2016 Rupee Demonetization (Dn): It's a Success!

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ABSTRACT

The November 2016 Dn of the rupee is a phenomenal event in India's monetary history with spillovers into every nook and corner of Indian economy, and yet it has hardly received the attention it warrants from economists and other professionals. To better understand the socioeconomic consequences this paper compiles and evaluates the positives and negatives of Dn in spite of challenges in quantifying them. There was uproar at the outset because of the market turmoil notebandi caused, but some twenty months later Indian economy is doing well on the Dn stress test. This is evident in a) the broadening of the tax base, b) the relatively higher degree of compliance with filing income tax returns and reduction in black money, c) the new business regulations related to Goods and Services Tax (GST) leaving little scope for corrupt ways, d) increasingly higher rates of growth in GDP and notably, e) the swift transformational change in economic behavior triggering better tax compliance as well as the exodus to digital payment modalities, and the concurrent reduction in habitual need for cash. The five structural changes above normally have a long gestation. However, the successful ongoing makeover in India in so short a time by itself calls for an intensive study tempting one to suspect if nation-state pride is one of the drivers of reform.

2016 Rupee Demonetization (Dn) : It’s a Success!

VENAL AND ALTRUISTIC ASPECTS OF DN

The November 2016 Demonetization (Dn hereafter) was stunning in scale, scope, and was also ground-breaking. It was arguably the largest event of its kind in India’s monetary history, withdrawing □500 and □1000 denomination currency notes as legal tender. The two notes did the heavy-lifting obligations of the role of money as a medium of exchange, store of value, unit of account and means of deferred payments. The two bills accounted for a massive 86 percent of total currency notes in circulation. No one seemed to hear the Prime Minister plead for the 50-day period of fine-tuning and restoring supply chains to refurbish a semblance of normalcy to the markets. The nature of implementation of Dn appeared somewhat flawed because of the need for keeping the entire move under utmost confidentiality to prevent leaks lest it should unravel, thereby reducing the potential for success in mopping up tax-evaded, illegally- or unethically-gained cash.

Notebandi became a complex and thorny issue and needlessly so. Political predilections of the contending sides concentrated on either just the relatively transient depredations of Dn or on the salutary effects of Dn such as the transformational change in financial behavior of hundreds of millions of people. Many antagonists, mainly rentiers, have had vested interest (including large unaccounted cash resources) in *status quo ante.* They took full advantage of a flourishing democracy with a spirited social media including TV and Press to vehemently oppose the far-reaching changes. What could possibly take decades for cognitive, social, cultural changes to occur have occurred in a fraction of that time. This significant behavioral makeover has been sidelined by critics. Such predilections, by their very nature preclude objectivity and could be a stumbling block to the cause of rapid economic growth.

Economic growth is predicated by the integrity of political institutions and a modicum of fairness in inter-party and even intra-party conflicts and confrontations.[1] Preferably politics should not be determining what economic policies the country should have, and on the other hand it should be the merits of policy or economic measure such as Dn *per se* that should influence decision-making. Opposing groups even within the same political party have been involved in undermining policies, however excellent or desirable, rather than coming up with constructive criticism and helping the overall goal of rapid inclusive growth. This is all the more a good reason independent and objective "double-handed" economists undertake studies looking into the merits of a policy rather than anything else. What cannot be belittled is the criticality of fairness in political or economic discussion, routing for the whole truth or information, rather than bits of it. Full disclosure of interests in any discussion will help understand the root cause of opposition to otherwise good policies that have much merit. This is illustrated elsewhere with reference to taxation of incomes to avoid generation of black money which bids for drastic measures.

There are numerous aspects to Dn besides the indescribable suffering of individuals, the bankruptcy of numerous cash-based businesses in the informal sector, the concomitant joblessness due to business closures and the overall momentary decline in business and loss in industrial production and jobs. There is a good deal more to this historic event in India's monetary history than just this collateral damage. A balanced account of all aspects of Dn is already behind schedule. Hence this treatise to come up with a narrative that scrutinizes all relevant issues and lets the reader make a measured assessment of the aftermath of notebandi.

NICOMACHEAN ETHICS

The Aristotelian dictum that it is the mark of an educated mind to be able to be able to entertain a thought without accepting it is pertinent to the current discussion of Dn. Such a mind can entertain opposite view points and come up with a wise *Tertium Quid*, or in this case, the greater good. After all this is the substance of Nicomachean Ethics aimed at the good of the entire community.[2] Pareto optimality or efficiency referred more to resource allocation than to economic measures such as Dn. And so Pareto efficiency criterion such as no one can be made better off without making someone worse off, is not pertinent to cases such as Dn.[3] On the contrary what is germane is that there has to be a balancing point between selfishness and altruism. Also relevant is the fact that the economy is still inside the production possibility frontier or in the pre-optimality stage of development or growth, a stage when all persons can be made better off by measures such as Dn and GST. Model-based simulation studies such as by Vanrolleghem et al propose are beyond the scope of this study.[4]

NATIONALISM PROPS UP DN AND GST

Dn is a singularity that caused transient discontinuities in economic growth. It influenced Indian financial psyche perceptibly with a salutary enticement. The coaxing is by way of carrots for compliance and stick for non-compliance as per the laws of the land. Dn also has direct and corollary effects on the economy. The consequent better compliance with the tax laws in particular the Goods and Services Tax is can only be regarded as a transformational change that is very tough to achieve in a litigious noisy democracy. It has been accomplished in a relative short time. The perception that to no mean extent this was due to the rising nationalistic ambiance in India cannot be dismissed. There is a craving for fast and clean economic and social progress without needless politicization of even the soundest of pragmatic ideas. Influenced by past history there is today more than a modicum of national unity clamoring for achieving India's potential as a major power like China, albeit within the framework of a functioning democracy. Ambience of this kind, also ubiquitous all over China, Europe including Russia, USA and elsewhere, has contributed to the success of numerous initiatives in those nations taken by even maverick leaders offering the alluring prospect of economic prosperity in one generation.[5] The interests of the nation become overriding and most people without private or vested interests accept that. In India too this explains the overwhelming discontent for 'business as usual' and the backing for measures such as Dn, GST, Swatch Bharat, promotion of indigenous medicine including ayurveda, yoga and so forth. A majority of people do not accept corruption as a way of life even after suffering it for decades, and are desperate for cleaner public life. The Government has been constantly tapping into this wellspring of antipathy for 'business as usual' and support for progressive good causes.

The November 08, 2016 Dn was not the first time such a measure was resorted to in India. The first Dn in recent times was tried on January 12, 1946 when notes of the denomination of Rs. 1000 and Rs. 10,000 were withdrawn. Even at that time it was to deal with unaccounted money which is income concealed from tax authority. Dn was again resorted to on January 16, 1978 when the Morarji Desai government withdrew notes of the denomination of Rs. 1000, 5000 and 10000. This was what the Wanchoo Committee had recommended to reduce the menace of black money. Because the implementation of the measure was perhaps not as much 'under the wraps' as the ground realities demanded, this Dn had less than limited success in curbing black money. Neither the Finance Minister at that time H.M. Patel nor the Governor of Reserve Bank of India I.G.Patel was in favor of the measure. Their reasoning was that black money would not be hoarded in cash form, but would be in real estate, jewelry, conspicuous consumption and other forms around which it is hard for the tax authorities or anyone else to wrap their arms around.[6] Without mindful planning and effective but veiled enforcement Dn may prove to be counterproductive.

