viewed on 22 September 2017, http://www.thehindu.com/opinion/interview/%E2%80%98Serious-job-losses-are-taking-place%E2%80%99/article17046208.ece.

Gabor, D and S Brooks (2016): "The Digital Revolution in Financial Inclusion: International Development in the Fintech Era," *New Political Economy*, Vol 22, No 4, pp 423–36.

Garikipati, S, I Guérin, S Johnson, A Szafarz (2017): "The Cost of Empowerment: Multiple Sources of Women's Debt in Rural India," *Journal of Development Studies*, Vol 53, No 5, pp 700–22.

Goedecke, J, I Guérin, B D'Espallier and G Venkatasubramanian (2017): "Why Do Financial Inclusion Policies Fail in Mobilizing Savings from the Poor?: Lessons from Rural South India," *Development Policy Review*, 15 November, http://onlinelibrary.wiley.com/doi/10.1111/dpr.12272/abstract.

Guérin, I, S Michiels and G Venkatasubramanian (2015): "Labour in Contemporary South India," *Capitalism in Development*, J Heyer and B Harriss–White (eds), London: Routledge, pp 118–35.

— (2016): Ceremonial Expenses as Relational Savings, *IMTFI Blog*, viewed on 22 September 2017, http://blog.imtfi.uci.edu/2017/01/ceremonial-expenses-as-relational.html.

Guérin, I, B D'Espallier B and G Venkatasubramanian (2013): "Debt in Rural South India: Fragmentation, Social Regulation and Discrimination," *Journal of Development Studies*, Vol 49, No 9, pp 1155–171.

Harriss–White, B (2003): *India Working: Essays on Society and Economy*, Cambridge University Press.

— (2017): "Barbara Harriss-White on Demonetisation," 16 January, viewed on 22 September, http://www.macroscan.org/dem/jan17/pdf/Barbara_Harriss_White.pdf.

Hindu (2016): "Demonetisation not a Solution to Problem of Black Money, Says Prabhat Patnaik," 16 December, viewed on 22 September 2017, http://www.thehindu.com/news/cities/Hyderabad/Demonetisation-not-a-solution-to-problem-of-black-money-says-Prabhat-Patnaik/article16841981.ece.

Joseph, N (forthcoming): "Our Ears Have Been Empty Since Then: Understanding How Gold Ownership and Gender Norms Have Mediated the Impact of Market Liberalisation Reforms on Work Vulnerability in a South Indian Silk-reeling Cluster," *Journal of Cultural Economy*.

Kalpana, K (2017): *Women, Microfinance and the State in Neoliberal India*, London and New York: Routledge.

Kohli, V, R Ramakumar (2016): "Economic Rationale of 'Demonetisation,'" *Economic & Political Weekly*, Vol 51, No 53.

Kumar, A (2017): "Economic Consequences of Demonetisation: Money Supply and Economic Structure," *Economic & Political Weekly*, Vol 52, No 1, pp 14–17.

Mader, Ph (2016): "Card Crusaders, Cash Infidels and the Holy Grails of Digital Financial Inclusion," *Behemoth*, Vol 9, No 2, pp 59–81.

Muldrew, C (1998): *The Economy of Obligation: The Culture of Credit and Social Relations in Early Modern England*, London: Palgrave.

Nordman, C J (2016): "Do Family and Kinship Ties Support Entrepreneurs in Developing Countries?" *IZA World of Labor*, 262, DOI: 10.15185/izawol.262.

Pandian, M S S (2000): "Dalit Assertion in Tamil Nadu: A Exploratory Note," *Journal of Indian School of Political Economy*, Vol 12, No 3–4, pp 501–17.

Patnaik, P (2017): "The RBI Report and the Truth about Demonetization," *Citizen*, 31 August, viewed on 22 September 2017, http://www.thecitizen.in/index.php/NewsDetail/index/1/11610/The-RBI-Report-And-The-Truth-About-Demonetization.

Rajakumar, J D and S L Shetty (2016): "Demonetisation: 1978, the Present and the Aftermath," *Economic & Political Weekly*, Vol 51, No 48, pp 13–17.

Rao, D K and R R Kotian (2017): "A Study on Impact of Demonetisation of Currency Notes on the Functioning of Indian Economy," *Journal Advances in Business Management*, Vol 3, No 2, pp 99–101.