

**ECONOMIC GAMBLE OR POLICY CATASTROPHE? A
DARK LOOK INTO DEMONETIZATION: VIVEK NARAYAN
SHARMA V. UNION OF INDIA (2023)**

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ABSTRACT

This paper aims to examine the economic effects of demonetization in 2016, paying particular attention to the ruling of the Supreme Court of India in the case of Vivek Narayan Sharma v. Union of India¹ in 2023. The analysis will address the legal and economic implications of the Supreme Court's ruling as well as the historical background of demonetization in India and its short- and long-term economic effects. The paper aims to present an all-encompassing perspective on this momentous occasion in India's economic history by drawing comparisons between the Indian experience and other demonetization cases worldwide. To that extent, this paper is of particular relevance to the intersection of law and economics, as it deals with the interaction between policy decisions on the part of the government and the legal basis underpinning such decisions and the resultant economic effects. The impact of demonetization is one such policy tool on the economy, legal systems, public government, and so on. In the present case, this study makes an effort to understand how judicial interpretations and rulings influence economic policies and their consequent effects by carefully analysing the judgment of the Supreme Court.

STATISTICAL TOOLS USED

- **SHAPIRO-WILK TEST**

It is used to check the normality of data. When we say data is normally distributed it would indicate that if we were to plot it as points on a graph, it would resemble a bell curve in its spread. Thus, the data gathered would be a good sample size that actually indicates the behaviour of the population it is representing.

- **CORRELATION**

Correlation is a statistical test that shows the degree and direction of the relation between two variables on a scale of +1 to -1. If the data is normal, Pearson correlation should be employed and if it is not Spearman- Rank correlation is employed.

- **LINEAR REGRESSION**

Regression is a statistical technique applied to analyse the relationship between a dependent variable and one or more independent variables, in an attempt to show whether and how changes in the dependent variable are related to changes in explanatory variables.

¹ Vivek Narayan Sharma and Ors. v. Union of India,(2023) 3 SCC 1.

This involves 4 further points of analysis:

1. Model Predictability
2. Root- mean square error (RMSE)
3. ANOVA
4. Coefficients

1. MODEL PREDICTABILITY – R²

The R-Squared value is the measure expressing the proportion of variance of the dependent variable around its mean, explained by the independent variable(s) in the model of linear regression. It simply shows how well the independent variables predict or account for the dependent variable.

2. ROOT MEAN SQUARE ERROR(RMSE)

This tool is used to measure the average error between the predicted value of a model and the actual observed value.

3. ANOVA (ANALYSIS OF VARIANCE)

ANOVA allows us to determine if the model is linear or non-linear. When the p-value <0.001, the model can be concluded as a linear model. Linear model is suitable for further analysis whereas a Non-linear data is not suitable for further data analysis.

4. COEFFICIENTS

The linear regression equation is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_n X_n$$

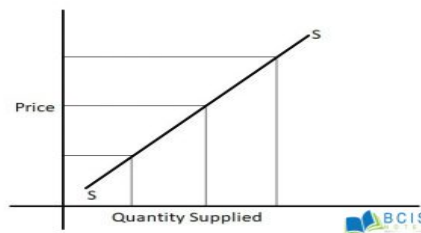
ECONOMIC CONCEPTS USED

1. COST-BENEFIT ANALYSIS

It simply means measuring the total expected costs against the total anticipated benefits of an action, mostly in monetary values, to establish whether the benefits outweigh the costs. The paper provides a cost-benefit analysis of demonetization in India, which is a valuation method applied to contrast the economic costs of the policy with the respective benefits.

2. LAW OF SUPPLY

According to law of supply, when the price of commodity rises, the quantity supplied of it in the market increases, and when the price of commodity falls, its quantity demanded decreases, other factors remaining constant.



3. KEYNESIAN ECONOMICS

This theory focuses on role of aggregate demand in influencing economic output and employment levels. According to this theory, when there is a reduction in aggregate demand there is a reduction in production and output. As a result, there is an increase in unemployment. This situation can be addressed through increased government spending or monetary policy to stimulate demand and economic activity.

4. PARETO OPTIMALITY

Pareto optimality is a situation whereby the economy is such that no one person can be better off without somebody being worse off. If an economy is not at a Pareto optimum, it indicates that there are inefficiencies present that could potentially be improved upon.

INTRODUCTION

Demonetization has been a key and contentious tool of economic policy, entailing the removal of a particular currency unit from circulation and its replacement with a new one. In India, the most recent instance of demonetization occurred on November 8, 2016, when Prime Minister Narendra Modi announced the invalidation of ₹500 and ₹1,000 currency notes. This action, which overnight made 86% of the nation's currency worthless,² was meant to target black money, counterfeit money, and illegal operations including smuggling and terrorism. Additionally, it was perceived as a step toward further formalization and digitization of the economy.

India had previously experienced demonetization. Although the similar measures taken in 1946 and 1978 were more limited in scope and impact. The demonetization of 2016 was unique in both its scope and stealth. The government's justification was to combat systemic corruption, restrict the flow of counterfeit cash, and minimize the amount of money going to illicit activity. It also attempted to encourage cash deposits into official banking systems in order to bring undocumented revenue under the tax authorities' purview. The announcement led to immediate and widespread disruptions across the economy. All industries were impacted by cash shortages, but small enterprises, daily wage workers, and rural communities were most severely hit. Even if the long-term implications of demonetization on the Indian economy are still up for debate, the immediate effects were clear and severe, ranging from a marked increase in digital transactions to a halt in economic development.

1. GOVERNMENT'S RATIONALE BEHIND DEMONETIZATION IN INDIA

A. CURB BLACK MONEY IN THE ECONOMY

It was claimed that people having black money will not take that to bank because the bank would match that amount of money with their salary and they will get caught. In that case, either black money will be burnt or will be disposed of in rivers. But nothing as such happened and according to RBI report, 99.93% money was back to the banks.³

² Justin Rowlett, *Why India Wiped Out 86% of Its Cash Overnight*, BBC (Nov. 14, 2016), <https://www.bbc.com/news/world-asia-india-37974423>.

³ Economic Times, *99.30% of Demonetised Money Back in the System, Says RBI Report, Demonetised Notes: 99.30% of Demonetised Money Back* (Aug. 29, 2018), <https://economictimes.indiatimes.com/news/economy/finance/99-3-of-demonetised-money-back-in-the-system-says-rbi-report/articleshow/65584922.cms>.

The two expected reasons of the same could be –

- a. There was not that amount of black money in the country as expected by the financial experts.
- b. Since the process of demonetization had so many loop holes, corrupt people had identified them and converted all their black money into white and submitted in the banks.

The value of the demonetized currency was 15.44 lakh crore and the value of money that was back in banks was Rs. 15.31 lakh crore. The rest 16000 crore is considered as the black money by people⁴. However, among this money not all is black money.

