

Evaluation of the Arthakranti Proposal

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PREFACE

The evolution of India's taxation system has progressed along a predictable course, from an economy highly dependent on land revenue and taxes on international trade, then on taxes on domestic goods and services to the present, while direct taxes on income constitute a steadily increasing share. The evolution of India's taxation structure has been such as one would expect of a growing emerging economy. However, two important features significantly impact the effectiveness of tax policy. The first is that the existence of a parallel or 'black economy' in India: there is a high level of unaccounted GDP which by definition does not form part of the tax base. The second is the rise in importance of finance and financial services in mediating real economy transactions, which has accelerated significantly following India's increased engagement with globalisation, increased financial inclusion and improvements in financial technology.

Addressing these challenges requires considerable refinement of existing tax policy. Beyond a point, there are limits to which enforcement can be used to address the parallel economy problem, for in that direction lies greater harassment of individual honest taxpayers and the danger of rent seeking by tax administration. With finance, the possibilities of base erosion and sophisticated forms of tax avoidance also arise. It is therefore important to seriously examine "out of the box" thinking on alternative paradigms for tax policy that have relevance in the Indian context. In this respect the proposal by Arthakranti for a paradigmatic change in the taxation system along with a proposal to expand the scope of non-cash transactions is a striking one, with its roots in India. While there has been global work on the subject, that complements the Arthakranti proposal, it is, in its genesis and *raison de etre*, a proposal that seeks to address India's structural response to the above mentioned features that impact the efficacy of our taxation system.

I, therefore, was very pleased when the governments of Madhya Pradesh and Haryana commissioned NIPFP to evaluate the Arthakranti proposal. This evaluation has explored in detail the analytical and operational features of the proposal, and pointed to areas where further research and refinement would further build the intellectual and operational case for the proposal to be considered at the policy level. I think it is important that out of the box proposals such as the Arthakranti proposal be taken seriously at the analytical and technical level. It is important not to reject proposals that are considered to be unorthodox simply because they are unorthodox; the obligation of policy research organizations such as NIPFP is to evaluate them on their merits and to point to areas where further work and analysis could help such ideas evolve.

I am happy that the evaluation, undertaken in this spirit, after extensive consultations with the Arthakranti team and a range of research, practitioner and policy stake-holders, has risen to this task. I hope that the evaluation will spur further work on this proposal so that it enriches our joint effort to use fiscal and economic policy to address specific Indian concerns that arise in the course of our development transformation.

It may be noted that opinions expressed in this report are those of the authors. The members of the Governing Body of National Institute of Public Finance and Policy are in no way responsible for the opinions expressed in this report.



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This study has been undertaken for the Government of Haryana and Government of Madhya Pradesh. During the course of the study, we had the opportunity to interact extensively with the Arthakranti team which contributed considerably to our understanding of the proposed reforms and enabled us to articulate the results of our analysis in a more effective manner. Dr Ajit Ranade was kind enough to review the first draft of our comments and provide some useful inputs. The revised version of the comments were discussed in a seminar organised at the NIPFP on May 25, 2017. The participants at the seminar included faculty members from NIPFP along with invited experts from other organisations. The participants from other organisations included Dr Ajit Ranade, Mr Hardayal Singh, Mr Sushil Solanki, Mr Sanjay Kumar, Mr Anish Tripathi, Mr Anil Gupta, Mr Sunil Saran and Mr Raj Kumar. From the NIPFP, the seminar was attended by a number of senior faculty members including Mr Sumit Bose, Dr Rathin Roy, Dr Pinaki Chakraborty, Dr Ila Patnaik, Dr Sudipto Mundle, Dr Pratap Jena, Dr H. K. Amarnath, Dr Mita Chaudhury, Dr Sukanya Bose, Dr B. B. Dash. The discussions at the seminar were very useful in finalising the report. The team gratefully acknowledges all these inputs received during different stages of the preparation of the report.

The team gratefully acknowledges all these inputs received during different stages of the preparation of the report. The team consisted of R. Kavita Rao, D. P. Sengupta, Sacchidananda Mukherjee, Sudhanshu Kumar, Sri Hari Nayudu and Suranjali Tandon.

Tax Team NIPFP

Chapter 1: Introduction

The financial crisis of 2008 followed by the slowdown in the world economy has brought an increase in focus on the taxes paid by different segments of the society. Particularly, it highlighted the fact that a number of large corporations as well as some high net worth individuals were found to pay relatively little by way of taxes. In India, there has been a lot of discussion on the amounts of “black money” various agents of the economy might have salted away either within the country or outside. The importance of this issue is reflected by the fact that the UPA government found it necessary to commission three studies on measuring the size of unaccounted incomes and for documenting the factors that contributed to the generation of unaccounted incomes. The issue has also been brought up repeatedly in election campaigns. The Indian tax system, is complex¹ and generates differential tax liabilities across sectors and agents. At the same time there are efforts within the government to find ways to simplify the tax regime and to encourage voluntary compliance. The proposed introduction of GST, efforts to reduce litigation in direct taxes and streamline administration are examples of measures working in this direction. Conceptually, for a simplified tax regime it is argued that there should be few or no exemptions and the system should be easy to comply with. However, there is another point of view emerging that incremental changes within the existing paradigm of tax policy may not be enough to correct the underlying problems of a globalised economy which is financially integrated to the world financial system. This is the context in which Feige (2000) and Cintra (2009) proposed an alternative system. The need for a similar reform is presented in the Arthakranti report² which combines a proposal for tax reform along with a proposal of expanding the scope of non-cash transactions in the economy.³

¹ For example Rao & Rao (2006) argue in favour of simplification of the Indian tax system as is also recommended by the report for TARC. Similarly the World Bank shows that India’s position has worsened on account of taxes.

² As updated on 19th January 2014.

³ Arthakranti team has informed that a booklet on ArthaKranti proposal, then named as “Transaction Tax Proposal”, was published on 15th October 2002 in “Think Line” publication by Guna Gaurav Nyas, Nasik, Maharashtra and that this proposal was put forth by Mr. Anil Bokil. It was then studied and propagated by ArthaKranti Group.

The main elements of the Arthakranti proposal as spelt out in the Arthakranti report are reproduced below:

- “• Withdrawal of Existing Tax System Completely (except Customs/Import Duties - Customs duties perform an important role of ensuring a genuine level playing field in a globalized world. Hence they will continue, may be, with the many improvements already suggested by the FRBM Act Implementation Task Force and other committees.)
- Every Transaction routed through a bank will attract a certain deduction in appropriate percentage as Bank Transaction Tax (say 2%)
- This deduction is to be effected on receiving/credit account only
- This deducted amount will be credited to different Government Levels like Central, State and Local (as say 0.7%, 0.6 % and 0.35% respectively)
- Transacting Bank will also have its share in this deducted amount (say 0.35%) as the Bank has a key role to perform
- Withdrawal of High Denomination Currency (say above Rs. 50)
- Cash Transactions will not attract any tax
- There will be no legal protection for cash transactions having a value of more than Rs. 2000.”⁴⁴

The elements of the proposal can be segregated into two components:

1. Demonetisation – elimination of high value currency
2. Replacement of most existing taxes with a banking transaction tax (except for customs).

The present study is an attempt to assess the likely impact of these proposed policy measures on the economy as well as on tax collections of the government. Towards this end, while the proposal presents these two measures as a combined policy proposal, it is important to understand the impact of these individually. The document is organised as follows: the following chapter will explore the effects of demonetisation on the economy. This chapter would explore the possible effects on consumer behaviour as well as on macro variables. The chapter highlights the possibility of a costly transition to an economy less reliant on cash for a range of basic transactions. In chapter 3, the proposal to replace all existing taxes apart from customs duties by a banking transaction tax

⁴⁴ Page 106. The Arthakranti proposal could have evolved with discussions over time. The assessment made in this document is of the proposal as made in the January 2014 version.

is examined in some detail. The analysis provides an assessment of the proposal on principles of taxation as well as a summary of the literature on the international experience in implementing such a tax. In the process, this chapter highlights the likely lacunae in such a tax regime and some dimensions of the likely impact on the economy. For instance, it explores the differences in tax liability across sectors and the likely change in the relative contributions to the exchequer and its implications for policy making. Since these two policies are presented as an integrated policy package, in the final chapter, an attempt is made to explore the feasibility of structuring this as an integrated policy and the likely steps that might be needed to facilitate the implementation.

Before taking up these aspects of the proposal for analysis, it would be useful to understand the basis on which the proposal advocates the reduction of currency in circulation. In the Arthakranti report a case is made for removal of high denomination of currency from circulation. The report provides the rationale for such removal through a cross-country comparison of currency in circulation to GDP, the ratio of per capita income to highest denomination notes and the ratio of currency in circulation to narrow money⁵. The report finds that India ranked fourth and first on currency to GDP ratio and currency to narrow money ratios respectively. The report uses the ratio of GDP per capita to highest denomination currency as a measure of ease with which high value transactions can be carried out with the use of cash. India ranks among the lowest, as per the report, therefore indicating greater ease in undertaking large transactions through cash.