DEMONETIZATION (DN) WORLD-WIDE

In a matter-of-fact way countries have undertaken Dn of varying scale and severity and with diverse objectives. Table 1 below is a partial list of countries that tried Dn with capricious outcomes with some exception, definitely without a modicum of success in achieving the objectives of curbing tax evasion and illegal activities.[7] In India's case there appears to be an exception. Human ingenuity being what it is, it could set at naught the objectives of such monetary initiatives. Operators take advantage of loopholes to launder tax-evaded tainted money into legit clean money. Against this backdrop of general failure of Dn to achieve stated objectives, what does the evidence in India regarding the November 2016 rupee Dn show? Do the outcomes resonate with those of other countries? Has there been a modicum of success or is the jury is still out? Is it too early to tell in the area of Indian economics and more specifically in behavioral economics? The analysis that follows shows that by contrast Indian Dn of November 2016 was a categorical success.

TABLE 1. DEMONETIZATION IN RECENT YEARS AND OUTCOMES

	Country	**Year**	**Result**	**Overall Conclusion**
1	Ghana	1982	Made economy weak. Unsuccessful	People continued to support the black market and resorted to investment in physical assets.
2	Nigeria	1984	Economy collapsed,	Debt-ridden and inflation did not take change well.
3	Myanmar	1987	Unsuccessful	Led to mass protest resulting in killing of many people.
4	Soviet Union	1991	Unsuccessful	People did not take change positively due to poor harvest.
5	Australia	1996	No side effects	Purpose was only to replace paper with plastic.
6	N. Korea	2010	Weak, unsuccessful	People left with no food and shelter.
7	Zimbabwe	2015	Unsuccessful	Face value of one hundred trillion Zimbabwe dollars dropped to US $0.5 dollar.
8	Pakistan	Dec 2016	Pak Senate recommends Rs. 5000 bills retired. Govt does not accept	People were to be given ample time to get their note exchanged. So no Dn of Pakistan Rupee happened.
9	India	Nov 2016	Rs. 500 and 1000 notes withdrawn. Conspicuous success.	Transformational long-term changes expected in economy and in Indian economic behavior. Benefits infinitely more than costs.

Source: Adapted by author from Ambalika Sinha , Divya Rai, Aftermath of Demonetization on Rural Population, *International Journal of Research in Economics and Social Sciences (IJRESS)* Available online at : http://euroasiapub.org Vol. 6 Issue 11, November - 2016, pp~223~228

NOVEMBER 2016 DEMONETIZATION

There are obviously conflicting perceptions about Dn as noted earlier. By marshalling all evidence, for and against, one can tease out the net effects. One bit of proof of success that overwhelms all others is the visible transformation of attitudes about government inaction, corruption, needless politicization, and other ‘business as usual’ ways of dealing with issues whether it is Dn, GST, Aadhar-backed financial ID for all citizens, the Clean-Up Movement or Swatch-Bharat, tax compliance and so forth. This is not to deny large-as-life presence of apathy and even antipathy about most every economic issue. But thanks to social media and other info channels, there is much less of apathy, and public anger is vented more instantly than before. One angry tweet has negative (angry) reaction up to three degrees of separation.[8]

Dn as an economic measure has made an unprecedented attempt at changing economic, financial and ethical behavior. In practice it is difficult to come across one hundred percent honest tax compliance. Tax evasion is often conflated with tax avoidance and justified on that ground. Avoidance is generally accepted as tax planning, making intelligent use of loopholes in tax laws and provisions in the law for contributions to charities, parking incomes and resources in retirement funds such as (just for illustration purposes) the New Pension Scheme (NPS with 10 % annualized return) and the more popular Employee Provident Fund (EPF) Scheme with a fixed 8.5% return. Incomes set aside for such savings are deductible for tax purposes. Someone making use of such deductions is doing the right thing. But this is not the same as not declaring all incomes in order to avoid paying taxes, such as well-off persons buying farm land to set off unverifiable harvest losses against large non-farm incomes. This is something questionable ethically. Losses in farming, very often hard to figure out or similar activity are set off against profits in other businesses. This launders black into white money.

Some would like to think that evasion of taxes calculatedly with intent to do so without abiding by the spirit of the tax law could be perfidious. It is all the more so if persons with tax-evaded money enjoy all citizen-privileges of education, health care, social security, basic infrastructure such as roads, bridges, canals, electric power, street lights, traffic control, disease prevention, and the like. While this may be the stand of the general public, some business persons may think that evasion and avoidance are both defendable in view of the generally high rates of income taxation. Such a stand is not justified even if the tax rates are "high or even confiscatory." One may also observe the letter of the law and avoid taxes legally exploiting allowances and provisions of the law, and still undermine the spirit of the law by constructing escapes from tax liability, such uses not intended by law.

Specious arguments just like this for tax evasion, are available for numerous other issues including capitalist or mercantilist growth for growth sake, eliminating safety nets such as social security for the underprivileged sections, or for doing nothing about global warming. Tax evasion by the way is the fountainhead of black economy augmenting its magnitude incessantly. This is where the greater good should have the upper hand. India's Black economy size is estimated at about a quarter of the GDP by the World Bank. Under-invoicing exports and over-invoicing imports is indulged in order to build illegal funds abroad such as in legendary secretive Swiss bank accounts for later personal use by politicians and business persons. A streamlined and clean economy would help realize economic goals sooner and at less cost. This would also help reach economic growth all people, provide opportunities to one and all, and minimize the Gini coefficient.

BLACK, RED AND WHITE MONEY

Money is supposed to have three colors: Black, Red and White. The last variety is legal money that is post-income tax. The other two are monies concealed from and undisclosed to tax authority. The essential difference between the two is that while black money is income undisclosed to tax authority, red money is money received by way of bribes, commission received in a foreign currency such as the US dollar , under-invoicing of exports and over-invoicing of imports, and other illegal operations. Red money is generally tax-evaded illegal income stashed away abroad, whereas black money is mostly of indigenous origin. It is also dispersed to bribe voters or government officials, ministers as well as for payments for illegal, antisocial or antinational activities. Biggest users of black money are real estate, jewelry, politics and unorganized sectors such as the film industry, rural industries, minor and small scale and service businesses.

Account keeping is strenuous, but is not difficult. The Goods and Services Tax is now making it mandatory for every business however small to maintain books of accounts and file tax returns periodically and promptly, reducing the scope for generation of black money. Red money as well as black money can be laundered into white legal money through farm incomes, buying gold deposited as security at finance companies and pawn shops, lottery or gambling wins and several other ways. Laundering is not very hard to accomplish, but needs cooperation, concealment and confidentiality at several stages and it is not worth the effort.