According to an article by Iftar Gilani, updated on 9th July 2017 – Nepal and Bhutan were stuck with Rs. 3300 crores in old notes.⁵ According to report published in The Telegraph Online on September 3, 2018, there was near to 950 crores with NRIs who were not able to come back and return this money. There was also some money which was in the donation box of the temples when demonetization was announced. It was reported on July 20 that a devotee from Tirupati had filed an application in the Supreme Court for a mandamus directing the RBI and the central government to accept Rs 8.3 crore worth of demonetized currency lying in the hundis of this reputedly the second richest temple in the world.⁶

In conclusion the government was not able to recover even 1% of black money.

B. COUNTERFEIT CURRENCY DETECTION

It was said that demonetization would have a great effect on fake currency. According to an article press trust of Delhi, 19 July 2017 – Fake currency of Rs. 11.23 crores face value was detected after demonetisation.⁷ Finance Minister Arun Jaitley also said that a mobile app was

⁴ Only Rs 10,720 Crore of Banned Currency Notes Not Returned Post Demonetisation, *BT* (Aug. 29, 2018), <https://www.businesstoday.in/industry/banks/story/rbi-demonetisation-10720-crore-banned-currency-notes-returned-108989-2018-08-29>.

⁵ DNA Exclusive | Demonetisation: Nepal, Bhutan Stuck with Rs 3300 Crore in Old Notes, *DNA* (July 9, 2017), <https://www.dnaindia.com/india/report-dna-exclusive-demo-nepal-bhutan-stuck-with-rs-3300-cr-in-old-notes-2496269>.

⁶ Plea to Accept Old Tirupati Notes, *Telegraph India* (Aug. 15, 2024), <https://www.telegraphindia.com/india/plea-to-accept-old-tirupati-notes/cid/1521067>.

⁷ HT Correspondent, Fake Currency of Rs 11.23 Crore Face Value Detected After Demonetisation, *Hindustan Times* (July 19, 2017), <https://www.hindustantimes.com/india-news/fake-currency-of-rs-11-23-crore-face-value-detected-after-demonetisation>.

then recently launched by RBI to allow users to see the features of new Rs. 500 and Rs. 2000 notes. This shows that there was zero impact on fake currency on demonetization.⁸

C. TERROR FUNDING

It was said that demonetization will have great impact on terror funding as well. But the facts say that demonetization was announced on 8th November 2016 and few days after the same that is on 19th November 2016 terrorist attacked on Indian soldiers in Assam. 3 soldiers were killed and 4 were injured after blast hits army vehicles in Assam's Tinsukia⁹. Similarly on 22nd November 2016, 3 soldiers were killed body of one them was mutilated along Loc in Jammu and Kashmir due to terrorist attack¹⁰. After this there was an attack on 29th November in Nag rota in which 7 martyrs were killed.¹¹

Within a month of demonetization these many attacks have happened in India which clearly indicates that there was no impact on terror funding by the demonetization.

An example of Jammu and Kashmir can be taken, in a press release of Ministry of Home Affairs dated 25th July 2017 discussed how demonetisation led to extinguishment of Pak-printed currency notes and the government seized fake notes worth 2.60 lakhs but in a press release dated 5th February 2019, the number of terrorist incidents in 2016 was 322 and in 2017 it went up to 342. The following year it almost doubled at 614 incidents in a year. This clearly shows that the government claiming the massive impact of demonetisation on terror funding is superficial and the impact was limited.

⁸ Arun Jaitley, Fake Currency Worth Rs 11.23 Crore Detected Since Demonetisation, *Hindustan Times* (July 19, 2017), <https://www.hindustantimes.com/india-news/fake-currency-of-rs-11-23-crore-face-value-detected-after-demonetisation>.

⁹ Utpal Parashar, Assam: Three Soldiers Killed, Three Wounded in Militant Ambush, *Hindustan Times* (Nov. 19, 2016), <https://www.hindustantimes.com/india-news/one-army-jawan-killed-4-injured-in-alleged-encounter-with-ulfa-i-in-assam/story>.

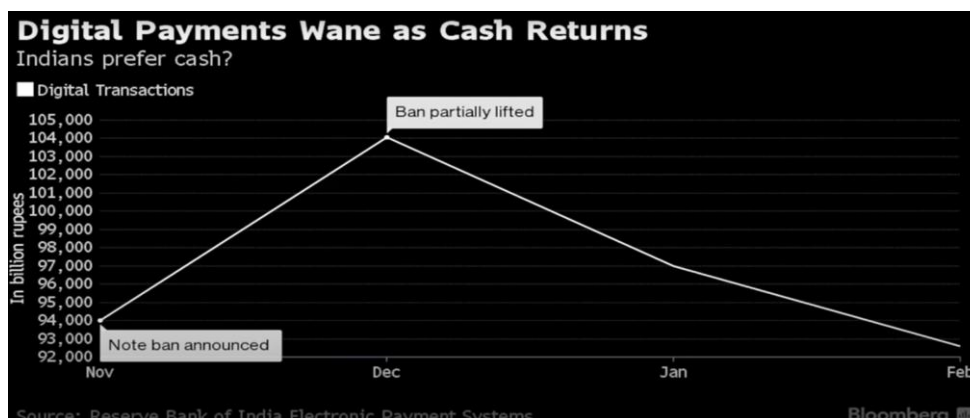
¹⁰ Fayaz Wani, Border Action Team Crosses LoC, Ambushes Patrol; Indian Army Vows Heavy Retribution, *Indian Express* (Nov. 23, 2016, 04:53 AM), <https://www.newindianexpress.com/nation/2016/nov/22/border-action-team-crosses-loc-ambushes-patrol-indian-army-vows-heavy-retribution-1541437.html>.