Before embarking on a detailed analysis of the proposal, it is therefore important to ask whether India is an outlier in the quantum of currency in circulation or even in the value of the highest currency denomination in circulation when compared to other countries. Clearly there are two questions being asked – one, is there too much cash in India and second, is the value of the highest denomination note too high. The evaluation of India's position as an outlier can be based on alternative metrics. Some alternative ways of posing this question and answering it are presented below to get some additional understanding on these two questions.

First, for answering whether India has too much currency in circulation, we attempt to identify the factors that could be influencing the demand for currency in an economy. Some of these variables could be importance of exports and imports in the economy, the rate of inflation and the interest

⁵ Narrow money is the currency in circulation *plus* demand deposits (M1).

rates and the “extent of specialization” in the economy. Since the goods and services once produced are exported out of the economy, countries with a higher dependence on exports would require less currency. On the other hand, in countries with higher share of imports, the demand for currency would be higher since the imported goods require currency for transactions but would not add to the value added in the economy. In situations of high inflation and high interest rate, it is argued that people would prefer not to hold currency and hence the need for currency would be lower. Finally, in countries where there is more specialization within the production and distribution chain of a commodity or service, the demand for currency would be higher. Given this argument, it is therefore not appropriate to compare the ratio of currency to GDP across countries.

One method would be to estimate⁶ the relation between currency to GDP and these explanatory variables and then estimate whether India is an outlier by examining the errors (the difference between the actual and estimated values of the ratio.) This exercise is undertaken both for currency to GDP and currency to private final consumption expenditure since currency might be used more often to transact for consumption purposes rather than for investment or government expenditure. For interest rate, the deposit rate has been used while for inflation the inflation in consumer prices has been used. For specialization, the proxy variable used is the share of industry in GDP since there is greater specialization within this sector when compared to other sectors in the economy. All the data is taken from World Development Indicators (WDI) database of World Bank and International Financial Statistics (IFS) database of International Monetary Fund (IMF).

The results are summarized in Table 1.1 below and the error plots for different years are presented in figures 1-6. The analysis is based on the data for 44 countries over the period 2001-2014.⁷

⁶ The relationship can be estimated using fixed effects and random effects model for the panel. In order to make this choice, we use the results of hausman test. For CC/GDP model, $\text{Prob}>\chi^2 = 0.1392$ and for CC/PFCE, $\text{Prob}>\chi^2 = 0.1403$ and these suggest that we fail to reject the null, that is the random effects model must be used.

⁷ In this exercise, countries such as US and Japan have been excluded since their currency serves as international currency. Similarly for China. Further, all EU member countries have been excluded since they work in a currency Union and hence do not have distinct currencies and cannot plan separately for the amount of currency to put into circulation. Further, since countries in Africa are structurally quite different from other countries in the sample, these too have been kept out of the analysis. Of the remaining countries, 44 countries were selected for analysis depending on the availability of data and on them not having extreme values in the variables considered.

Table 1.1: Estimated Relations for Trends in Currency

	(1)	(2)
VARIABLES	Currency by PFCE	Currency by GDP
Exports to GDP	-1.019***	-107.5***
	(0.119)	(10.47)
Imports to GDP	1.338***	134.8***
	(0.107)	(9.403)
Share of Industry in GDP	0.601***	62.35***
	(0.181)	(15.72)
Inflation	-0.255**	-23.47**
	(0.107)	(9.438)
Interest rate	-0.373**	-26.33**
	(0.146)	(12.90)
Constant	-14.02**	-1,920***
	(6.972)	(603.3)
Observations	536	536
Number of id	44	44
Random Effects	YES	YES
Wald chi2(5)	178.20	226.70
Prob > chi2	0.0000	0.0000
R-sq:		
within	0.2644	0.3102
between	0.1676	0.2592
overall	0.2026	0.2786

Note: Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Figure 1.1 Currency to GDP: Errors (2001)

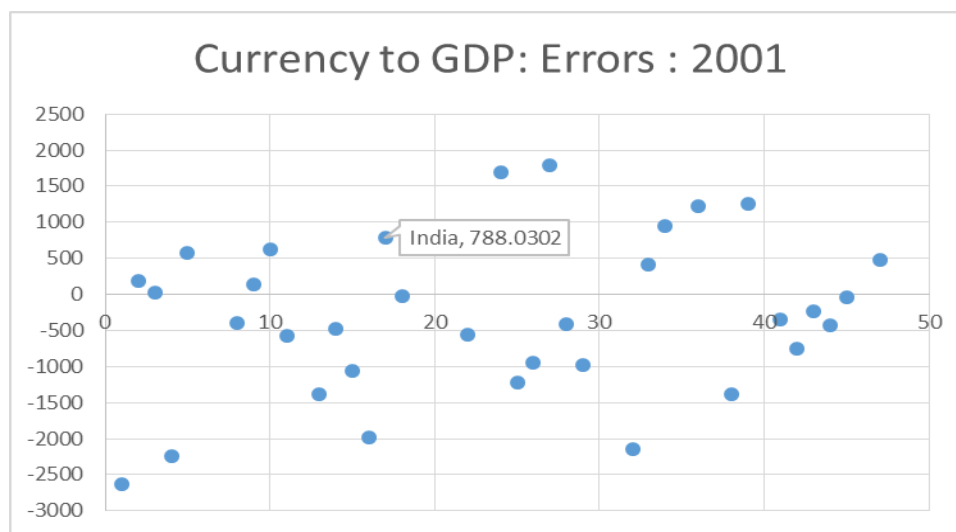


Figure 1.2 Currency to PFCE: Errors (2001)

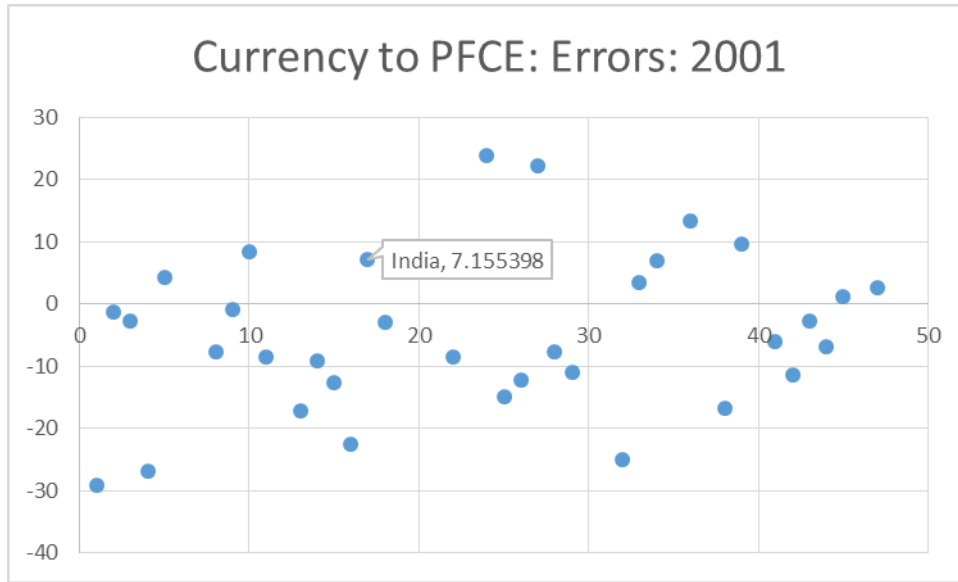


Figure 1.3 Currency to GDP Errors (2005)

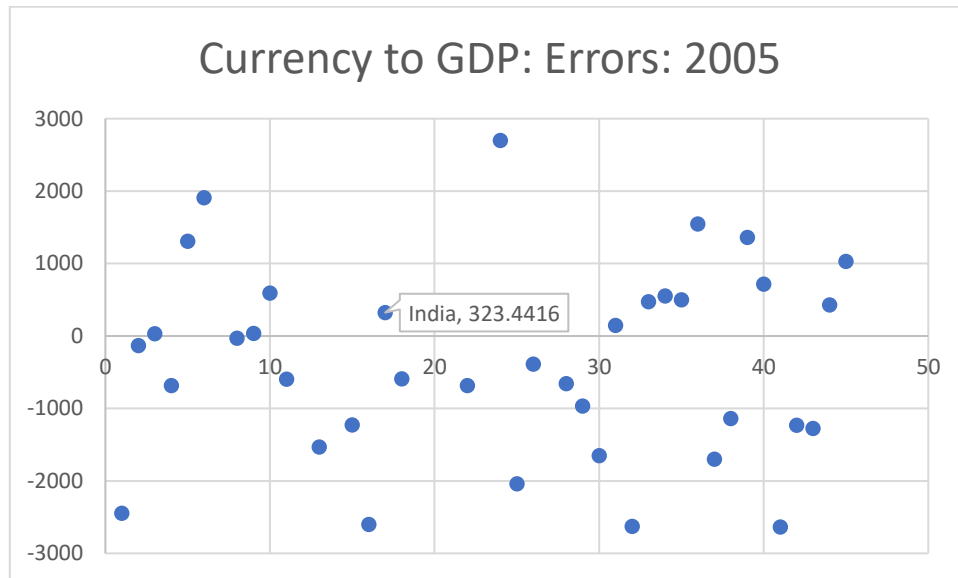


Figure 1.4: Currency to PFCE Errors (2005)