INDIA'S NOTEBANDI

The good effects of Dn linger on even as GST and other administrative and legislative measures to improve economic efficiency, reduce transaction costs and otherwise streamline all economic activity roll on. There are also attempts at nudging the public, a majority of whom do not pay taxes taking advantages of loopholes and tax havens such as farm incomes which are generally income tax free even now.[9] Farm incomes have been well-used by well-off communities to escape taxation.[10]

There are other escape routes for one's black money such as by buying securitized gold from finance companies and pawn shops as noted above. However Draconian tax laws may be market economies will always scout for loopholes to dodge the laws and dodge compliance. For instance in Kerala holders of black money that have effectively evaded official maneuvers for tracking unaccounted resources, have been investing such monies to buy gold pledged with finance companies as security for loans. An amendment of 2015 to the Wealth (Tax) Act 1957 lets gold possessors free if such possessions exceeded a specified quantity. When collateral gold is sold to jewelers or anyone else black money gets laundered as white. Fugitive Nirav Modi also known as diamantaire and many like him have allegedly resorted to these swindles to conceal cash.[11]

TELL-TALE SIGNS OF SUCCESS OF DN

Counting the positives, during financial year 2018, over 200,000 non-filers have filed income tax returns and paid Rs. 64 billion by way of taxes. As many as 304,000 persons that had deposited cash up to Rs. 1 million or more in the post-Dn period have been notified to file tax returns and explain the source of their funds. Verification is being made online making use of big data analytics. Guidelines regarding online substantiation by PAN card holders together with other details are posted at *https://incometaxindiaefiling.gov.in.*[12] The website gives interesting facts that underscore the success of Dn.: Number of Registered Users 73.6 million, Registered and Aadhar Linked: 53.5 million, not registered but Aadhar linked 24.5 million, Verified Income Tax Returns 17.8 million. Often these numbers are multiples of numbers before Dn. Data Analytics used under "Operation Clean Money" detected Rs. 15,496 crores as undisclosed money and tax authorities seized Rs. 13920 crores.[13] There are millions who need to pay taxes and do not. It is this segment that is adapting quickly behaviorally to the new economic reformative milieu. Such enforcement activity puts fears in the minds of would be tax evaders, further adding to the success of Dn.

One of the non-economic benefits of Dn was one of outwitting those indulging in antisocial and anti-national activities. Nobel Laureate Kailash Satyarthi pointed out that there was a sharp drop in human sex trafficking. Black-money and counterfeit currency have funded stone-pelting in Kashmir on law-enforcing forces. This came to an abrupt end. How do we quantify these benefits in monetary terms?

The costs and benefits of Dn cannot be considered in isolation of supportive measures taken as a package to streamline Indian economy. High on the list of that package is the GST. It eliminated thousands of points of harassment and bribery on the supply chains of goods and services. It saved time and knitted the country's geographical area into a single common market. The relief brought to businesses and consumers by elimination of octroy and other central, state and local taxes and the time saved are too considerable to be neglected in any cost-benefit analysis of Dn. The measures in the package are mutually complementary and fitting. The provisions of GST, Income Tax and others help close in and pin down suspects of black money and wealth. GST enforces compliance discipline which comes in so convenient to the income tax authority. New big data analytical technology is a dragnet capable of grabbing even the sneakiest of tax evasion cases.

What the Governor of Reserve Bank of India (RBI) Urjit Patel states in a different context is true of Dn and related measures too. According to him the establishment of the GST Council, the amendments to the RBI Act and the enactment of the Insolvency and Bankruptcy Code were transformative and unprecedented.[14] The fundamental changes in terms of vesting the RBI with more power in creating the institutional infrastructure for monetary policy formulation is economic statesmanship. GST has been hailed as the best single piece of tax reform in India's 70 years of independence.[15] Similar approval of GST has been received from the IMF as a milestone reform that would unify the country and help create a common market between states in the country, besides promoting efficiency all around.[16]

HUMAN COSTS AND COST OF NEW CURRENCY

One of the negatives of the Dn was the cost of printing new notes to replace the Rs. 500 and Rs. 1000 denomination currencies declared non-legal tender. One way to figure the amount spent by the RBI to print new currency in the post-notebandi period is to process data relating to the dividend RBI paid to the Government. For the year ended June 30, 2018 the dividend was Rs. 500 billion which is 63 percent more than the previous year. Assuming the dividend recommended by the Government to be paid was the same amount as this year, and comparing it with the actual payment of Rs. 18.5 billion, it can be surmised that the difference of Rs. 31,500 not paid is the amount spent by the RBI to print new currency.[17]

Analysis of Dn without an examination of the collateral human cost would be piecemeal. Much has been written about the "disastrously botched," poor and "clumsy" execution of this bold step in India's perpetual hunt for black money and corruption: long lines at the banks in the initial months after the announcement, the abysmal helplessness of the poor who were particularly dependent on the lifeline of cash, old and sick customers collapsing in waiting lines that never seemed to end, the constantly changing rules and goalposts in what appeared as "learn as you go" implementation especially of re-monetization or the task of introducing the hot new legal tender so that lost liquidity could be made good on the double. Farmers could not buy seeds for new crops. What was the loss in farm output and the loss in incomes to farmers? Many office goers had to decide either to forego salary for a day or wait in line at banks to deposit cancelled currency.

EFFECTS OF LIQUIDITY SHOCK ON GDP

The liquidity shock of Dn was caused by lack of legal tender to replace the delegalized currency. Dn left a big gap in the intermediate range of payments between a small denomination □100 and large denomination □2000 by the retirement of notes worth □500, constituting 49% of money supply and □1000, being the other 37 %, together adding up to 86% of money supply. What further contributed to the chaos was the delay in replacement of old notes with new notes, dysfunction of ATMs, disruption in banking, and the pupation period for the payment mechanisms to emerge fully-fledged as a legit and mature payment system. In no small way did the disruption contribute to curb and constrict agriculture, construction, production, real estate business, jewelry, garment manufacturing, bus transportation, workshops and repair shops, and the economy as a whole. Black money facilitates much of construction, luxury goods, real estate, liquor, tobacco and other business and as noted earlier it overlaps with the informal sector. Nevertheless, the real story of the impact of Dn on output seems to be somewhat different as seen below in the data tables.

Fig. 1 below gives the annual GDP chart. Apparently there is no discontinuity in growth as can be discerned in the chart based on World Bank data in billion US Dollars. The economy seems to be chugging along normally. Numbers seem even incredible: growth during 2017 over 2016 is an impressive 14.21 percent, as much as $323.29 billion coming on top of $2274.20. However, it is the quarterly data as shown in Table 2 that captures the breaks in growth.

FIGURE 1. ANNUAL GDP GROWTH

FIGURE 2. GDP GROWTH RATES

During the Quarter ended June 2016 GDP reached the highest growth rate of 9.2 percent and over the next four quarters it kept declining. What is critical is that declines started not after Dn but much before that, some two quarters earlier. This would mean that the declines were not caused by Dn, but it is possible that the cash crunch caused by disruption in cash flows on account lack of overall liquidity in the economy contributed to accentuate the downward trends in total output. This was all the more aggravating particularly for businesses in the informal sector which woke up suddenly to find there would be not much of a resort to foot-loose funds or funds often not accounted for. As cash, the lifeblood of businesses became increasingly available, production in all sectors started picked up and this is seen in the histogram for quarter ending September 2017, the growth rate climbing from 5.6 % and reversing the trend. Somewhat the same trends for the 2016-17 period are seen in Table 3 presenting the value contributed by the construction sector in billions of rupees. After dipping below normal during this period, the revival in 2018 is perceptible.

Incrementally higher growth rate in GDP is expected to continue far into the future, even increasing to 8 to 9 percent, subject to stability in world trade, domestic political and economic atmosphere, weather conditions for farming, word oil prices, and so forth. More recently, Arvind Subramanian has expressed optimism that GDP growth would resume at a much higher level of 8.5 percent if: a) Demand picks up b) Restrictions on large transactions are eased and c) There is recapitalization of banks after minimizing bad debts they were burdened with.[18] There is a measure of dynamic scoring here, reckoning that the momentum of growth would have beneficial exogenous effects radiating on the economy. Arvind Panagariya has also mentioned more or less the same rates.[19]

Currently the economic fundamentals could not have been stronger. “Animal spirits” as termed by John Maynard Keynes has been unleashed in the Indian economy. It can be witnessed in investments in highways, ports, airports, railways, defense and ordnance industries, health care, rural electrification, river cleaning, toilets for the masses, farmer debt reduction, public sector bank recapitalization and so forth. In much of these endeavors there is Public and Private sector Partnership (PPP). High rates of growth have been supported by a transparent, corruption-free and time-bound administration. In any case, India is destined to emerge in its own right as a major power on the world stage with good possibilities of double-digit growth rates enabling doubling of GDP every 8-9 years, eventually to $20 Trillion by 2036 as per the simplistic rule of 72.