Year	No. of terrorist incidents	No. of civilian killed	No. of Security Force personnel killed	No. of terrorist killed
2014	222	28	47	110
2015	208	17	39	108
2016	322	15	82	150
2017	342	40	80	213
2018	614	38	91	257

Source: 5th Feb 2019, Press Information Bureau, Ministry of Home Affairs

D. CASHLESS ECONOMY

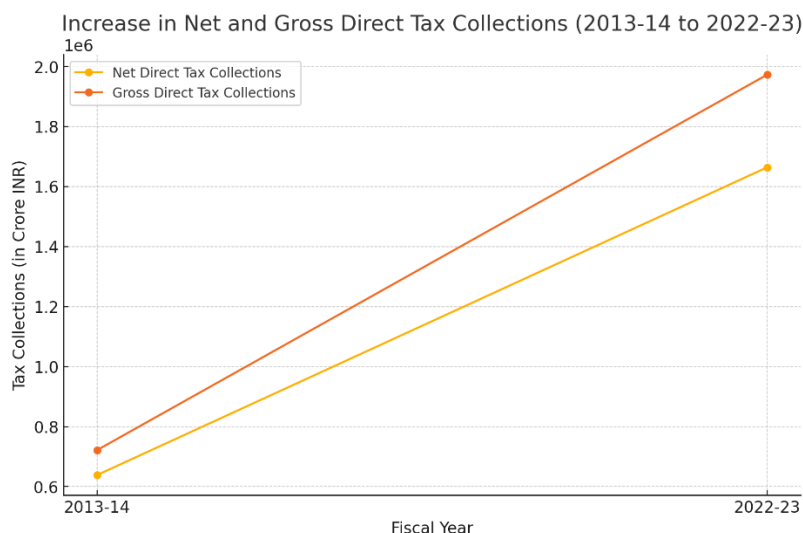
After this it was claimed by the government that the purpose of demonetization was cashless economy. It is true that an increase in digital transactions was seen after demonetization since people were not able to use their cash and also there was a shortage of the same. But gradually when the cash returned in the economy as usual again, there was a decrease in digital transactions till February – march 2017. It can be observed from the graph below,



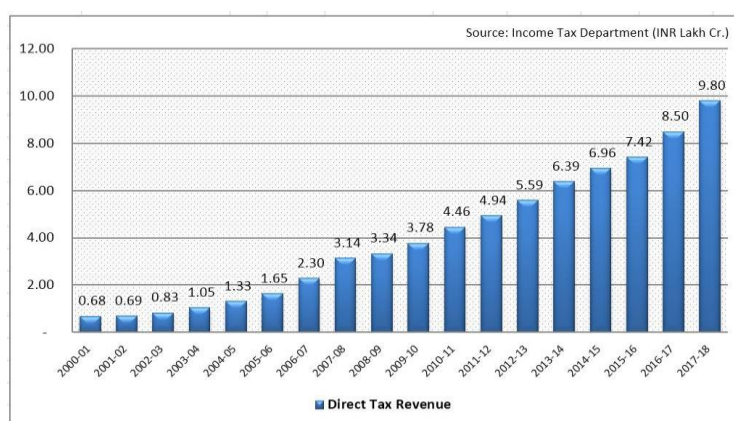
E. INCREASE IN COLLECTION OF TAX

A significant change has been observed in tax collection and number of taxpayers after demonetization. It was claimed that there had been 14% increase in tax collection when compared with previous year. A press note issued by the Ministry of Finance, dated 23rd January 2024, claims: "Net Direct Tax Collections increased by 160.52% from ₹6,38,596 crore in FY 2013-14 to ₹16,63,686 crore in FY 2022-23. Gross Direct Tax Collections in FY 2022-

23 were ₹19,72,248 crore as against ₹7,21,604 crore in FY 2013-14, a growth of over 173.31%."



But claiming it to be an effect of demonetization would be definitely misleading because if follow the previous year graphs- it can be seen that the increase in tax collection by 14% is not something new. The same increase was also seen in the year 2014. Therefore, it would not be justified to state that this increase was a result of demonetization. Similarly, the taxpayers are also increased every year hence increase after the demonetization was also nothing special.



Mr. Arun Jaitley, in a tweet dated August 30, 2018, mentioned that the quantum jump in the number of returns filed—from 3.18 crore in March 2014 to 6.86 crore in 2017-18—demonstrates the impact of demonetization, pointing toward a growing economy.

The same was exposed by Mr. Rupa Subramanya where she represented the growth rate of number of returns and claimed that the figure cannot be asserted as 'phenomenal'.



2. CASE OVERVIEW: VIVEK NARAYAN SHARMA v. UNION OF INDIA (2023)

FACTS

The 2016 demonetization policy disrupted activity in almost all sectors of the economy, chiefly small businesses, day-wage earners, and people residing in rural areas. Long queues formed outside banks and ATMs as people rushed to exchange or deposit the now useless notes. It also sparked a big political and public debate on how effective the policy really is and the hardship that it has caused. In the backdrop of 2016 demonetization, a batch of petitions challenging the policy of demonetization was filed and the lead case is that of Vivek Narayan Sharma v. Union of India. The petitioners in this case have urged that the policy on demonetization is unconstitutional and also suffers from lack of proper legislative support, besides being violative of fundamental rights under Articles 14 and 21 of the Constitution of India. A Constitution Bench has heard the case of the Supreme Court of India.

ISSUES

The Constitutional bench reframed the nine questions posed by the three judges of the Hon. Supreme Court on December 16, 2016, into the following six issues:

1. Whether the expression "all series" in Section 26(2) of the RBI Act would permit restriction by the central government to "one" or "certain" series of banknotes; whether the word "all" preceding "series" in the subsection would make the demonetization restricted to certain series, especially when the earlier demonetisations were carried out by plenary legislation?
2. Whether the power under Section 26(2) of the RBI Act should cease to operate if it is interpreted to extend to "any" series of banknotes, considering the excessive delegation of power under this subsection?

3. Whether the notification dated November 8, 2016 may be struck down on the pretext of any illegality in the decision-making process?
4. On the basis of proportionality test, whether not impugned notification dated November 8, 2016 is liable to be struck down?
5. Whether the contention that the time for exchange of notes by the impugned notification dated November 8, 2016 was inadequate or unreasonable is a valid contention?
6. Whether the RBI can accept demonetized notes beyond the period notified in the notifications issued under Section 4(1), completely independent of Sections 3 and 4(1) by virtue of the power under Section 4(2) of the 2017 Act?¹²

LEGAL PROVISIONS

1. Section 26(2) of the Reserve Bank of India ('RBI') Act, 1934
2. Section 4(2) of the Specified Bank Notes (Cessation of Liabilities) Act, 2017 (2017 Act)

PROPORTIONALITY TEST LAID DOWN BY COURT

The Court has relied on Four Proportionality test: -

1. That the impugned notification was issued for a valid purpose and it dealt essentially with three issues, namely: (i) counterfeit currency, (ii) unaccounted wealth, and (iii) drug trafficking and terrorism.
2. That the measures undertaken should be appropriate for achieving this purpose. Action was taken essentially against circulation of counterfeit notes.
3. No other steps could have led to the same end result; Central Government and the RBI are the best institutions to decide on the country's monetary policies.
4. The means selected to achieve the purpose must show a reasonable connection. In this case, the purpose of preventing circulation of counterfeit money is very important socially as it goes to the heart of the economy; thus, relating the purpose to the action properly.¹³

¹² JUSSCRIPTUMLAW, Case Analysis: Vivek Narayan Sharma v. UOI (2023), *JUSSCRIPTUMLAW* (last visited Aug. 14, 2024), <https://www.jusscriptumlaw.com/post/case-analysis-vivek-narayan-sharma-vs-uoi-2023>.