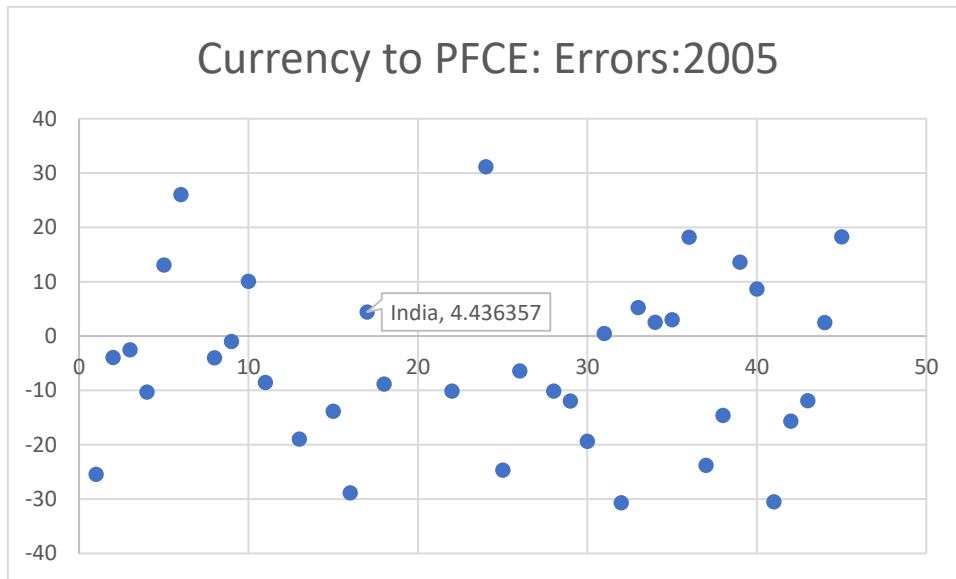


Figure 1.5: Currency to GDP Errors (2013)

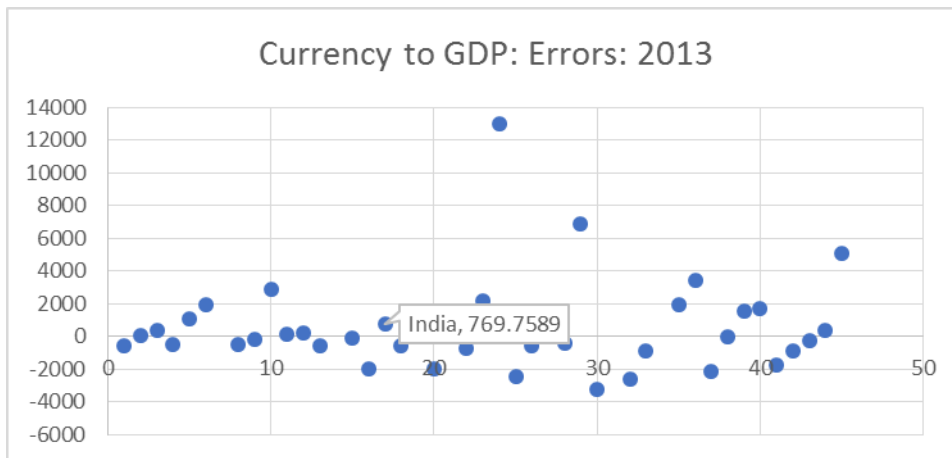
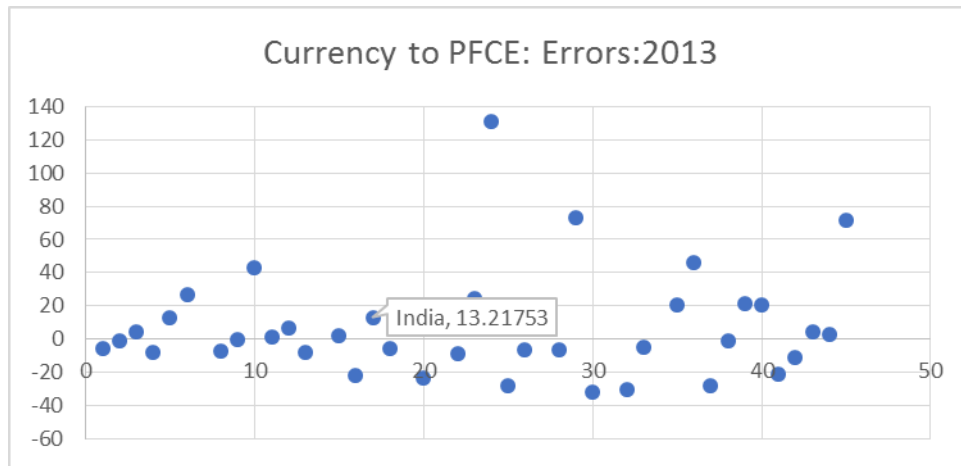


Figure 1.6 Currency to PFCE Errors (2013)



The figures above suggest that India is not an outlier in the level of currency to GDP or in the level of currency to private final consumption expenditure. A similar analysis was undertaken for explaining the levels of narrow money to GDP. Once again the results are similar. In other words, this analysis suggests that given the structure of the Indian economy, the level of currency in circulation is not sharply higher than that dictated by its needs.

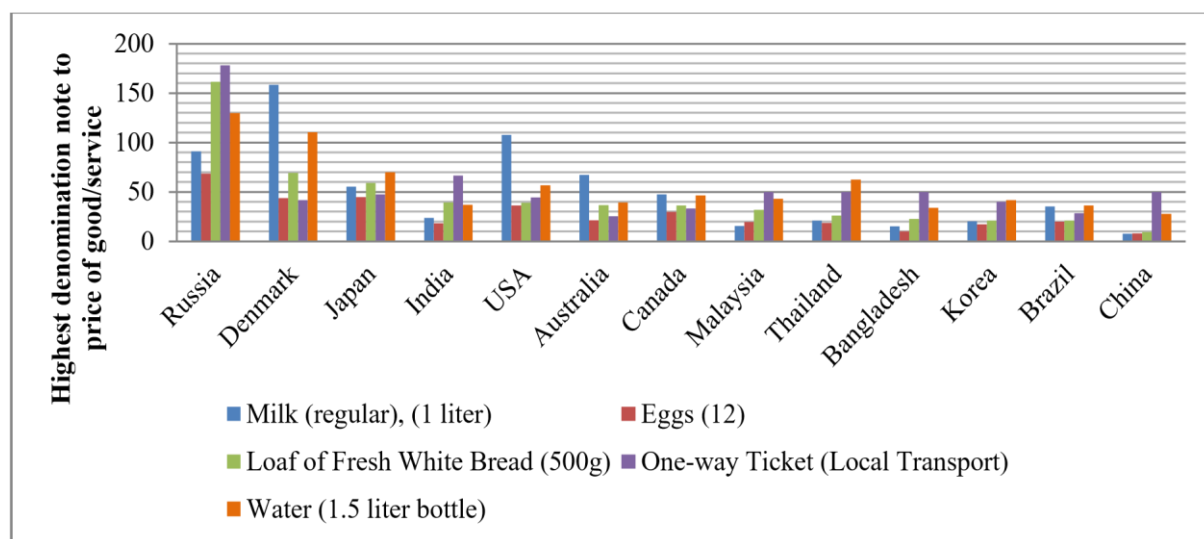
Turning to the second question, there can be two broad ways of judging whether the currency denominations are too high or not. The first approach is to compare the value of the highest denomination currency note with some macro-economic aggregates. Since the purpose of currency is to facilitate or mediate in transactions, the second approach is to ask whether, to buy certain essential commodities, the highest denomination is too high when compared to other comparable countries. Using a range of macroeconomic aggregates as discussed above, the Arthakranti report concludes that India has too high a value for the highest denomination currency note. This conclusion depends on the countries chosen for the comparison –changing the countries could well alter the conclusion. Japan, Russia and Thailand are examples of countries with higher ratios⁸.