FIGURE 3. CSO QUARTERLY DATA ON VALUE OF CONSTRUCTION

OTHER CAUSES FOR POST-DN GDP RATE DECLINE

GDP decline that had started even before Dn in November 2016 was also due to the fall in farm output following less than adequate rain fall during both the rabi and khariff seasons of 2016. While in February 2016 the rainfall deficit was -59.5 percent of the long period average (LPA) it was +10 percent of LPA in February 2017, and so a better than normal rainfall.[20] There were external factors too that affected India's export performance. The Trump administration initiated world trade disrupting protectionist bustle and pursuits that impacted India's billings for software and internet services. There were cancellations of outsourcing back office contracts. For want of jobs and restrictions on hiring holders of H-1B visas in the USA, many of them returned to India or re-migrated to other countries such as Canada.[21] China's economy ceased to continue to operate at double digits and in fact had started to slow down to around 7 percent. Even these growth numbers are suspect because of lack of transparency and the growth numbers put out by China seem to be too linear not capturing variations in factors like iron imports, movie ticket sales, orders for earth-moving equipment, besides consumption and construction data.[22]

Indian exports declined for five consecutive quarters beginning Q_3 2015 and ended only Q_3 2017.[23]

Besides these global commerce factors there were a few domestic reasons too, domestically the decline in farm output was mentioned above. Next, there was the direct impact of the July 01, 2017 roll-out of General Sales Tax prompting businesses to destock inventory in June 2017 prior to price relabeling.[24] Second, there was a refiguring of wholesale prices. The unorganized sector overlaps with the underground economy or has a common Venn space with tax-evaded economy. Real estate business came to a standstill and lost buoyancy. With the waning of, if not complete loss of the practice of "Pagadi" or rent-seeking behavior of urban home vendors, the for-sale home inventory just seemed to fade away from the market. The demand for paying Pagadi or half the purchase price of apartments "in black" was almost gone contributing to substantial decline in business.

A remarkable observation while studying the impact of Dn on GDP was the robust spending all through 2016 and 2017 by the Union and State Governments. The well-off sections of society including in the rural areas apparently continued with their conspicuous as well as normal consumption by resorting to *inter alia*, non-cash media of payments such as credit cards and on-line. As a result the adverse aspects of Dn and cash crunch were cushioned by Government and personal consumption. This buoyancy in spending, and the resiliency in the economy, corroborated by the RBI prevented further declines in output.[25]

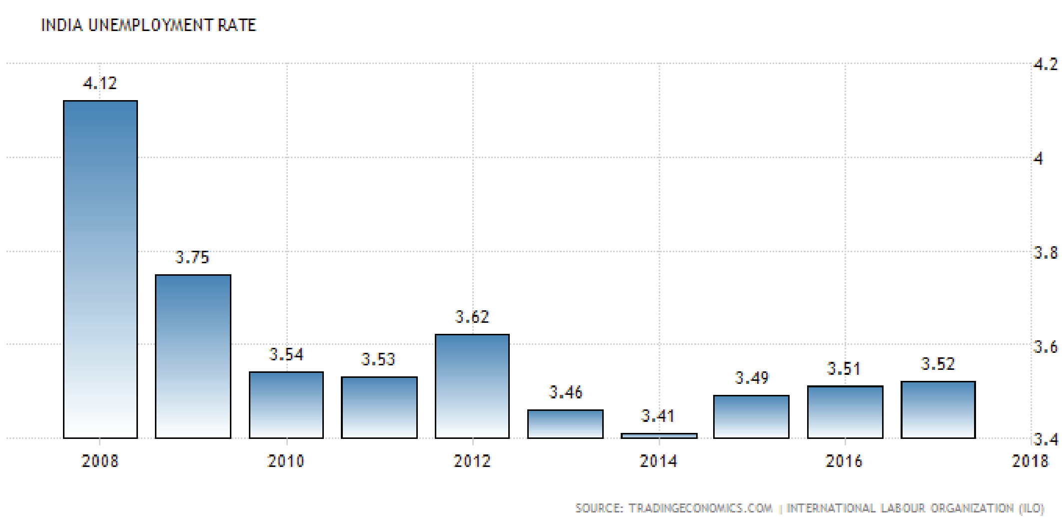
TRANSIENT UNEMPLOYMENT

Much cash was shredded or even burnt for fear of being prosecuted for unaccounted money. As incomes (mostly in the unorganized sector) fell consumption regressed too. There was one report claiming over 2 million street vendors were out of business because of cash shortage. Many live from day to day relying on daily cash earnings. Temporary job losses were there prompting critics to claim that the far-reaching monetary event was anti-people. But the real fact is that unemployment had hit the lowest rate by then as Table 2 and especially Fig. 4 show. The underground economy which is the sustainer and regenerator of tax-evaded money often overlaps and makes over into the informal unorganized sector. The conundrum here is that till recently about 98 percent of Indian economy was based almost wholly on cash.[26]

TABLE 2. LABOR AND UNEMPLOYMENT DATA

India Labor	Last (2016)	Previous (1983)	Highest	Lowest
Unemployment Rate (%)	3.46	3.49	8.30	3.46
Employed Persons (in Thousands)	29650.00	28999.00	29650.00	17491.00
Unemployed Persons (in Millions)	44.85	48.26	48.26	5.10
Labor Force Participation Rate (%)	52.50	50.90	52.90	50.90
Population (in Millions)	1299.00	1283.00	1299.00	359.00

FIGURE 4. RATES OF UNEMPLOYMENT[27]



THE PLUS SIDE: TRANSITION TO CASHLESS PAYMENTS

It is here that the second most welcome financial transformation and significant behavioral change are happening. Without Dn and GST, the lurch towards less ethical ways in real estate and other businesses would have been inconceivable. The government has taken initiatives for financial inclusion of millions still in a subsistence more or less 100 percent cash economy. The **J**an Dhan program has brought millions of persons with or without regular incomes under the banking sector by opening accounts in their names. Supplementing Jan Dhan is the **A**adhar unique identity card giving all Indians recognition and a modicum of credentials as citizens, not unlike the Social Security number for all Americans. A third thing that is most enabling of digital payments is the **M**obile Temporary phone. All three have a popular synonym of **JAM**. FinTech is substituting bank branches in unbanked areas making many remote areas and villages get connected for noncash payment systems. People are getting more tech-savvy, especially the Generation X, Y and Millennials. As a result the number of internet users has jumped from 302 million in 2014 to 900 million in 2018. About 350 million persons still outside the internet, will be covered in just about a year, enabling full-fledged e-commerce for the entire population.[28]

The world over, with India not being an exception, non-cash payments are increasing by leaps and bounds. According to the World Payments Reports (WPR) this growth is likely to be almost 11 percent per annum through 2020. For Asia and in particular for India and China the WPR projects a 30.9 growth rate, the largest growth being in B to C, B to B growing at a less impressive 6.8% because it is already highly digitized[29]. During 2014-15 the growth in noncash transactions volume was 11.02 %. Just in the first three months after Dn the growth of digital wallet companies has been phenomenal to the tune of 281 percent or by Rs. 191crores or \$2.8 B.[30] The ecosystem for such leapfrogging in non-cash payments such as installing point of sale paraphernalia, mobile phones, WiFi apparatus is already there in the urban areas or in the blueprint stage. One instance of that is the Prime Minister Modi's proposed creation 100 smart cities which are citizen friendly and technologically adequate, leave alone being digital payment responsive.