¹³ Shyam Saxena, *Vivek Narayan Sharma v. Union of India (Validity of Demonetization)*, 2 MAGLAW 106, 108-10 (2023).

RATIONALE

The court held that the central government may exercise such power over any series of bank notes under Section 26(2) of the RBI Act. The fact that all the earlier demonetization was effected by plenary legislation does not prohibit the central government from exercising its power under Section 26(2). The requirement that the recommendation of the central board is required is a check on arbitrary exercise of power and prevents Section 26(2) from becoming an instance of excessive delegation. Moreover, as the notification survives the proportionality test, it is not liable to be struck down on that count. The contention that the time for issue of notes was not reasonable is without merit. Further, under Section 4(2) of that very Act itself, the Reserve Bank of India had no independent authority to accept demonetized notes beyond the time declared in notifications under Section 4(1) of that Act.¹⁴

JUDGEMENT

The validity of the impugned notification was upheld on a hearing in the Court. It explained that the word "any" in Section 26(2) of the RBI Act, 1934, means "every." It was further noticed that there was no case of excessive legislation as the government had acted at the recommendation of the Central Board under Section 26(2) of the RBI Act, 1934. While conceding that no decision is perfect, the Court held that the notification survived the four tests of proportionality. Further, the Court rejected the submission that the notification was bad in law because it caused hardship to some persons; it held that individual interests must give way when they stand in the way of a larger public interest that the impugned notification serves¹⁵.

CONCLUSION

This case is very instructive in relation to Section 26 of the RBI Act, 2017, as it elaborately develops the purposive interpretation together with the golden rule in the dissenting judgment. It enables understanding the process of demonetization done in 2016, the issues it served, and the problems that have arisen. The case has laid emphasis on public interest having precedence over individual interest and application of Aharon Barak's four-pronged test for application of proportionality test.¹⁶

¹⁴ *Id.* at 113.

¹⁵ *Id.* at 113.

2.1 ECONOMIC IMPLICATIONS OF THE JUDGEMENT

The judgement has huge economic implications for India's monetary policy and financial stability. This verdict upholding the legality of demonetization further strengthens the Central Government power in order to take bold and firm decisions while handling the economy, particularly when it is troublesome.

A. IMPACT ON MONETARY POLICY

Given the affirmation of the wide meaning assigned to "any" in Section 26(2) of the RBI Act, the judgment grants to the Central Government requisite flexibility in the management of currency. The flexibility is intrinsic, yet indispensable for the government to respond promptly to the challenges that may arise in the form of inflation, counterfeit currency, or circulation of black money. This judgment has brought to the fore the need for an effective, dynamic and responsive monetary policy system, which allows the government to take such actions as would be necessary for maintaining financial stability.

B. BOOST TO DIGITAL ECONOMY

This judgment is also an impetus to digital transactions and formalization of the economy. One of the stated objectives of demonetization was to reduce dependence on cash and move towards digital payments. By being a party to the government's demonetization step, the Court indirectly holds up an important initiative for moving toward a less cash economy. This digital transaction shift has immense potential for improving transparency, reducing tax evasion, and enhancing financial inclusion—all which contribute to the general health of an economy.

C. LONG-TERM ECONOMIC GAINS

The judgment does realize, however, that the short-term economic impact was disruptive and acknowledges that the long-term benefits may be larger than the immediate costs. Secondly, the emphasis of the Court on the proportionality of the measure suggests that a decision to demonetize was justifiable in view of the larger public interest at stake. Obviously, the judgment aims to indicate that economic policies must not be judged solely by immediate effects but by the potential they hold to reach sustainable economic growth and development.

D. PRECEDENT FOR FUTURE ECONOMIC DECISIONS

The verdict is of precedent value for future economic decisions, particularly those related to monetary policy and financial regulation. Upholding the delegation of powers to the Central

Government and the RBI, the Court underscored the establishment of expert bodies that are vested with powers to take some very critical economic decisions. This may set a further precedent for future cases of economic policy, where the Court would like to exercise continued judicial restraint in matters where expertise of specialized institutions is to be respected.

E. INFLUENCE IN PUBLIC CONFIDENCE

The verdict equally has implications for public confidence in the government's economic policy decisions. In ruling that demonetisation was legally valid, the Court tends to tell the people that the government is legally and constitutionally competent to take tough decisions in the interest of the nation. This could help in re-establishing the power of the government to effectively manage the economy and other challenges like corruption, black money, and financial crimes, thereby enhancing public confidence.

3. COST- BENEFIT ANALYSIS OF DEMONETISATION

3.1 COSTS OF DEMONETIZATION

A. LIQUIDITY CRUNCH

It refers to a condition where the public is unable to access the currency denomination which is widely used in the economy, like Rs. 500 made up nearly 49% of the supply of previous currency. The sudden withdrawal of 86% of currency caused a huge liquidity crunch, especially in cash-driven sectors of the economy, like agriculture, small businesses, and the informal sector. That caused a slowdown of economic activity with reduced consumer spending and disruptions in supply chains. The liquidity crunch extends due to delay in replenishing the Rs. 500 notes. As of March 2016, 16 billion notes of Rs. 500 were in circulation in the economy however by the end of the year only 2 billion Rs. 500 notes were expected to be produced by the security printing presses. Some of them were replaced by Rs. 2000 notes and it was estimated that approximately 10 billion new Rs. 500 notes would have been printed and distributed by the end of that March. Considering these factors, the shortage of currency notes was predicted to last for about four more months then.¹⁷

B. LOSS OF JOBS

The cash crunch led to the loss of many jobs, especially in the unorganized sector. Several small businesses—who run their most of the transactions through cash—were forced to shut

¹⁷ Dr. Reena, *Demonetization and its impact on the Indian economy*, IJCRT, 437, 437- 445 (2018).

down or slash their operations drastically. In the first fifty days after demonetisation the Indian economy had to bear an estimated loss of 1.28 lakh crore. An article in The Indian Express November 8, 2016, reports that in the data of CMIE, it has been revealed that the total number of employed is estimated to be 405 million from January to April 2017, as against 406.5 million in the four months prior, which is from September to December 2016.