Turning to the second approach, taking some of the basic goods and services used for daily consumption as the benchmark, we can make a comparison across countries, of the purchasing power of the highest denomination currency notes. As an example, three commodities and two

⁸ <https://www.rbi.org.in/SCRIPTS/PublicationsView.aspx?id=14932#2>

basic services- milk, eggs, bread⁹, bottle of water (1.5 litres), and local transport costs- are taken for comparison. The purpose of selecting these commodities/services was that these are fairly standardised and may not embody different processes of production and costs that make such a comparison irrelevant.¹⁰ A set of 15 countries comprising developing as well as developed countries were selected for comparison. For every country, the ratio of the highest denomination currency in circulation in that country to the price of each of these essential commodities gives the quantity of the good/goods that can be purchased with that currency note. A high currency to price ratio implies that the denominations presently in circulation are in excess of what is necessary to undertake daily/essential purchases. As can be seen from (Figure 1.7) the comparison with other countries, the notion that India is an outlier, i.e., that is it circulates a denomination that is too high in value, in relation to prices of specific commodities, may be incorrect.

Figure 1.7 Currency to Price Ratio in 2014



Source: Estimated using information available, for May 2016 on cost of living, at www.numbeo.com. Data reproduced in Appendix 1.1

⁹ It is possible to argue that in countries like India, bread may not be an item for daily consumption for the general public. But incorporating food preferences might make comparisons more difficult. Hence bread is used as a common benchmark.

¹⁰ The choice of commodities here is also based on the assumption that these commodities would be used in all economies. These commodities have been taken for the purpose of illustration. It should be possible to consider a different set of commodities and services – but these should be “standardised products” without significant differences in either production or in use in the countries considered. For instance, if one considers “rice”, there are different varieties of rice with widely differing prices and further, the consumption of rice in daily diets could vary widely across countries.

The second issue that might be of interest would be the composition of currency notes by denomination. It is also important to examine if the structure of denominations in circulation is skewed in favour of the large value. For this we take various denominations in circulation in USA, UK, South Korea, Australia and India.¹¹ Presented below are the proportions in terms of volume and value of currencies in each of these countries.

Table 1.2: Share of Denominations in Volume¹² in 2015 (%)

Denominations in circulation in USA							
\$1	\$2	\$5	\$10	\$20	\$50	\$100	\$500 to \$10,000
36.4	2.9	8.7	8.1	24.3	5.2	13.9	0.0029
Denominations in circulation in India							
1	10	20	50	100	500	1000	
13.9	36.3	5.2	4.2	18	15.7		6.7
Denominations in circulation in UK							
£5		£10		£20		£50	
9.6		22.7		60		7.7	
Denominations in circulation in Australia							
\$5	\$10	\$20	\$50		\$100		
1.3	1.97	0.05	47.8		43.2		
Denominations in circulation in Korea							
1000		5000		10000		50000	
4.5		0.07		87		7.4	

Source: Bank of England, Federal Reserve, RBI.

Rogoff (2016) calculates for a range of countries the proportion of large currency notes in circulation. Presented below is the comparison of large currency denomination in circulation, where large denomination is defined by Rogoff as those of value greater than \$50.

¹¹ There is nothing specific in choice of these countries – except for ease of availability of information.

¹² Note that the coins in circulation have not been considered.

Table 1.3: Large Currency Notes in Circulation and Threshold used to Define Large Notes

Country	Year	Proportion of large currency notes to total currency in circulation (%)	Local currency threshold used to define large note
Switzerland	2015	96.6	50
Israel	2015	94.8	100
Norway	2015	94.1	200
Russia	2014	93.5	1,000
Australia	2015	92.2	50
Japan	2015	91.1	5,000
Eurozone	2015	90.7	50
Singapore	2014	90.6	50
Taiwan	2014	89.6	1,000
Argentina	2015	88.3	100
China	2014	86.8	100
Brazil	2015	85.5	50
South Africa	2014	85.1	100
Mexico	2015	84.7	500
United States	2015	84.2	50
Hong Kong	2014	83.4	500
Thailand	2015	82.4	1,000
Sweden	2015	79.2	500
Denmark	2015	75.4	500
Canada	2015	71.3	50
New Zealand	2015	70.7	50
United Kingdom	2015	68.6	20
Turkey	2015	58.4	50
Colombia	2014	35.7	50,000
Chile	2014	31.9	20,000
India	2015	39.3	1000

Source: Rogoff (2016), RBI, Bank of Bangladesh.

Taking Rogoff's definition of high value currency, the share of the largest note in circulation in total value of currency in India is below the proportion observed for a number of other countries.

The table 1.2 shows that for none of the countries the volume of currency in circulation is concentrated in the highest denominations. Even in terms of the volume of currency notes in circulation India does not appear to be an outlier. In fact, the maximum number of notes in circulation is the Rs. 10 note.

The volume of currency notes might be misleading since a few high value notes could embody more value than a large number of smaller denomination notes. Therefore it would be useful to look at the composition in terms of value as well.

Table 1.4: Share of Denominations in Value (%)

Denominations in circulation in USA							
\$1	\$2	\$5	\$10	\$20	\$50	\$100	\$500 to \$10,000
1.6	0.2	1.9	3.5	21.0	11.6	60.1	0.1
Denominations in circulation in India							
1	10	20	50	100	500	1000	
0.3	2.1	0.6	1.2	10.5	46	39.3	
Denominations in circulation in UK							
£5			£10	£20		£50	
2.4			11.5	60.5		19.4	
Denominations in circulation in Australia							
\$5			\$10	\$20		\$50	\$100
12.8			9.2	12.9		44.7	20.1
Denominations in circulation in Korea							
1000			5000	10000		50000	
3.4			2.9	65.7		28	

Source: Bank of England, RBI, Federal Reserve, RBA and Bank of Korea

Note: The notes in circulation for USA were for end of 2015, for UK it was February 2016, Korea was 2009 and Australia 2016.

In terms of value of notes, India seems to have more than 86% of its currency in two denominations which is 500 and 1000. A similar distribution is observed for UK and USA. It appears that it is not uncommon for the value of currency to be concentrated in the highest denomination notes in most countries. It remains a moot question whether the values should be 70 percent or 80 percent. Still even within this comparison, India does not seem to be a complete outlier.

These comparisons suggest that based on a comparison of highest denomination notes alone, it cannot be conclusively inferred that India has too high a value for high denomination currency notes. Even if one wants to work with that conjecture, it is important to ask whether the solution to seek would be a reduction in the number of high value currency notes to whatever may be seen as a more reasonable level or to eliminate these notes altogether. It may be mentioned that even if we remove the high denomination notes, there would still exist another “highest denomination note” and its share in total value of currency in circulation would continue to remain high.

The analysis so far does not provide reasons for reduction in the currency in circulation or the reduction or elimination of high denomination notes in circulation. It is often argued that predominance of cash in an economy could result in less transparency in the reported transactions leading to tax evasion. If for these or other reasons, a government seeks to reduce the dependence on cash within the economy, then the question to ask would be what denomination of currency would be adequate to mediate for some basic transactions where it might be difficult in the short term to ensure a shift to other cash equivalents or substitutes. There are two ways to doing this analysis – one can be based on the average daily consumption of perishable items which cannot be stored and hence cannot be purchased in bulk. Earlier in the section, a comparison on the basis of price of consumables was presented. Consumption baskets can vary widely across individuals thereby making it hard to determine how much will an individual spend daily and on what. A second approach would be to use to income of daily wage earners as the basis for assessment. This is the approach that is adopted in this part of the analysis. The incomes of the individuals who are paid daily as agricultural or non-agricultural labourers is measured. These workers who are paid daily would find it difficult to transact through the banking channel. Since the money paid will be small, in the absence of saving, these individuals will have to wait for the money to be credited to their accounts before it can be withdrawn for consumption purposes. In other words, this segment of the economy would prefer to earn their wages in the form of cash. Taking the 2011-12 IHDS

database, the average wage was computed for those who reported wages from agricultural work as well as for those who reported wages from non-agricultural work and were paid on a daily basis.¹³ These figures for 2011-12 are reported in Table 1.5. In order to bring this number up to date CPI is used, for 2015-16, to adjust the wage rates. These are presented in Table 1.6.

Table 1.5: Average Daily Wage Reported in IHDS for 2011-12

Average Daily Wage		
Sector	Paid daily agricultural wage	Paid daily non-agricultural wage
Rural	117	148.92
Urban	144	207
Total	118	167.6

Source: IHDSII.

Table 1.6: Average Daily Wage Reported in IHDS Adjusted for Inflation

Average Daily Wage Adjusted for CPI		
Sector	Agricultural wage	Non-agricultural wage
Rural	158.98	202.35
Urban	188.82	271.44
Total	157.71	224

Note: Rural wages are adjusted using New CPI rural; Urban wages on the basis of New CPI urban and total using New CPI Combined (Rural+Urban) for 2015-16.