Compared to Singapore, India is far behind in digitized payments as can be seen in Table 2 below.

TABLE 2. CASH DEPENDENCE

Country	% Cashless
1-Singapore	61%
2-Netherlands	60%
3-France	59%
4-Sweden	59%
5-Canada	57%
6-Belgium	56%
7-United Kingdom	52%
8-USA	45%
9-Australia	35%
10-Germany	33%
11-South Korea	29%
12-Spain	16%
13-Brazil	15%
14-Japan	14%
15-China	10%
16-India	2%

Source: MasterCard Advisor's

Though the data could be somewhat dated and not picking up more recent trends in post-Dn period, it shows India's relative rearwardness in ranks and how far ahead she can go in digitization.

MEASURING PROGRESS TOWARD A CASHLESS SOCIETY

Digitization is occurring faster than ever before looking at the number of cell phones sold in India and also the point of sale paraphernalia installed in stores and other business places including in petty shops, taxis, wayside vending units and such others. Between 2013 and 2018 the number of mobiles in India went up from 524.9 to 775.5 million or by 47.7 percent. The trend continues thanks, inter alia, also to the JAM scheme mentioned above. And then it can be assumed that most small payments would be made digitally as well as by online transfers from account to account and through credit cards, thereby bringing down use of cash further. This has implications for the stock of money and velocity of circulation, the latter increasing and the former decreasing. This topic has been dealt with separately under Currency in Circulation. Suffice here to note that the number of cash payments constitute 98% of all payments for India. In terms of value it is 68%. In other words 32% of the value of all payments are noncash payments. The latter number is closer to 50 percent today and the number of payments could constitute 80 percent of the total number of payments. These trends will receive further boost with the implementation of smart city program. The smart cities would have good externality effects rubbing off on neighborhood towns and villages. Reinforcing the positive development would be the emergence of demographic groups like Generation X, Y and Millennials which are more ready to switch to digital payments, as noted above, than baby boomers. Digital payment facilities are increasing by leaps and bounds and so also the digital transactions which can happen 24/7 enabling persons to shop till they drop. Consumption and investment expenditure would then trigger faster growth.

POSITIVES AND NEGATIVES OF DN

Assuming India's black economy is about a quarter of the overall economy, and given that the GDP is \$2.264 T (for 2016 at constant 2011-12 prices) there has to be a substitute medium of exchange for about \$566 billion of economic activity that has so far been sustained by the tax-evading and/or informal segment of business. Hitherto, the informal sector has operated on mostly cash basis and did not generally comply with the laws of the land in regard either production, distribution, commerce or any other aspect of business. After re-monetization and after GST, liquidity has returned to this sector and has also been supplemented by digital payment modalities. Digital systems and GST help trace such business activity making Indian economy more inclusive. This is a major gain of Dn. Digitization is being dealt with at the end.

The first negative was the deprivation of a large number of persons making a hand to mouth existence on daily cash earnings, or from paycheck to paycheck. Most persons had to stand in long ques at considerable cost to thousands of individuals. Some persons with physical complaints had their conditions further aggravated because of strain. The negative results were no doubt grave, as noted earlier. Dn shut out a whole lot of cash-based activity in the informal penumbra area of business. There were also dramatic revelations of caches of unaccounted money which got either deposited in the banks before the expiry dates for deposits of currency withdrawn from circulation. Some large amounts were distributed on trust and some amounts of currency were allowed to rot or dropped in temple hundis, or even shredded.

One of the main objectives of the Notebandi was to uncover black money hoards and this was achieved to some extent, though much less than 100 percent. This drastic measure was a significant part of the multi-pronged strategy to widen the tax base. Dn flushed out considerable amounts of black money compelling persons with such undeclared cash to deposit them in banks or lose them for good. Where such deposits were made, the authorities questioned the source of such funds especially when they were disproportionate to the declared or incomes shown on tax returns. Big data analysis techniques were pressed into service by the Income Tax Department (ITD) and 18 lakh persons were identified as persons of interest. Much of the work of the ITD is online: receiving online returns, queries addressed on line, and communications are online including refunds minimizing opportunities for bribes and foul play.[31]

In June 2018 there were reports that Indian funds parked in Swiss banks rose by as much as 550 percent or by Rs. 7000 crores. This was surprising because it reversed a 3-year trend, and in particular after the clampdown on black money. The report was nullified by the Acting Finance Minister Piyush Goyal making use of Bank for International Settlements (BIS) data. The data show that after 2014 deposits with Swiss banks by Indians fell by as much as 80 percent and during 2017 alone by as much as 34.5 percent. In discussions with Swiss authorities the latter faulted the reports claiming a 50% increase.

Interpretations of data of changes in deposits were erroneous. Since 2017 the Common Reporting Standard with many countries has enabled India to receive financial information of Indian residents and this in turn has been useful bringing unaccounted income and assets under purview of Indian taxes.[32]

Much of the funds that politicians collect from all sections of the society are for the purpose of not just enriching oneself, but also for building large caches for battling the elections and winning them so that the money-making scheme may continue. Money in circulation normally goes up at the time of election campaigning. In order to curb this practice, the Finance Minister announced that anonymous donations would be capped at Rs. 2000 from the present Rs. 20,000 per person.

Conversions into real estate are still being caught by government investigators. New laws are coming up to assess unaccounted and benami property, putting fear in such owners.

Deposits of over □250,000 were put under the scanner to demand payment of the penalty of 200 % of the amount of tax due. By tracing such flows to individuals and firms the enforcement authorities have been able to discover unaccounted amounts to the tune of □17,000 crores gathered from 58,000 bank accounts belonging to 35,000 deregistered companies. 224,000 companies have been classified as shell companies on account of non-compliance with post-Dn regulations. 1,773,000 suspicious cases have been identified that do not match the tax profile. Deposits worth □ 368,000,000 million are under scrutiny. Over 300,000 directors have been disqualified for the same reason.[33] No doubt there will be long litigation and the Government may not have the wherewithal to press them. Be that as it may, even if Dn has just nudged people towards better tax compliance and ethical behavior that could be regarded a major achievement. Similarly rent-seeking and corruption especially in areas such as real estate have come down visibly.

Among non-monetary benefits, besides behavioral change, over the longer run, there have been several more such as the reduction in violent political agitations. There are serious problems of evaluating these benefits in monetary terms so that such amounts serve as the benefits (numerator) to be divided by the costs (denominator) to figure the cost/benefit ratio for Dn.

TAX-EVADED MONEY UNCOVERED

If black money is 25% of GDP of $2.264 T, what part of this black segment of the economy of about $566 to $600 billion was mopped up? Another interesting question is: Is GDP data exclusive of the contribution of the black economy? Not all of this could be in cash, much of it already converted into property. So the focus is on checking increase in wealth.