C. COST OF PRINTING CURRENCY

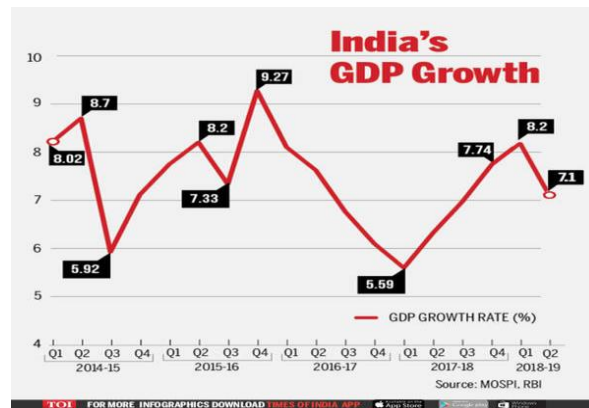
Expensive costs of printing new ₹500 and ₹2,000 notes and distributing them across the country had to be borne by the government. Increased cost of currency printing has been reported by the Reserve Bank of India, thereby impacting the government's finances. The cost of printing the new notes was Rs. 21,000 crores. Overall, the estimated loss was of Rs. 5-6 lakh crore.

D. FALL IN GROWTH OF GDP

There was a fall in GDP by 2.2%. The same had been predicted by the economists. India may lose tag of fastest-growing large economy: A setback in consumption, income, and investment could pull down the growth in Indian GDP since there is at least a time lag of three to four months for this liquidity squeeze to resolve, though consumption would be the first casualty in case of a liquidity squeeze. The moment there is loss in consumption there will be reduced production which in turn will lead to reduced employment. It will reduce the growth and thus the tax revenue¹⁸

From the graph, it can be seen that the growth rates of GDP went down in the Indian economy over successive quarters in the post-demonetization period. The GDP growth rate dropped from 8% in Q2 2016 to 6.1% in Q4 2016, and then further dropped down to 5.7% in Q1 2017, thereby reflecting the hostile impact on economic activity.

¹⁸ Tojo Jose, What Are the Impacts of Demonetisation on Indian Economy?, *INDIAN ECONOMY.NET* (Nov. 16, 2016), https://www.indianeconomy.net/splclassroom/what-are-the-impacts-of-demonetisation-on-indian-economy/#google_vignette.



E. STRAIN ON BANKING SECTOR

The banks were tasked with replacing the old currency notes. Long queues were a common sight, and large amounts of resources got diverted to it. The banking sector also suffered re-calibration costs of ATMs and costs associated with handling increased workloads.

F. SOCIAL COST – PUBLIC INCONVENIENCE

There was considerable public inconvenience, more in rural areas where access to banking is minimum. Reports even surfaced of related deaths due to the tension and pressure of demonetization.

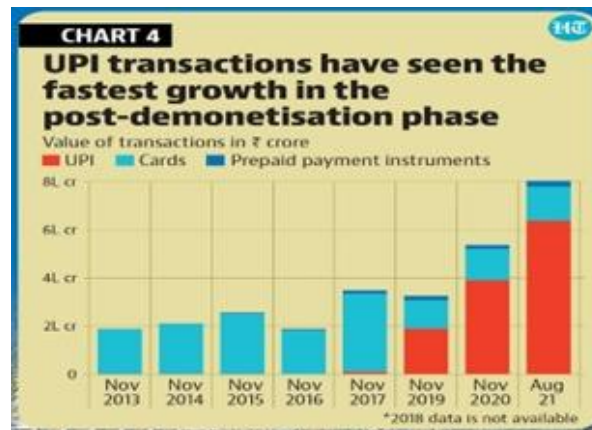
G. EFFECT ON INFORMAL SECTOR

The informal sector, largely dealing with cash transactions, was severely affected, causing the loss of income among daily wage workers, small traders, and farmers. Welfare loss for the currency-dependent population: The most active sections of the population, which are often constitutive of the 'base of the pyramid', are heavily dependent upon cash for their daily transactions. Daily wage earners, labourers, small traders, and others outside the formal economy engage extensively in cash transactions. Without liquid currency, income loss is suffered by these sections. Cash shortages might induce firms to reduce labour costs and thereby reduce the earnings of the poorer working classes.

3.2 BENEFITS OF DEMONETIZATION

A. INCREASE IN DIGITAL TRANSACTIONS

The inherent advantages of demonetization were that more people adopted digital modes of payment. It has seen a huge spurt in digital wallets, online transactions and UPI payments; this goes a step further in fulfilling the government's dream of a cashless economy.



B. FORMALIZATION OF ECONOMY

Demonetization forced businesses and people to turn towards formal banking channels and, hence better tracking of transactions and increased tax compliance.

C. BOOST TO FINANCIAL INCLUSION

PMJDY accounts saw a steep rise in deposits during the period of demonetization, pointing to increased financial inclusions. Many opened bank accounts for the first time; therefore, such people were brought into the folds of the formal financial system.

3.3 NET IMPACT

The impact of demonetization overall, therefore, remains controversial. Though it worked wonders in digitizing transactions and improving tax compliance, short-run economic costs were huge in terms of a slowing-down of GDP growth, loss of jobs, and public inconvenience. Black money and reduction in problems of counterfeit currency were largely temporary; the long-term benefits accruing in the form of financial inclusion and formalization of economy remain at large.

SHORT -RUN ECONOMIC DISRUPTION - The sudden withdrawal of high denomination notes caused a shortage of liquidity, which hurt small businesses and daily wage earners. Counting these disruptions against the long-term benefits from a cleaner economy needs to be done for a proper weighing of the effects.

LONG-TERM BENEFITS - The possible long-term benefits that can be gained from these measures can include higher tax compliance, a larger tax base, and greater formalization of the economy. The fact that the judiciary accounted for these long-term benefits implicates an approach of utilitarianism to economic policy, in which overall welfare is factored first before any inconvenience.

4. DATA ANALYSIS OF KEY ECONOMIC VARIABLES

The following section uses statistics software JASP to understand the relationships between key variables such as GDP, inflation rate, unemployment rate, and digital transactions during the period after demonetisation.

4.1 Shapiro Wilk Test for Normality

Descriptive Statistics

	Digital transactions	Inflation rate	GDP
Valid	7	8	8
Missing	1	0	0
Mean	7041.714	4.975	2.902
Std. Deviation	4360.235	1.288	0.419
Shapiro-Wilk	0.927	0.928	0.948
P-value of Shapiro-Wilk	0.526	0.500	0.689
Minimum	2071.000	3.300	2.290
Maximum	13462.000	6.700	3.550

Variables	Shapiro-Wilk	P-value of Shapiro-Wilk
Digital Transactions	0.927	0.526
Inflation rate	0.928	0.500
GDP	0.948	0.689

If the p-value is more than 0.1, then it would indicate that the data is normally distributed. Here, the p-value of all the variables is above 0.1, so this data is normally distributed. Thus, we have to use the Pearson test now to determine the strength and direction of regression.