Alternatively, the wage rates reported by labour bureau can be taken to estimate the highest denomination necessary for such payments. The result is the same as that from IHDS. The highest wage is 397 thereby making 100 rupee notes sufficient for making such payments.

¹³ Of the 39,927 individuals who reported their employment status as casual daily and casual piecework 35,733 were paid daily in the case of those working in the non-agricultural sector with 153 days of employment in a year. In the case of 17,772 individuals reporting agricultural wage 17,749 were paid daily with 125 days of employment in a year.

Table 1.7: Rural Wages Reported by Activity and Gender

Activity	Category	Average wage (Rs)
Ploughing/tilling workers	Men	263.98
	Women	182.81
	Children	
Sowing (including planting/transplanting/weeding workers)	Men	218.45
	Women	175.45
	Children	126.11
Harvesting/winnowing/ threshing workers	Men	212.11
	Women	178.11
	Children	153.69
Picking workers (including tea, cotton, tobacco & other commercial crops)	Men	208.19
	Women	174.52
	Children	145.83
Horticulture workers (including nursery growers)	Men	227.94
	Women	155.96
	Children	
Fishermen inland	Men	262.81
	Women	
	Children	
Fishermen costal/deep sea	Men	348
	Women	
	Children	
Loggers and wood cutters	Men	310.57
	Women	151.54
	Children	
Animal husbandry workers: including poultry workers, dairy workers & herdsman	Men	183.26
	Women	138.33
	Children	67.74
Packaging labourers	Men	238.8
	Women	151.18
	Children	
General agricultural labourers including watering & irrigation workers etc.	Men	224.66
	Women	165.67
	Children	111.76
Plant protection workers (applying pesticides, treating seeds, etc.)	Men	288.77
	Women	169.51
	Children	
Carpenter	Men	315.83
	Women	
	Children	
Blacksmith	Men	253.54
	Women	

Activity	Category	Average wage (Rs)
	Children	
Mason	Men	350.91
	Women	
	Children	
Weavers	Men	236.2
	Women	186.45
	Children	
Beedi makers	Men	164.2
	Women	116.41
	Children	72
Bamboo, cane basket weavers	Men	208.31
	Women	142.67
	Children	
Handicraft workers	Men	271.56
	Women	133.3
	Children	
Plumbers	Men	397.69
	Women	
	Children	
Electrician	Men	365.34
	Women	
	Children	
Construction workers (for roads, dams, industrial & project construction work & well diggers)	Men	247.41
	Women	182.76
	Children	146.67
LMV & tractors drivers	Men	291.47
	Women	
	Children	
Non-agricultural labourers (Including porters, loaders)	Men	237.98
	Women	173.8
	Children	86.76
Sweeping/cleaning workers	Men	182.82
	Women	188.87
	Children	

Source: Wage Rates in Rural India, December 2016, Labour Bureau, available at http://labourbureau.gov.in/UserContent/WRRI_DEC_2016.pdf

The data suggest that if individuals are being paid on a daily basis, notes of Rs 100 denomination would be adequate to carry out the transactions.

The Arthakranti report proposes that the highest denomination in circulation should be Rs. 50. However, no basis has been provided for why 50 is the right denomination. The above analysis

suggests, however, that while the rationale for eliminating high denomination notes is not clear from inter-country comparisons, it is reasonably clear that if the central bank or the government decides that this is the policy direction, then currency notes beyond Rs 100 might not be required with the present configuration of prices. Whether it would be preferable or desirable to have even lower denominations is not suggested or supported by our analysis.

In what follows, we now turn to the two important proposals of the Arthakranti report.

Appendix 1.1: Prices and Highest denomination notes: Different Countries

Commodity price	Milk (regular) (1 litre)	Eggs (12)	Loaf of Fresh White Bread (500g)	One-way Ticket (Local Transport)	Water (1.5 litre bottle)	Basic (Electricity, Heating, Water, Garbage) for 85m2 Apartment	Pack of Cigarettes (Marlboro)	1 min. of Prepaid Mobile Tariff Local (No Discounts or Plans)	Highest Denomination
Russia	55	72.9	31	28.1	38.5	6082.76	98.55	1.6	5000
Denmark	6.3	22.9	14.5	24	9.1	1206.18	44	0.83	1000
Japan	181.1	223.3	169.2	210	142.8	19706	450	39.55	10000
India	42.2	55.3	25.6	15	27.1	2150	150	0.95	1000
USA	0.9	2.8	2.6	2.3	1.8	147.23	6.5	0.11	100
Australia	1.5	4.7	2.7	3.9	2.5	188.15	24	0.4	100
Canada	2.1	3.4	2.8	3	2.2	143.33	12	0.3	100
Malaysia	6.5	5.1	3.2	2	2.3	178.21	13.8	0.25	100
Thailand	47.8	53.5	38.6	20	16.1	2115.72	92	1.78	1000
Bangladesh	65.7	99.9	44.4	20	29.4	2902	200	1.17	1000
Korea	2450.3	2931.7	2373	1250	1204.2	157465	4500	161.47	50000
Brazil	2.8	5	4.8	3.5	2.8	247.06	7.16	1.34	100
China	13	12.3	10.7	2	3.6	341.61	18	0.27	100
UK	0.9	2	0.95	2.3	0.91	144.07	8.5	0.14	50

Chapter 2: Elimination of High Denomination Notes

One of the key elements of the policy package proposed in the Arthakranti Report is the elimination of high denomination notes from the economy.¹⁴ In particular it is proposed that notes of denomination Rs 500 and Rs 1000 should be eliminated. This, it is argued, would have two effects – one, transactions which are mediated through these notes would necessarily have to move to other cashless forms of money and thereby become a part of the formal economy, and second, this could potentially lead to availability of more credit or credit at lower rates of interest. To explore the effects of such a change it is important to first ask what form this change would be introduced in. The form in which HDD is implemented can influence not only the speed of transition to the new regime but also can impose certain costs of transition on the economy. Therefore, to begin with an attempt is made to identify the ways in which HDD can be implemented and the kinds of transition issues that might arise. These are presented in section 2.2. This is followed by a discussion on the effects of HDD on the economy. The effects briefly can be classified into two categories: effects on the macro variables (discussed in section 2.3) and effects on the individual agents in the economy (discussed in section 2.4). In the final section an attempt is made to identify measures which might ease the pains of transition to the new regime¹⁵. Before embarking on this exercise, section 2.1 provides a brief overview of the some of the prominent cases of demonetisation in the world.

2.1 International Experience

There are two ways in which a currency in circulation might be removed from circulation: one, where the monetary authority seeks to withdraw a currency from circulation without affecting its legal status and the second, where the currency is stripped of its legal status. The former act is described as withdrawal of currency while the latter is termed as demonetisation.

¹⁴ Demonetisation of High Denomination Notes will henceforth be referred to as HDD

¹⁵ The discussion in this chapter is about the proposal of demonetisation as described in Arthakranti report. It however does not discuss the impact of the demonetisation that has recently been implemented in India. For a discussion on the latter please see NIPFP working paper
http://www.nipfp.org.in/media/medialibrary/2016/11/WP_2016_182.pdf

Monetary systems have drastically changed over time from commodity money to metallic money and then to paper currency backed by gold and finally, to the pure fiat money. Moreover, in the recent times, we can see a shift from fiat paper currency to card based or technology based payment systems. Some of these changes were accompanied by demonetisation. For instance, a move from metallic money to fiat money backed by gold would have required a demonetisation. Even within the same regime too, there have been cases of demonetisation for various reasons. During the era of metallic currencies, demonetization was done with the motive of profit from debasement. But with the move to fiat currency, debasement is no more a criterion. One of the reasons for demonetisation in fiat currency is to deal with counterfeiting by improving the currency notes through advances in the security features incorporated. For example, according to the 2008 edition of Guinness World Records the current series of Swiss Franc notes is the most secure in the world with up to 18 security features¹⁶. The second reason often discussed is in order to deal with situations of hyperinflation. The third reason could be political regime changes or disruptions in the economy (breakup of USSR, new regime in Iraq). A fourth reason is when a currency is being replaced by another currency either as a part of the process of economic integration (EURO) or where there is a felt need to stabilise the economy with respect to international economy (Zimbabwe).

Broadly, all the episodes witnessed in the world can be categorised into two categories:

1. Complete demonetization (No country went for it in the recent times).
2. Partial Demonetization
 - a. Currency replacement with US dollars. e.g. Zimbabwe
 - b. Currency replacement with new currency. e.g. Switzerland
 - c. Abandoning higher denomination currency e.g. India and many other countries
 - d. Political regime changes and turmoil e.g. Iraq, Uganda.

¹⁶ The Swiss case is altogether a different one. The Swiss central bank will come up with new series periodically, and replaces the old currencies. First notes were issued in 1907. Since then, eight series of Swiss franc notes have been printed, six of which have been released for use by the general public, and a new series is expected in 2016.