The RBI Annual Report mentioned earlier has announced that about 99 percent of the demonetized currencies had found their way back to the banks. Vast sums have flowed into the banks, quite a windfall, considerably improving bank liquidity. Almost all of the estimated □15.4 lakh crores ($242 billion) in high-currency bills removed from circulation has returned to banks, the actual being □15.28 lakh crores. This means that directly or otherwise the notes returned and got exchanged for new notes or just got deposited. There are caveats here. First the tax-evading world includes both the all-cash world (up to 7 percent of the total,) as well as the in-kind world, in the form of bullion, real estate, and other assets. Second tax-evading money found ways to convert itself to clean money by employing mules and proxies for deposits, and benami purchases using backdated bills, and through collusion with some bank officials willing to bend rules. Dn would have to be followed up by other measures to trace black wealth. GST and other taxes could help tackle that. In this limited sense of scooping up funds of black money Dn has been a success.[34] In the future, in the absence of black money, Dn and digitization would serve as a great equalizer, everyone hopefully contributing their fair share of taxes according to their incomes and wealth. However in the absence of farm taxation, agriculture could continue to provide a tax haven to the rich.

There has been a deliberate attempt to broaden the tax base by means of cleansing the economy of unaccounted money and property. Dn was definitely one of the surgical attacks on such cache compelling many persons to deposit such cash in banks. Persons making large deposits were questioned, as stated above, and the number of such persons depositing monies disproportionate to their income is 1.8 million. They were asked to disclose the source of their undisclosed income. Current technology is being used for big data analysis and most of these inquiries through tax authorities is online including tax returns, queries, assessment orders, and where needed, refunds too.[35]

Dn delivered sizeable new liquidity to banks. The Government took advantage of this windfall and approved recapitalization of Public Sector Banks (BSB) in a front-loaded manner. The total allocation for this purpose is □ 2.1 trillion. It comprises of budgetary provisions (□ 181 billion), recapitalization bonds (□ 1.35 trillion), and raising of capital by banks from the market while diluting government equity share around □ 580 billion, thanks to the impact on black money.[36]

In any discussion of Dn, it is but natural to look at the efficiency of monetary policy transmission, one of the least-discussed matters. In the US the Duffie-Krishnamurthy Dispersion Index of money market rates purports to measure pass-through efficiency.[37] Typically a change in interest rates should be reflected in all money market rates such as rates on deposits, CDs, lending to households and businesses, to government and interbank lending. Friction-less pass-through transmission with low DK Dispersion Index is essential to achieve objectives for inflation and growth. It is easy to suspect that in India tax-avoiding unorganized sector could raise the Dispersion Index. As such the need for such an Index in India acquires new relevance.[38] In its absence there is the real possibility Dn or GST get scapegoated for any economic illness.

CURRENCY IN CIRCULATION

Currency in circulation is 12% of Indian GDP. Some 86% of the 12% or 10.32 % was withdrawn under Dn. The plus point is that a substantial part of the informal sector got formalized and financialized enabling monitoring by authorities. Bank liquidity improved substantially and brought down lending rates. People use rupees every day, but that amount is a fraction of the money in circulation. In India the measures of money supply are as follows:

$\mathbf{M_1}$ = Currency held by public (C) + Demand Deposits (DD) + Other Deposits with RBI (OD)

$\mathbf{M_2}$ = $\mathbf{M_1}$ + Savings Deposits with Post Office Savings Banks (SD)

$\mathbf{M_3}$ = $\mathbf{M_1}$ + Time Deposits with Commercial Banks (TD)

$\mathbf{M_4}$ = $\mathbf{M_3}$ + Time Deposits with Post Office Savings Banks excluding NSC (National Savings Certificate)

A major plus is an appropriate rein on money supply in recent years. This has enabled better management of business needs. It also checks on inflation. And yet, as Fig 5 below shows there has been year upon year money supply growth in India of around 14 percent with inflation rates around 8 to 10 percent. Other countries with money expansion at the same rate as in India are successfully controlling the inflation rate at just 2% (Fig. 5). In China there is state control of much of the economy and it is not a surprise. In India

possibly, tax-evaded money or the informal economy may explain relative higher inflation.

The new inflation target mandated by the Government to the Monetary Policy Committee of RBI is 4%, not the glide path of current 8% → 6 % → 4%. It is also the mandated target for four years.[39] Inflation targeting just got a bit easier with the reduction of currency in circulation as well as by the increasing switch to digital payment systems. Considering that the number of points of sale (POS) has more than doubled in just one year soon after Dn, what is the reduction in currency in circulation? The answer is negative as Table 4 below shows, the last Difference Column in particular.

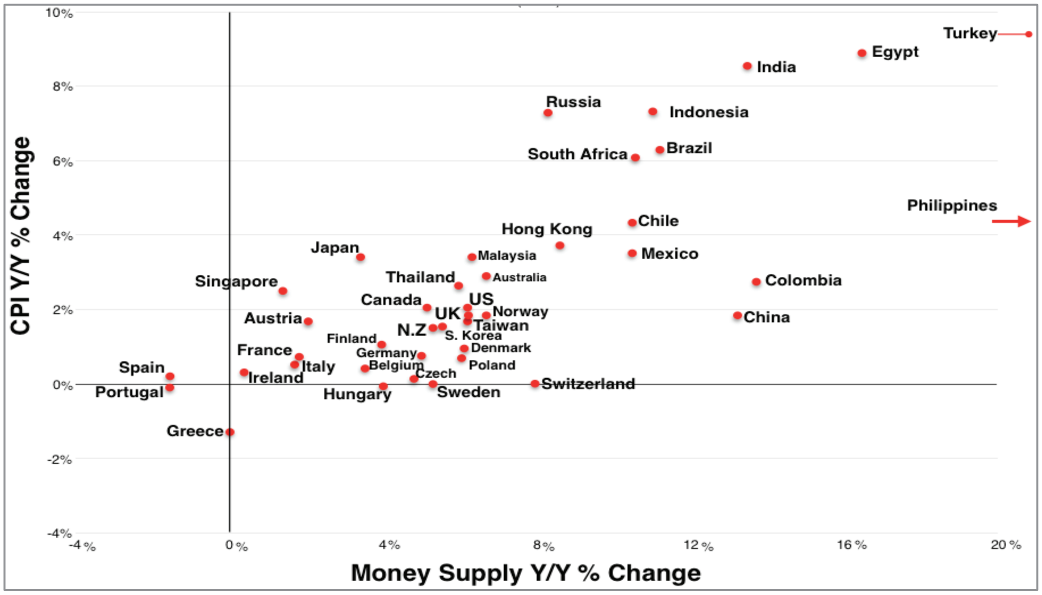
TABLE 4. MONEY STOCK MEASURES (□ BILLION)

Items	**As on May 25, 2018**	**As on Nov. 11, 2016**	**Difference**	**Difference as % of 2016**
1 Currency with the Public (1.1 + 1.2 + 1.3 – 1.4)	18,538.70	15,972.50	2,566.20	16.07
1.1 Notes in Circulation	19,050.60	16,415.60	2,635.00	16.05
1.2 Circulation of Rupee Coin	249.6	211.6	38.00	17.96
1.3 Circulation of Small Coins	7.4	7.4	0.00	0.00
1.4 Cash on Hand with Banks	768.8	662.1	106.70	16.12
2 Deposit Money of the Public	13,100.30	10,052.80	3,047.50	30.31
2.1 Demand Deposits with Banks	12,831.60	9,898.30	2,933.30	29.63
2.2 'Other' Deposits with Reserve Bank	268.6	154.5	114.10	73.85
3 M_1 (1 + 2)	31,639.00	26,025.40	5,613.60	21.57
4 Post Office Saving Bank Deposits	1,028.00	615.7	412.30	66.96
5 M_2 (3 + 4)	32,666.90	26,641.10	6,025.80	22.62
6 Time Deposits with Banks	108,206.50	90,150.80	18,055.70	20.03
7 M_3 (3 + 6)	139,845.50	116,176.20	23,669.30	20.37
8 Total Post Office Deposits	2,881.40	2,084.10	797.30	38.26
9 M_4 (7 + 8)	142,726.90	118,260.30	24,466.60	20.69

Source: Compiled by the author from period-relevant *Monthly RBI Bulletin*.