4.2 Correlation

Pearson's Correlations

Variable			digital transactions	unemployment rate	inflation rate	GDP
1. digital transactions	Pearson's	—				
	r	—				
	p-value	—				
2. unemployment rate	Pearson's					
	r	-0.896				
	p-value	0.006				
3. inflation rate	Pearson's					
	r	0.754	-0.427			
	p-value	0.050	0.291			
4. GDP	Pearson's					
	r	0.931	-0.934	0.423		
	p-value	0.002	< .001	0.296		

Pearson's correlation coefficient is a measure both of the strength and of the direction of the relationship between two variables measured on a ranked scale. It, in fact, measures the degree of monotonicity in a relationship: how well the relationship of the two variables can be described by a monotonic function.

Variables	Pearson's value	Interpretation
Digital transactions and unemployment rate	-0.896	Negative strong

Digital transactions and inflation rate	0.754	Positive strong
Digital transactions and GDP	0.931	Positive very strong
Unemployment rate and inflation rate	-0.427	Negative moderate
Unemployment rate and GDP	-0.934	Negative strong
Inflation rate and GDP	0.423	Positive moderate

4.3 Model Predictability – R²

Model Summary - GDP

Model	R	R ²	Adjusted R ²	RMSE
H ₀	0.000	0.000	0.000	0.365
H ₁	0.983	0.966	0.931	0.096

The model summary returns R² value of 0.966 which means that the model predicts 96.6% of the variance in the dependent variable according to a variance in the independent variables.

4.4 Root- Mean Square Error (RMSE)

The model- summary returns RMSE value of 0.096 which means that the model's predictions are very close to the actual GDP values showing good predictive accuracy.

4.5 ANOVA (Analysis of Variance)

ANOVA

Model		Sum of Squares	df	Mean Square	F	p
H ₁	Regression	0.773	3	0.258	28.123	0.011
	Residual	0.027	3	0.009		
	Total	0.800	6			

Note. The intercept model is omitted, as no meaningful information can be shown.

Since the p-value of the given model >.001, the model can be concluded as a non-linear model.

4.6 Coefficients

Coefficients

Model		Unstandardized	Standard Error	Standardized	t	p
H ₀	(Intercept)	2.990	0.138		21.662	< .001
H ₁	(Intercept)	3.500	0.676		5.178	0.014
	inflation rate	-0.061	0.071	-0.232	-0.857	0.454
	unemployment rate	-0.100	0.098	-0.403	-1.018	0.384
	digital transaction	6.237×10 ⁻⁵	4.540×10 ⁻⁵	0.745	1.374	0.263

The linear regression equation is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_n X_n$$

The linear regression equation for this data set is –

GDP = 3.500 – 0.061(Inflation) – 0.100 (Unemployment rate) + 6.237×10⁻⁵ (Digital transaction).

Interpretation

- 1 unit increase in inflation will decrease the GDP by 0.061 units and it is NOT STATISTICALLY SIGNIFICANT, ceteris paribus.
- 1 unit increase in unemployment rate will decrease the GDP by 0.100 and it is NOT STATISTICALLY SIGNIFICANT, ceteris paribus.
- 1 unit increase in digital transaction will increase the GDP by 6.237×10⁻⁵ and it is NOT STATISTICALLY SIGNIFICANT, ceteris paribus.
- Irrespective of the changes in any of the independent variables, there will be an autonomous change in the dependent variable, GDP by 3.500.

5. IMPACT OF DEMONETIZATION ON KEY SECTORS

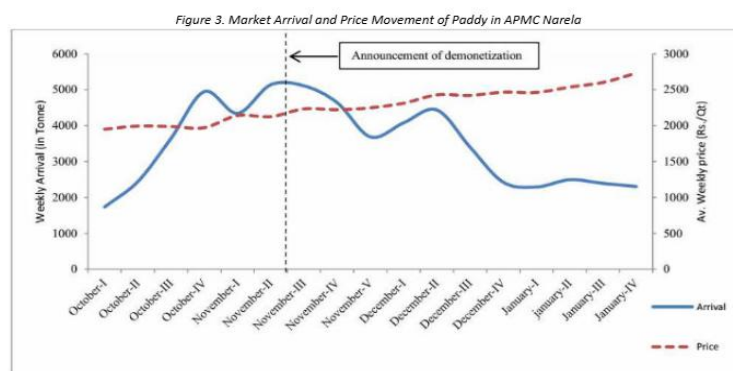
In this section, three key sectors i.e. agriculture, manufacturing and banking sector are discussed, evaluating the short term and long-term impacts of demonetisation and how the sectors revived after the sudden and massive blow of demonetisation, which rendered the high-value ₹500 and ₹1,000 notes invalid.

5.1 AGRICULTURE

SHORT – TERM IMPACT

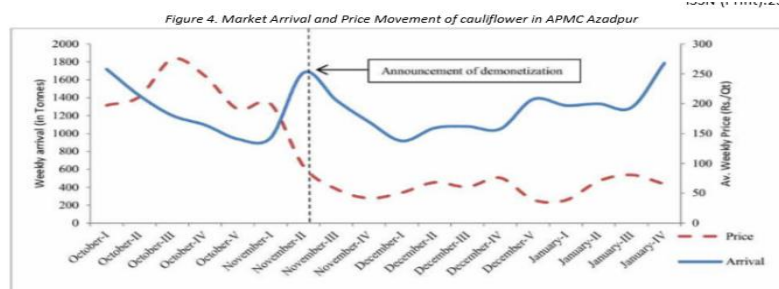
The demonetization of high-value denominations in 2016 was implemented during a critical period which caused a lot of difficulty to the farmers. It affected their ability to manage the cash flow for Kharif and Rabi crops. In addition to this, the sales, inputs, labour and even the payments were affected as compared to previous instances.¹⁹

However, Figure 3 indicates that demonetization had no effect on the price of paddy although the arrival of paddy decreased significantly after the second week of November.



It should be noticed that the prices and market arrivals of perishables like fruits and vegetables dropped after demonetization. Wholesale prices for vegetables (such as cauliflower) and fruits (like apples and oranges) fell, leading to income losses for cultivators, as shown in Figures 4, 5, and 6.

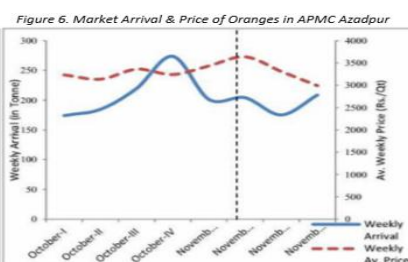
¹⁹ Jaiprakash Bisen, Shiv Kumar, P. Venkatesh and K.S. Aditya, *Impact of demonetization on agriculture: a case study*, 5(2) IJED. 1, 6-7 (2017).



Source: agmarknet.nic.in [7]



Source: agmarknet.nic.in[8]



Source: agmarknet.nic.in

It is challenging to determine the extent to which the price drop in November and December 2016 was due to an oversupply or disruptions caused by demonetization as there was good monsoon that year which had increased the supply, which in turn led to lower prices.