Withdrawal from circulation, as discussed above, is different from demonetization. In other words, banknotes and coins may be withdrawn from circulation, but remain legal tender. For example, in United States, Section 102 of the Coinage Act of 1965 makes all coins and currency of the United States legal tender without any time limit. So, in USA, banknotes issued at any date remain legal tender even after they are withdrawn from circulation. This is also true in New Zealand, where all paper and polymer currency issued by New Zealand from 1967 onwards are still legal tender, even though, many of these notes are withdrawn from circulation.

Table 2.1: Examples of Demonetisation

Country	Start of Swapping Period	End Swapping Period	Last Date of Legal Tender	Reasons For Demonetization
Demonetisation				
India	31-03-2014	31-03-2015	31-09-2015	It withdraw all currency notes issued before 2005 from April 1, 2014. Aim is to weed out fake currencies to a large extent from the system.
	1978	1978	1978	The RBI had gone in for demonetisation of notes of value Rs 1,000, Rs 5,000 and Rs 10,000 to tackle generation of black money.
Philippines	31-12-2015	31-12-2016	01-01-2017	The old series, NDS were issued in 1985 and had monetary value only until December 31, 2015. This measure was taken to upgrade the security features.
Pakistan	30-11-2016	01-12-2016	31-12-2021	Old currency notes were replaced by new currency notes to improve the security, durability and aesthetic quality of banknotes.
CIS countries	1989	1989	1989	The successor countries of the Soviet Union replaced the Rouble in the 1990s. The exchange rate from the Rouble to the new currency was different in different countries.
Europe	2001	varying	varying	With the formation of the Eurozone, the erstwhile currencies of the countries concerned were replaced by Euro. Different countries gave different time periods after which the currency would cease to be legal tender.
Iraq	1991	1991	NA	After the Gulf War, the Iraqi government disendorsed the old currency, favoring

Country	Start of Swapping Period	End Swapping Period	Last Date of Legal Tender	Reasons For Demonetization
Demonetisation				
				newly printed <i>Saddam</i> dinars, and the Swiss dinar ceased to be legal tender.
Uganda	March, 2013	May, 2013	NA	The 1987 series was demonetised in an effort to stabilise the economy.
Zimbabwe	June, 2015	Dec, 2015	Dec, 2015	In June, Royal Bank of Zimbabwe said the Zimbabwean dollar would be retired from the formal system to build confidence in the multicurrency regime that has been in use since 2009.
New Zealand	NA	NA	NA	In 1933, the Coinage Act created a specific New Zealand coinage and removed legal tender status from British coins. In the same year the Reserve Bank of New Zealand was established. The bank was given a monopoly on the issue of legal tender.
Withdrawal of currency from circulation				
UK	1971	---	No Limit	The United Kingdom, adopting decimal currency in place of pounds, shillings, and pence in 1971. Banknotes remained unchanged (except for the replacement of the 10 shilling note by the 50 pence coin).
USA	NA	NA	NA	Section 102 of Coinage Act of 1965 makes all coins and currency of the United States legal tender without limit. Demonetisation is currently prohibited in the United States and the Coinage Act of 1965 applies to all US coins and currency regardless of age.

Source: Compiled based on information from respective central banks.

2.2 Implementation of HDD and Transition Issues

It is argued in the Arthakranti report as well as elsewhere in mainstream literature (Sands, 2016; Rogoff, 2016) that high denomination notes, aid the sustenance of illegal activities as well as tax evasion. It has therefore been proposed that by eliminating these notes from circulation, the State can reduce if not eliminate the scope for such activities within the economy. In other words, by eliminating high denomination notes, it is argued, there would be less tax evasion and at the same time, there would be less opportunity for people to finance activities like terrorism.

Demonetisation can be undertaken in broadly two ways: one, by replacing the high value currency notes by low value currency notes. This would not change the total currency in circulation but would alter the composition of the currency. It can be argued that such a change would allow transactions to be carried on as before but increase the transaction cost for agents since there would be a cost of carrying larger packets of currency notes which have the same value. This change would gradually encourage people to shift from transactions based on cash to using various cash substitutes like plastic money. An alternative way could be one where an amount equivalent to the high value currency note could be credited into the bank account of the agent surrendering the note. This approach would drastically reduce the value of currency in circulation and force a change in the behaviour of economic agents. It is possible to imagine a combination of these alternative ways too, like gradual elimination of the high value currency notes by not replacing worn out notes or by withdrawing a fraction of total high value notes in circulation¹⁷. These approaches can broadly be thought of as either forcing an immediate transition to a regime with low use of currency or one where the movement to a low currency economy is induced in a gradual way.

For each of these alternative models for demonetisation to succeed, there are a number of issues of transition that need to be managed. These are briefly discussed below:

1. **Infrastructure issues:** Studies suggest that over 68 percent of the value of transactions is completed through cash¹⁸. As per the Report released by the Reserve Bank of India in March, 2016, *Concept Paper on Card Acceptance Infrastructure*, even though there are a large number of ATM cards and debit cards that have been issued to account holders, a bulk of debit cards are used for withdrawing money from ATMs – such transactions account for 88% of the total volume and around 94% of the total value of debit card transactions. Since demonetisation would involve moving most of the transactions to non-cash instruments, it would require a substantial expansion in the capacities of the system to tackle a large number of transactions. There is need for a significant upgrade of the banking system as well as in the telecom infrastructure that would provide the backbone for digital transactions. For people to be able to transact at any time and place as well as for them to consider it a reliable medium of exchange, it is important that not only the banking system is upgraded to ensure that transactions can be completed without a hitch, but the supporting infrastructure too is up to the mark. For instance, in many parts of the

¹⁷ Another decision needs to be taken is whether the transition from one system to another should be compressed into a short duration of time or whether people should be given sufficient time to convert at convenience.

¹⁸ “68% of transactions in India are cash based”, November 14th 2016, Business Standard

economy, there is limited and intermittent supply of electricity as well as mobile connectivity. In these areas, it would be difficult to expect people to shift to electronic medium of exchange.

2. ***Access to the new network:*** A large part of the economy will have to incur costs in order to gain access to digital networks. This could involve purchase of smart phones/gadgets as well as buying data package in order to function in the digital space. These costs could well reduce over time as larger numbers of transactions and values of transactions move to the digital space and innovations in this space reduce the costs. However at the time of transition, these costs need to be factored in.
3. ***Security and confidence in the new medium:*** It would be incorrect to argue that digital instruments or non-cash instruments would be safer than cash. For a financially and digitally literate user, it may be argued that the latter are safer, but in the absence of financial or digital literacy, both the actual security of transactions as well as the confidence of individuals in undertaking these transactions would need to be improved. For instance, a number of instruments that are evolving in this space are using the smart phone or even the regular phone for undertaking transactions. Theft of a phone or access to a phone can potentially allow non-authorized persons¹⁹ to utilise these services thereby removing money from the accounts of the bonafide user. Educating people about the mechanisms for maintaining security in their phones and in their digital accounts would be an essential prerequisite before one can build confidence in the new medium. In addition some forms of insurance too could be provide to protect the new users from unauthorized access and resultant losses.
4. ***Consumer behaviour issues:*** Apart from the technological issues, there is a behavioural change that is being expected in people from using cash as a medium of exchange to using other cash substitutes both for making payments and receiving payments. This transition requires individuals to make two changes in their behaviour: one, agents need to move from tangible means which can be seen and felt, to forms which are less tangible or not tangible, and second, they have to learn to rely on technologically advanced tools to undertake regular day to day operations. The latter requires agents to be educated to the extent of comprehending the content of transactions. If this transition is not suitably managed, agents might be tempted to move to non-official cash substitutes.
5. ***Accessibility in language:*** In addition to all of the above, most of the banks and the mobile instruments for transaction are currently adapted to a single to two languages. If the bulk of the population of this country needs to come on board, it might be important to make

¹⁹ There has been in the recent period hacking of ATM cards details
<http://www.huffingtonpost.in/2016/10/20/massive-debit-card-hack-hits-indian-banks-3-2-million-cards-aff/>

these facilities available in a number of Indian languages to ensure that the user can comprehend the transaction that they are entering into.

6. ***Transition issues for banking sector:*** There are multiple issues here.