A direct answer to the question is hard considering that some are debit card-like, a payment facility that can be used after a deposit with the issuing bank. Others are credit card like, more in the nature of a loan that could possibly increase spending capacity. Subject to these caveats the key components of money in circulation and the differences if any between November 2016 and July 2018 are presented in Table 3 above. Each percent at the end of each row has a story to tell. For instance, the significant increase in Post Office Deposits by almost 67 percent in the post Dn period is indicative of the anxiety to find an inconspicuous parking place for one's unaccounted money, perhaps a little less dicey than a plain bank deposit.

FIGURE 5. COUNTRIES MONEY SUPPLY GROWTH vs INFLATION RATES (2014)[40]



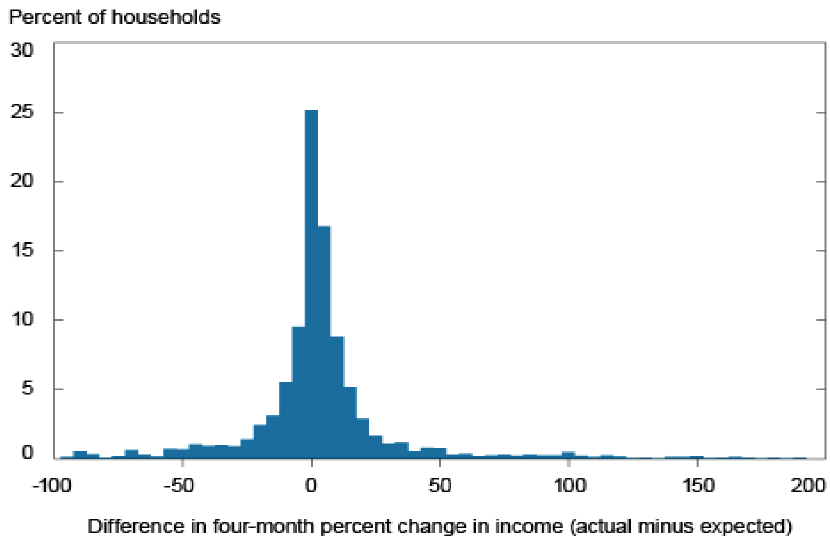
A debit-card like payment facility is part of a deposit that could be part of M_3. What is the impact of payment facility on velocity in circulation? What will be the new velocity in circulation, how much more than 1.3, the RBI rate? In 1960 velocity was as much as 4.464. Broad money as percent of GDP went up from 22.4 to 75.6 %. There is reason to believe that Dn and digital systems do bring down broad money as percent of GDP to less than 75%. This author believes that considered responses to these queries would help approximate, if not quantify the key parameters such as money supply and velocity of circulation.

LOSS OF INCOMES

For a sizeable number the workforce incomes are not always steady and do vary. (Fig. 6) Regardless of whether people adjust their consumption or even compromise on their standard of living, basic bills have to be paid. The fact of adjustments however difficult is a fact of life, however much unpalatable due to loss of jobs, loss of business, flood and other natural catastrophic losses, both expected and unexpected as shown on the left of the graph, and positive changes such as bonuses and pay-rises, on the right of the graph. In the west it may be normal for the typical worker to change jobs. Fig. 6 data may be somewhat true of people here too or it may not be so in India to a varying degree. Strong social links and networks cushion shocks.

One of the reasons for relative calm even after the upheaval of Dn is the fact that earnings of households and individuals in India also do vary as between actuals and expectations. New York Fed Survey of Consumer Expectations (Fig.6) shows that both pleasant and unpleasant changes in income (actual minus expected) occur to households sometime or the other.[41] There is zero change in incomes in the case of only 25 percent of households, and for the rest of the 75%, it changes seven times during the first ten years, which is about two-thirds of the person's career total.[42]

FIGURE 6. INCOMES EXPECTATIONS AND REALIZATIONS



Sources: New York Fed Survey of Consumer Expectations; authors' calculations.

MORE POSITIVES THAN NEGATIVES

What most observers were not ready for was the ease with which the common man everywhere came to accept despite the discontent. Dn was agreed to as a necessary disruption in order to: (1) Reduce black money so that the massive disparity between the rich and poor could be alleviated, if not eliminated. (2) Rein in terrorist activity. (3) Curb illicit money that is flooding borders states like Punjab and Rajasthan with addictive meth and heroin. (4) Prevent financing of other antisocial and anti-democracy rackets such as vote-buying and political donations. (5) Increase tax compliance and bring more revenue to the Indian government. The Finance Minister Arun Jaitley believes that in terms of achieving major objectives such as a less cash economy, digitization, formalization of the economy, widening the tax-base, formalization of the unorganized sector, clamping down counterfeit currency and so forth Dn has had extremely positive outcomes.[43] At least some of these benefits from Dn were unintended and even serendipitous perhaps like the swift makeover in behavior vis-à-vis compliance with tax law.

The deficiencies in implementation do not however detract from the rationale for Dn. A groundswell of validation of the radical move has come from Kenneth Rogoff to achieve objectives such as: a) reduce corruption and curb terrorism b) curb traffic in humans and such other undesirable activities c) digitize transactions so that regulatory authorities can overview suspicious trails of money flows and d) make rapid advance towards a minimal-cash economy with no big denomination currency. It shows how high-value currency can be phased out of the economy. Rogoff believes that there is an increasing trend towards digital payment systems including credit cards, and yet currency in circulation is pretty large. Where is the justification for a large currency in circulation?[44]

In some advanced economies problems related to stimulating consumption expenditure with the help of a zero lower bound (ZLB) as during the 2008 recession are relevant. However, for post-Dn India issues such as liquidity trap, ZLB, interest rate reduction issues and the like are not relevant and at best are of academic interest. Thanks to Dn banks are already flush with cash balances and many of them are using such surplus to reduce lending rates, engineer robust capital structures and rid their balance sheets of non-performing debts or assets which are about 19 percent on average. Notebandi will not eliminate all ills, but at least India will start addressing those issues more seriously.

When transactions are conducted on the basis of digital information rather than banknotes and coins which are legal tender, we enter the cashless economy. There has been general perceptible trend towards cashless societies where is cash is replaced by cash equivalent digital credits. There is nothing out of the ordinary in the realm of personal banking—roughly 12 percent of the population—are enabled to participate in the formal economy and learn pecuniary smarts. What is welcome is that personal banking is getting stronger thanks to the authentication provided by Aadhar ID cards, which now number more than 1.1 billion for India's 1.3 billion. The results in Table 5 below show that the trend towards digital payments has been accelerated by Dn. Check payments in value had the lowest growth of 2.9 % in value. Growth in card usage at points of sale was the largest at 93.83 percent and in terms of value it was 82.98%. Real Time Gross Settlements (RTGS) had an impressive growth of 14.6% for volume and 20.36% for value. Retail Electronic Payments (REP) growth was 40.76% and 51.95% for volume and value respectively. Despite these sizeable differences, matched pair test shows that there is not enough evidence to reject the hypothesis of equality of means in the first and the third columns (Test t -1.3748, Critical t ± 2.3646, and P-value = 0.2116) as shown in the plot below (Fig.6).