The main model of price determination in economic theory, the law of supply as explained in the beginning of this paper can be used to analyse this relationship between the quantity of the commodity that producers wish to sell at various prices and the quantity that consumers wish to purchase.

LONG TERM IMPACT

It was expected to make some transformational changes in the sector related to better access to credit for farmers, removing middlemen-one of the major reasons behind the poor financial condition of Indian farmers since their profit is substantially reduced by the commissions-and direct transfer of subsidies to farmers that would lead to an overall improvement in their conditions..²⁰

Using data from 3000 markets and 35 crops we analysed that the impact of demonetization on agricultural trade was the initial drop by 16.63- 16.8%, which later after eight months stabilized at 11.8- 12.1%. It was due to decline in prices. Kharif crops, perishable items and

²⁰ Dr. R. Govindasamy, *Demonetization impact on agriculture sector in India*, 5, SIJE. 148, 150-151 (2017).

the crops with least government intervention had seen the significant effects. The reduction in trade value persisted for two growing seasons though the broader economic effects typically faded within that time frame²¹.

5.2 MANUFACTURING

Demonetization had a notable impact on manufacturing sector. The Nikkei India Manufacturing Purchasing Managers' Index (PMII) fell from 52.3 in November to 49.6 in December. For the first time it fell below 50 marks in 2016. This decline marked a contraction in the sector with decreased new work, decrease in output which resulted in decrease in employment. This situation can be analysed using Keynesian economics which is explained above.

According to Geeta Rani (2016), some industries faced production issues due to the scarcity of certain raw materials, such as agricultural commodities and cash crunch. Supply chains were severely affected which resulted in difficulties in transportation and stock procurement. As a result, there was decrease in trade and manufacturing output. The decline in PMI was linked to slower growth in core sectors like cement and steel, as their growth rate fell from 6.6% in October to 4.9% in November.²²

FUTURE OUTLOOK - In the short term, the manufacturing sector may still struggle with the effects of demonetization, including disruptions to supply chains and liquidity issues. However, as cash flow problems are addressed and businesses adapt, a recovery is expected. Improved financial practices, investments in digital payment solutions, and potential government support could aid in this process. Over time, the sector is likely to see a rebound in production and growth, especially in key industries like cement and steel, signalling a return to normal economic conditions.

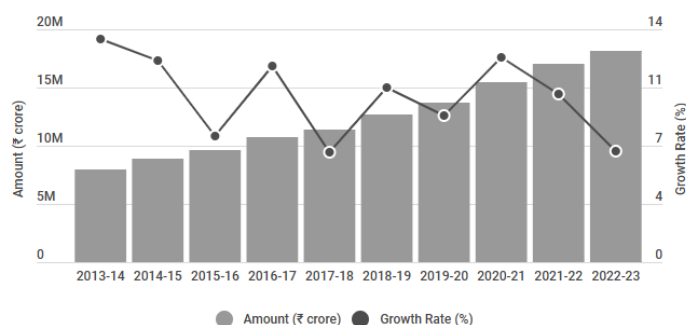
²¹ Nidhi Aggarwal, Sudha Narayanan, The impact of India's demonetization on domestic agricultural trade, 105(1), AAEA, 316, 321-330 (2023).

²² Gaganpreet Singh, *Impact of demonetisation on different sectors of India's economy*, 6, IJCRT, 638, 640 (2018).

5.3 BANKING INDUSTRY

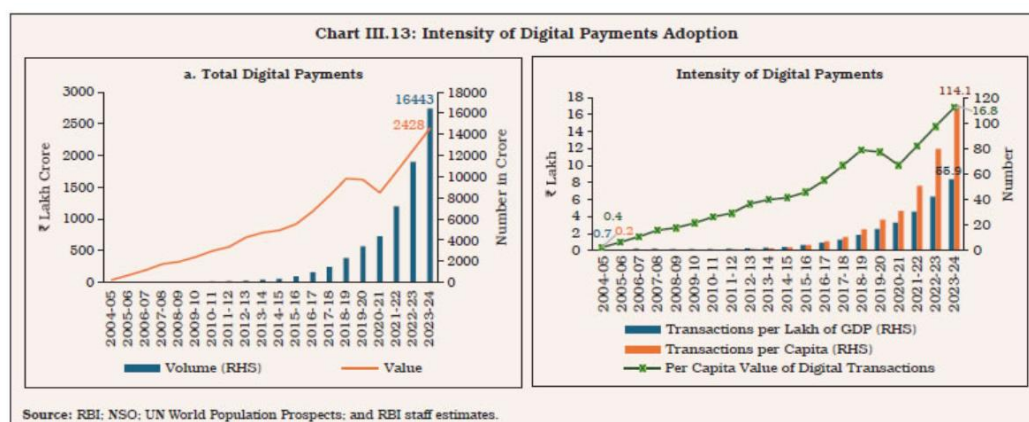
SHORT – TERM IMPACT

- Increase in operations** - From the day of announcement about demonetization, the very next day, banks experienced an increased number of customers, which doubled up the operations in banks as they need to extend their working hours to manage the rush of deposits and exchanges of old Rs. 500 and Rs. 1000 notes.
- Increase in deposits** - The drive of demonetization has seen a massive increase in bank deposits. The growth in deposits was higher than the previous year. This infusion of cash within the banking system had been a direct fall out of people depositing their old currency notes.²³



Source: RBI

- Growth in Digital Transactions**- Digital payment systems showed a remarkable spike. E-wallet transactions went up from 17 lakh to 63 lakh per day, and the value increased from Rs 52 crores to Rs 191 crores. This was one of the most striking changes in consumer behavior.



²³ Adil, M. H., & Hatekar, N. R. (2020). Demonetisation, Banking and Trust in 'Bricks' Or 'Clicks'. South Asia Research, 40(2), 181-198. <https://doi.org/10.1177/0262728020915566>

- d. **Reduction in Non-Performing Assets (NPA)** - With increased deposits, banks might have got respite from NPAs. Increased liquidity enabled banks to lend better, and this was likely to reduce the bad loans burden.

IMPACT ON BANKING STOCK INDEX

On 9th November, 2016 after the announcement of demonetization, the BSE BANKEX closed at 22,374.20. On 10th November, it peaked its value at 23,185.29 but from here it declined through December. The index rebounded in early January 2017 and by February an increase of 4.38% was seen since November 9. The initial dip was probably due to reduction in demand for loan, net interest margins and slow pace of economic activity. It is to be noted that some banking stocks especially, PSUs marked gain as benefits were anticipated from demonetization by the markets. It also included potential lending rate cuts and increased CASA deposits.²⁴

The index showed some positive movement after the announcement of demonetization on November 8, 2016. It closed at 22,374.20 on November 9, 2016, and surged ahead to a one-month high of 23,185.59 on November 10, 2016. The upward movement did not stay for long. The index has fallen drastically during the whole December 2016.