- a. Banks would have a model of the fraction of deposits that they can safely lend without an excessive risk of withdrawal of the amount. This is important since, while banks can borrow money from the call money market, the costs of such borrowings can be large. These models however might need to be altered in the new regime since the character of the new deposits that come into the bank would be different from the pre-existing deposits. In the latter, while a fraction of the deposits would be for transactional purposes – e.g., in the case of salary earners – another fraction would be depositing only savings into the account. By eliminating high value currency notes, these agents who were operating through cash, would now have to move to non-cash instruments and hence, the balances in their accounts would not be savings but transaction values which will be retained in the account for shorter durations of time. The banks therefore would need to remodel their decisions on how much of the deposits can be lent out and for what duration. It is for instance possible, that a larger proportion of the deposits would be retained for short term lending and can even be dedicated to the call money market.
- b. Second, the total cumulative credit that can potentially be generated is defined in terms of the reserve ratio.

$$\text{Total credit potential} = \text{incremental deposit generated} * (1/\text{reserve ratio})$$

However, the actual credit generation would be defined both by the demand for credit and the extent to which cash intervenes in the functioning of the economy. For instance, if people who receive credit from the bank make payments through cheques alone and the receivers of these cheques in turn make payments through cheques, then the potential credit creation can be realised. However, if on receipt of payment, the agent withdraws the money to cash and makes payments, only a fraction of the credit/deposit will return to the banking system. Thus, larger the extent, to which cash is used as a means of transacting, smaller is the total credit that can be generated. With a withdrawal of cash from circulation, the deposits will continue to remain in the bank it would merely shift from account to account or from bank to bank. Thus, even on the earlier deposits, the amount of credit that can be generated would be larger. This is another reason why the banks would need to remodel their investment decisions corresponding to given level of deposits.

- c. A third issue that might arise as a transition issue is because of the mismatch between people's preferences for cash and the availability of cash. In the interim, until people adjust to the use of non-cash instruments, there would be an increased

demand for the cash that is available and that might generate a situation where the agents have to pay a premium to access legal tender. In periods of scarcity of coins for instance, it is commonly known that people pay a premium to get the change. While this can be considered a transition issue, there are two different implications of such a development:

- i. If the premium on cash is high, it would encourage both the shift to noncash instruments on the one hand, and to informal substitutes of cash on the other.
- ii. This might undermine the confidence that people have in the currency and hence encourage move to other currencies.

2.3 Impact on Macro Variables

To understand the impact of the proposed demonetisation on the economy, we need to differentiate between a case where demonetisation is undertaken by replacing high value notes with low value notes and the second case where high value notes are replaced by an equivalent deposit in the bank account. The former, it is expected, will bring people gradually into the banking system, while the latter will force this change instantaneously. The effects of former would therefore be spread out over time while the latter would need an immediate adjustment from the economy. This in turn has two implications. In the former, there might not be any major short term consequences while the latter will have significant short term consequences. Therefore, in the following discussion, we first consider the more aggressive form of demonetisation, i.e., replacement of high denomination notes with an equivalent increment to bank balances. The likely impact of the gradual transition process will be discussed subsequently.

2.3.1 Demonetisation by Moving Currency to Bank Accounts

To explore the impact of this move, it is important to ask what role the currency was playing in the hands of the people who held it. There are two roles money could have played – a medium of exchange and store of value. Here it is important to note that currency could have been playing both these roles for unaccounted incomes as well as for accounted incomes. Table 2.2 provides some examples of the kinds of incomes and the role that currency could have played in each of these cases.

Table 2.2: Demand for Cash by Various Agents in the Economy

Description of the activity	Unaccounted transactions (legitimate transactions but not tax paid)	Illegal transactions (corruption, crime, etc.)	Informal sector transactions	Accounted transactions
Medium of Exchange	Incomes are earned through exchanges in cash, payments are made in cash	Payments for crime	Incomes are earned in cash and spent in cash	Transaction demand for money
Store of value	Balances held in the interim until alternative investment options become available (there exist a number of instruments which yield better return than cash – real estate, lending in the unaccounted or informal sector, and so on.)	Balances held in the interim until alternative investment options become available (there exist a number of instruments which yield better return than cash – real estate, lending in the unaccounted or informal sector, and so on.)	Savings as well as precautionary purposes (as yet unbanked)	For emergencies (precautionary demand for money)

By removing currency and replacing it by an equivalent amount in bank deposits, each of the listed functions would initially be disrupted before some or all of them move to various cash substitutes and get reorganised. The impact on the economy both accounted and unaccounted will depend on the speed with which the agents can adjust to the new scenario and adopt new methods for operation.

Short term effects:

The short term effects of demonetisation would be akin to a sharp reduction in money supply since aggressive demonetisation would be associated with a sudden transition where a sizeable fraction of the population would not have access to or feel comfortable with the new forms of transaction.²⁰ Theoretically, assuming that the Quantity Theory of Money works, the result should be a sharp decline in nominal GDP, driven either by a sharp fall in prices or a sharp fall in outputs or a combination of both. If there are differences in the use of cash versus non-cash instruments across

²⁰ If all agents in the economy are already familiar with and comfortable with the new ways of transacting, then the role money is playing in the economy would be considerable smaller and the impact too would be considerably smaller – then the demonetisation would be considered a gradual demonetisation and not an aggressive demonetisation.

different segments of the economy, the effects would be felt differentially across sectors. For instance in sectors, which operate purely in cash, transactions might not happen at all, implying a reduction or elimination of output/sales rather than a reduction in prices, e.g. handloom and SME in textiles. In other sectors such as FMCG and perhaps automobile, where there is a combination of cash and non-cash transactions, there could be a reduction in demand from the former component and the dealer could consider a change in price to stimulate demand. In other words, in these sectors, there could be a reduction in price as well as a reduction in output/sales. In sectors like construction and tea gardens where there is a large labour component and wages are paid in cash, it is expected that economic activity will decline substantially. For perishables, there could be a sharp fall in prices at the farms and a rise in price in retail markets – transport services might be compressed resulting in shortages in urban retail outlets. This could even induce an increase in price.

What the above suggests is that until agents in the economy have moved to some alternative medium/media of exchange, transactions would not have a medium and this can have adverse effects on all segments of the economy.

For income earning dependent on economic activities based on cash, both as wages, and as profits, incomes would be compressed or even wiped out. In some sectors, this could translate into a greater dependence on informal sector credit markets at usurious interest rates if economic activity is sought to be sustained in the absence of cash – some examples are agriculture, SME.

If this demonetisation is preceded by major initiative to encourage digital or non-cash instruments, then the transition away from cash would involve a shorter period. Otherwise, this could be a protracted period where people adjust to working with new instruments. In the interim, the economic costs could mount.

Medium term effects:

Demonetisation would change the composition of money from cash to bank deposits. It is often argued that the increase in deposits would expand the capacity of the banks to create credit. The total cumulative credit that can potentially be generated is defined in terms of the reserve ratio.

$$\text{Total credit potential} = \text{incremental deposit generated} * (1/\text{reserve ratio})$$

In India, the cash reserve ratio is 4 percent while there is a statutory liquidity ratio of 22 percent²¹. In determining the credit creation, it is important to take into account only the CRR and the additional credit creation can be 25 times the amount of money deposited in the banks as a result of the proposed demonetisation.²²

Table 2.3: Potential Credit Creation Based on Reserve Ratios - 2015

Percentage remaining in account	Value in account (in Rs. crore)	Potential credit creation (in Rs. crore)	Potential credit as multiple of stock of debt today
70	992600	24815000	3.08
60	850800	21270000	2.64
50	709000	17725000	2.2
40	567200	14180000	1.76
30	425400	10635000	1.32

Source: RBI.

Table 2.4: Potential Credit Creation based on Historical Trends

Percentage remaining in bank account	Value in bank account (in Rs. Crore)	credit potential (in Rs. Crore)	% of total credit	% of total incremental credit
100	1,418,000	1,684,119	20.9	198.4
90	1276200	1,515,707	18.8	178.6
80	1134400	1,347,295	16.7	158.8
70	992600	1,178,883	14.6	138.9

²¹ The official SLR is 22 percent but some transactions and deposits with the banks have been excluded from the requirement of SLR. These include current account balances and foreign currency accounts. Therefore the effective rate of SLR is lower. (https://www.rbi.org.in/scripts/BS_ViewMasCirculardetails.aspx?id=7340#13).

²² SLR is not treated as a reserve for the bank since, it restricts only the instruments into which the bank can invest but does not limit credit creation. Further, amount invested in government bonds as a part of the SLR requirement would accrue to the government and be spent. All expenditure by the government, as long as it is expenditure within the domestic economy, will return the borrowed funds to the economy thereby allowing for further deposits and credit creation akin to lending to private sector. Only to the extent the borrowing is used for purchases from the international market, either by the government or by the private agents, will the borrowing not create further credit in the economy.

Percentage remaining in bank account	Value in bank account (in Rs. Crore)	credit potential (in Rs. Crore)	% of total credit	% of total incremental credit
60	850800	1,010,471	12.6	119.1
50	709000	842,059	10.5	99.2
40	567200	673,648	8.4	79.4
30	425400	505,236	6.3	59.5

Note: these figures are based on the ratio of deposit to credit for the year 2011-12.²³

As discussed in the section on transitional issues, the actual credit that can be created will be limited by the extent to which the deposits are used only for transaction purposes and the extent to which there is unfulfilled demand for credit in the economy. Here it is important to recognise that if there is a compression in economic activity as a result of the abrupt transition from cash to bank deposits, then there would be compression in the demand for credit as well. This in turn could result in a reduction in the interest rates. If the demand for credit is responsive to changes in interest rates, there could be some corrective expansion in demand for credit. The net impact of these factors would determine the impact on the overall economy. If the net impact is an expansion in overall credit, especially credit for investment purposes or for working capital, it would result in an expansion in GDP. On the other hand, if the net impact on credit is negative, this feature of demonetisation might not be enough for turning the economy around.