The use of credit cards increased 33 percent during 2017-18 (coming on top of 30 % last year) compared to fiscal 2016-17 from 29.8 to 37.4 million and the value of transactions put through them almost doubled from Rs. 2.43 billion to Rs. 4.62 billion.[45]

To be sure, there are certainly enough hurdles, especially in India, that could make going significantly cashless fanciful, if not unattainable. The system requires a certain amount of sophistication and faith that may be hard to come by in the lowest strata of economic class; not to mention logistical challenges of shifting such a huge mass of population into a digital economy. Not all street vendors will invest in POS hardware. And then there are issues of cybersecurity where even one bad incident can spook millions of those living hand-to-mouth.

TABLE 5. SUMMARY RESULTS OF MEAN EQUALITY TEST FOR PRE-DEMONETISATION, DEMONETISATION AND POST-DEMONETISATION PERIODS

Payment Category		Monthly Average			Mean Equality Test Results
		Pre Dem ($\bar{x}_1$)	Dem ($\bar{x}_2$)	Post Dem ($\bar{x}_3$)	
Cheque	Volume	88.50	119.88	97.45	$\bar{x}_1 < \bar{x}_2 = \bar{x}_3$
	Value	6623.86	7095.49	6819.41	$\bar{x}_1 = \bar{x}_2 = \bar{x}_3$
Retail Electronic payments	Volume	306.93	391.57	432.04	$\bar{x}_1 < \bar{x}_2 = \bar{x}_3$
	Value	9087.21	12950.59	13808.39	$\bar{x}_1 < \bar{x}_2 = \bar{x}_3$
Card at POS	Volume	192.53	406.56	373.18	$\bar{x}_1 < \bar{x}_2 = \bar{x}_3$
	Value	390.37	726.52	714.29	$\bar{x}_1 < \bar{x}_2 = \bar{x}_3$
RTGS	Volume	8.49	9.54	9.73	$\bar{x}_1 = \bar{x}_2$; $\bar{x}_1 < \bar{x}_3$; $\bar{x}_2 = \bar{x}_3$
	Value	74410.61	87531.27	89561.59	$\bar{x}_1 = \bar{x}_2$; $\bar{x}_1 < \bar{x}_3$; $\bar{x}_2 = \bar{x}_3$

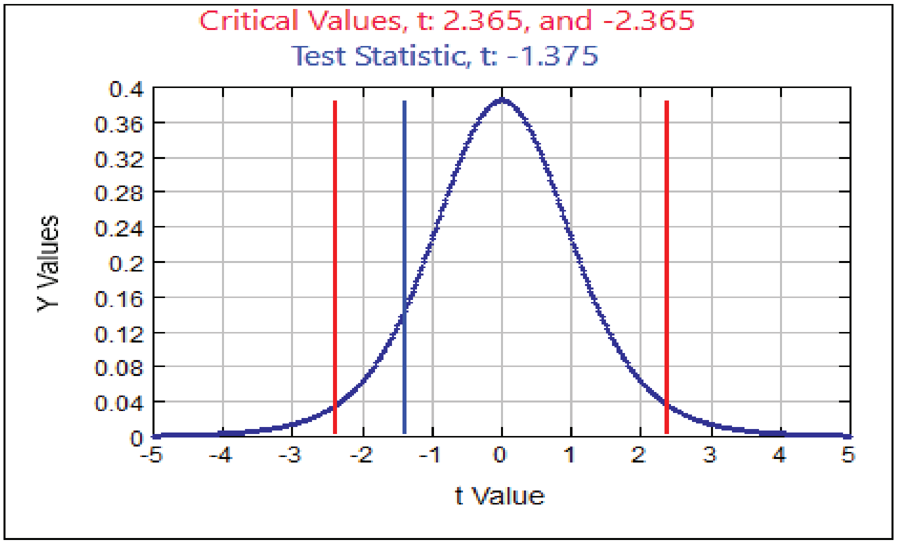
Source: Sasanka Sekhar Maiti, Mint Street Memo No. 07, *From Cash to Non-Cash and Check to Digital, The Unfolding Revolution in India's Payment Systems*, available at https://rbi.org.in/Scripts/MSM_MintStreetMemos7.aspx46. Data in Table 2 have been derived using a linear regression model and applied to time-series data separately for volume and value. The first three periods relate to volume and the last two to value. Details of the model are mentioned in source cited. The data relate to the following periods:

Apr'05-Feb'08	Mar'08-Oct'15	Nov'15-Aug'17	Apr'05-Oct'08	Nov'08-Aug'1

Skeptics who doubt the prospects of a cashless economy in India abound, and perhaps with good merit. But as of now, the results are palpable. Maharashtra government is going for a cashless payments system for fees, fines and taxes. The same Government is introducing BHIM-Aadhar biometric Pay app in rural areas. It will also continue with existing credit card and other modes of cashless system. Street vendors and auto drivers are switching over to digital wallets with payments going directly to their bank accounts. Since Notebandi was initiated, PayTM alone, the largest digital payments company, signed up some 20 million customers in just about a month, bringing its total number of customers to a sizeable 177 million. The growth would have been more but for its connection with the Chinese company Alibaba, the single largest shareholder. At this rate India will go significantly cashless sooner than most other countries and could be the first third world economy to successfully undergo the digital revolution.

This is no small achievement for an emerging economy with a sizeable illiterate and a much larger apathetic population. What are the implications of such a shift towards a cashless economy for Indian business and economy?

FIGURE 7. MATCHED PAIR TEST RESULTS.



Source: S. Char (2017) based on data in Table 3 above.

First there is the inclusion of vast sections of people and also vast unmonetized areas of the economy, enlarging the tax base, additions to quantity of money of legitimized ex-black money, less utilization of real estate as a buffer for inflation and as long-term investment. There will be more inclusion and more democratization. New trends may emerge in finance management for both households and business. Will the burgeoning cashless economy lead to better working capital management as well as less investment in non-performing assets? The trends compel positive outcomes.

TERTIUM QUID

The costs and benefits of Dn have been evident and this is because of the very nature of the Indian economy with a sizeable tax-evading economy which had become something of a way of economic life. It had embedded itself in every segment of the economy including religious places. There were many who wanted this pattern to continue or were apathetic and there were many more who wanted the cancer surgically chopped out of public life. The latter had zero tolerance for such economic behavior. Also it would be hypocritical to disparage Dn as anti-people and remain serene about corruption which citizens suffered for decades and which discouraged business, and even charity initiatives and entrepreneurship. Serendipity has helped too with rapid digitization of payment systems and making the economy more formal and inclusive, making it more difficult to be noncompliant. Now that business comes to know where policy chips my fall, and their pattern, there will be brisk investment activity.

While dealing with the costs of Dn one cannot ignore that the declining trend in output had already set in even before November 2016. It is possible that Dn accentuated it to some extent because of the cash-dependent informal sector. The same is true about job losses and unemployment. Again the trends are heading north after taking in their stride issues such as the new price-labeling in post-GST period, the confusion caused by wholesale price index changes, the liquidity crisis due to delays in making available new cash, malfunctioning of ATMs, and other hobbling hindrances.

Dn and other economic measures have the character of long-term measures with a gestation of about 2 years. They defy modeling and coming up with a template. The far-reaching measure is still impacting positively much of Indian economics. Besides bringing about behavioral changes in tax compliance, Dn along with GST and other economic measures is restructuring and streamlining the economy, eventually with not much of the informal sector left to throw spanner in the works of Indian economy.

ENDNOTES

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