The index started showing signs of recovery by early January 2017 and had continuous increases to reach 23,354.41 by February 6, 2017. This represented an increase of 4.38% from its November 9, 2016, close. It is said that the fall was due to factors such as a fall in the demand for loans due to demonetization, decreased net interest margins, and a general slowdown in economic activity. Despite these shocks, some banking stocks rose sharply; in particular, public-sector undertakings were the ones leading the charge.

²⁴ Swati Gupta, *An impact Analysis of Demonetization on Key Sectors of the Indian Economy*, 2, LIBERAL STUDIES, 205, 210-217 (2017).



Source: www.bseindia.com

LONG- TERM IMPACT

1. **Sustained Growth in Deposits** - High deposit levels can thus be retained by the banking sector in the long run since more people will be habituated to banking services and digital transactions will become the rule rather than the exception. This could therefore result in a more robust banking system that would be characterized by a higher level of liquidity,
2. **Lower Interest Rates**- A flood of deposits can result in a reduced interest rate for loans. Since banks have more money to lend, it may lower the cost of borrowing, which will boost economic activity and consumer spending.
3. **Better Regulatory Environment and Investment Opportunities**- The demonetization drive is likely to make the working environment within the banks more- systematized and clean. Any regulatory action initiated in the direction of making black money less and bringing about more transparency and accountability will, in the long run, turn out to be good for the banks. With improved liquidity and a cleaner financial system, the banks can have a better chance of improved investment opportunities in infrastructure, small businesses, and other sectors, leading to overall economic growth.

6. GLOBAL PERSPECTIVE: COMPARISON WITH DEMONETIZATION EVENTS IN OTHER COUNTRIES

Apart from India, a number of countries have tried demonetisation to redesign their economy. These countries include Ghana, Myanmar, the Soviet Union, Australia, Zimbabwe, and North Korea among others. While some have succeeded, others have not been as effective in the process. Singapore too, conducted a demonetisation, but not as extensive as in India. Under the claim of a Japanese occupation, the introduction of "banana" notes was done for circulation. Post-Japan's surrender in August 1945, the "banana" notes were demonetised²⁵, states Singapore mint.

Ghana demonetized its own currency, the cedi, due to the menace of black money and hyperinflation. Inadequate support resulted in a mass shift to hard assets and foreign exchange that brought chaos²⁶. In 1984, with the induction of new coloured notes, Nigeria demonetized its currency to eliminate black money under the military president Muhammad Buhari.²⁷ Poor planning coupled with high inflation and a short period of exchange resulted in the crash of the economy. There have been many demonetizations in Myanmar that took place during 1964, 1985, 1987, and 2015, with the main purpose behind them being to combat counterfeiting.²⁸ It is these latter, true enough, though, that most of the 1984 one caused serious casualties and protests, and 80% of that had been declared null and void. The demonetization that took place in 2015 reaffirmed the 10.

The state of Zaire introduced currency reforms of the same decade by the 1990s led to inflation spikes and collapse in exchange rates. Soviet president Mikhail Gorbachev announced the demonetization of higher denomination Rubble bills in 1991 had minimal economic impact, but he lost his presidency within a year. Australia first adopted polymer notes entirely in the year 1996 to minimize counterfeiting. The Euro is a demonetization event, specifically the exchange of old national currencies or denominations into euros. North Korea's 2010 demonetization under Kim Jong-Il caused food shortages, economic breakdowns, and starvation. In 2015, the demonetization of the Zimbabwe dollar took place in the height

²⁵ P H Kratoska, *Banana money: consequences of demonetization of wartime Japanese currency in British Malaya*, 23, J. SOUTHEAST ASIAN STUD. 322, 325-327 (1992).

²⁶ Dzokoto, Vivian Afi Abui, and Edwin Clifford Mensah, *Making Sense of A New Currency: An Exploration Of Ghanaian Adaptation To The New Ghana Cedi*. JABE, (2010).

²⁷ Fourchard, Laurent, Azeez Kayode Sikiru, *The 2023 Cashless Election in Nigeria: The Politics of Withdrawing Money*, AFR. AFF. 122, 429, 435-436 (2023).

²⁸ Modak, Kali Charan, Vivek S. Kushwaha, *Pre and Post Impact of Demonetization on Economic Growth: Evidence from Countries Implemented Demonetization*, ABHIGYAN, 36, 1-10 (2018).

of its hyperinflation, where foreign currencies were adopted to stabilize the economy. In 2008, hyperinflation devalued the Zimbabwean dollar on a massive scale. On the other side of the border, the Philippines demonetized old notes in 2015 to prevent counterfeiting, with new notes already in circulation in 2010. Pakistan once phased out all old-designed Rs.5 and Rs.500 currency notes.²⁹

How well demonetization meets the desired goals of clean-up of counterfeit currency, clamping down on illicit activities, and black money depends entirely on good planning, implementation, and the macroeconomic context of individual countries.

²⁹ Dr. Ram Singh, *Demonetization-A Comparative Study "Special Reference to India with Rest of World*, ZIJBEMR, 8, 120, 128-129 (2018).

7. CONCLUSION

The case of **Vivek Narayan Sharma v. Union of India** brings out the interdisciplinary nature of law and economics in assessing governmental policy decisions like demonetization. The 2016 demonetization was supposed to address black money, fake currency notes, and illegal transactions while pushing India towards a more formal, digital economy. On the other hand, consequent economic disruptions, especially in the informal sector, have exposed its huge costs in terms of diminishing GDP growth, liquidity problems, and social distress.

The Supreme Court, while conceding that citizens were put to hardship, ruled that demonetization was legally valid. The judgment thus underlines the vast, even limitless, powers of the executive while flagging the constraint that judicial review can effectively exercise over intricate and intensely complicated policy decisions. But both the short-term miseries and long-term uneven benefits of mixed economic outcomes expose the pitfalls of a measure like this without due homework and calculation of its impact.

The demonetization move had several implications on the economy. It was brought to reduce black money in the system, reduce the amount of counterfeit currency, and increase digital transactions. It did accomplish some of these objectives but caused huge disruptions, foremost of which was cash shortage and logistics problem that affected small businesses and daily wage workers. This demonetisation, in essence, did not accomplish **Pareto optimality** because, on the one hand, it made a few sections of people in society better off due to formalization of the economy and digital push in payments. It was a policy hurting others due to immediate economic distress and liquidity problems. Hence the said policy cannot be called Pareto optimal.

In summary, had the decision to demonetize been upheld legally, its economic analysis still indicates that more cautious and better-planned reforms are needed. Any future policies should undertake comprehensive planning and stakeholder involvement to avoid unwanted outcomes and ensure intended benefits match results in the real world.

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