MSME is one segment of the economy which is argued to be credit constrained and perhaps cash driven as well. Expansion in the potential credit in the economy, as the Arthakranti report argues would expand the credit available to this segment of the economy. If the access to credit for this segment can be improved, it can generate many positive spin-offs like expansion in employment since this is considered an employment intensive sector. While this is an interesting possibility, it is important to ask what factors could be limiting the access to credit for MSMEs. There are two possible factors – one, the entrepreneur might not have assets to provide as collateral and second, the entrepreneur may not have recorded transactions which support her claim of the size of her

²³ The projections are done using the ratio for 2011-12 since in subsequent years the ratio declined due to low offtake of credit in the economy.

enterprise. The latter may be because these units chose not to pay taxes, or because they operated principally with cash. It is also possible to argue that if firms access credit from the informal sector²⁴, the incentive to remain unaccounted is higher since the payments for servicing the credit would need to be obtained out of the books of accounts. While bringing the transactions from cash to non-cash instruments would encourage or induce a shift to formal sector transactions in the medium term, and hence make these units better equipped to access formal credit, it should be mentioned that the short term consequences of demonetisation in the form of compression of demand could affect the MSME more than the rest of the economy. In other words, while there could be expansion in access to credit for MSME sector, only those units which survive the short term effect of the demonetisation will be able to benefit from this change.

If the demand for credit falls short of the supply of credit even with decline in interest rate, banks would need to explore alternative ways of placing the additional deposits available with them. This could mean that banks take in more risky assets potentially opening up the economy to more volatility and risks. The housing loan bubble of the US economy might be one such example of lending to more risky projects thereby bringing in more volatility into the system.

In the recent past, attempts to use this approach to stimulate demand for credit has resulted negative interest rate regimes as well (e.g. Japan, EU). It is argued in some strands of the literature (Rogoff, 2016) that elimination of cash from the economy would actually facilitate the use of negative interest rates as a policy instrument. But within the Indian context, this might not be an immediate concern since the rate of inflation has been above 5 percent thereby helping keep nominal interest rate too in the positive territory.

There are two channels through which the exchange rate will be affected. One is the interest rate channel and the other is GDP.

1. If there is an expansion in credit in the economy accompanied by an increase in demand for goods, the higher GDP will result in higher demand for imports leading to an exchange rate depreciation. However, if this increase is not realised due to the slowdown in activity then imports will decline leading to appreciation of the exchange rate.

²⁴ http://www.business-standard.com/article/economy-policy/why-chits-and-informal-channels-are-still-popular116121900740_1.html

2. Capital flows respond to interest rates and perceived decline in GDP. Suppose interest rate declines exchange rate may further depreciate owing to lower inflows in the category of debt. Further, the slowdown in economic activity may also decline in flows into the equity instruments.

Therefore, depending on the impact of demonetisation on the growth in GDP, the impact of imports on the exchange rate may be countered by that of capital flows.

Effects on Government Finances:

The effects of demonetisation on government finances can be divided into three categories: the impact through RBI's finances, the impact through taxes and the impact through credit available to finance deficits.

1. ***Through RBI's finances:*** The RBI earns seigniorage through its currency operations.²⁵ Currency seigniorage is measured as the interest earnings to the central bank from keeping currency in circulation. For currency in circulation, the central bank does not have to pay interest on these values while it earns interest on the corresponding assets. This therefore represents earning to the central bank.²⁶ With a reduction in currency in circulation, this source of income to the central bank would be compressed.
2. ***Impact through taxes:*** there are multiple channels through which taxes will be affected
 - The impact on indirect taxes would be negative during the period of adjustment to the new regime because of the compression in demand. To the extent that in the medium term, there is a larger component of formal sector in the total economy, the indirect tax collections should recover. This could have an adverse impact on state finances since states are more dependent on indirect taxes.
 - On income tax there can be two potential effects: first, with compression in the economy, there could be a reduction in the tax collection. In the event that demonetisation brings in a larger share of the economic activity into the formal sector, there would be an expansion in income tax collections. The net impact would depend on the relative magnitudes of these two effects.
3. ***Through financing of fiscal deficit:*** The generation of additional deposits and credit, as a result of the SLR requirements can make more credit available to governments. Given the FRBM limitations, the amount of borrowing that governments can take on may be limited and

²⁵ There are multiple ways of defining and measuring income from seigniorage. RBI's Annual Report suggests the use of a concept called opportunity cost concept or fiscal seigniorage concept which has been adopted here.

²⁶ It is measured as (notes in circulation - cost of printing and distributing them)*market interest rate.

the additional supply can mean a decline in the interest rate that governments pay on their debt. Governments could attempt to restructure their debt to take advantage of the low interest rate in this regime.

2.3.2. Demonetisation by Replacing High Value Notes with Low Value Notes:

The impact of this approach would be considerably milder when compared to the first scenario. In the short run, one expects to see no effect, since the transactions can continue as before the change. There could however be transition issues related to the speed with which the demonetisation takes place. In the medium term, with perception of inconvenience in operating with cash and with an expansion in capacities in non-cash forms, gradually, it is expected that people would opt for non-cash forms of transactions. This would bring in more people into the formal economy and also bring money into bank accounts. This in turn could expand credit creation in the economy and generate a virtuous cycle.

2.3.3. Demonetisation and Unaccounted Incomes:

There may be differences in how these two alternative approaches affect the generation and utilisation of unaccounted incomes in the country. To begin with, it is important to recognise that generation of unaccounted incomes is not solely related to the existence of a cash based economy. Unaccounted incomes can be generated through a number of methods, one of which is through cash transactions which are kept out of the account books. Gold plating of expenses for instance is one such mechanism where the transactions remain within the banks but the tax liability can be reduced. Thus, it would be incorrect to assume that demonetisation would close all avenues for generation of unaccounted incomes.

Within the method of suppressing sales and associated incomes, it should be noted that the first and more aggressive form of demonetisation might be more effective to place some limits on the generation since the change over from the cash to non-cash economy would be instantaneous. In the demonetisation where the high value notes are replaced by low denomination notes, cash can continue to be used for generation of unaccounted incomes. It should also be mentioned that there are a number of alternative currencies that are evolving in the world, some of them to encourage local transactions and others to bypass official currencies. A more detailed discussion is presented in chapter 3. The emergence of these alternatives might open up the scope for generation of

unaccounted incomes through the suppression of sales. Thus demonetisation can place some limits but cannot be adequate for reining in generation of unaccounted incomes in the economy.

It should however be pointed out that if the demonetisation is aggressive, for agents who are left holding cash balances associated with unaccounted incomes, they might seek illegal ways of converting the cash balances to acceptable bank deposits. This process itself could contribute to unaccounted incomes in the economy.

The move away from cash based transactions are expected to thwart activities such as money laundering since the digital transfer leaves a footprint and makes it easier to trace the source of transaction . However, the FATF in its reports of 2010 and 2013 has flagged some risk factors that are associated with even with new payment mechanisms (NPMs)²⁷. The most obvious is the lack of customer due diligence in some cases. Two cases are provided here from the FATF 2010 report to illustrate the misuse of these instruments for money laundering.

²⁷ These include prepaid cards, internet payment system and digital currency.

Box 1: Case Studies for Money laundering using New Payment Mechanisms

Case 1: Fraud scheme and money laundering conducted through Internet payment services

An individual devised a scheme to defraud users seeking to purchase textbooks on a commercial website. The individual created approximately 384 phony bank accounts which were opened at a bank in Jurisdiction Z, for nonexistent employees who he indicated to the bank, would sell college textbooks. The individual then used the bank account information to open approximately 568 seller accounts with the commercial website using P2P online payment services (i.e., an IPS provider).

The defrauder advertised the college textbooks for sale on all of the phony commercial website seller accounts he had created. Buyers, believing they were purchasing books from the commercial website sent over USD 5.3 million in payment to the seller accounts, using the IPS provider.

The defrauder subsequently transmitted the illicit proceeds from the IPS provider seller accounts to several Singapore based bank accounts.

The law enforcement agency from Jurisdiction Z contacted Singapore's law enforcement agency, who then responded quickly to seize the tainted funds. With the close cooperation between the law enforcement agencies, the seized funds were successfully repatriated to the victims. The defrauder was also charged for wire fraud in Jurisdiction Z.

Source: Singapore.

Case 2: Funds stolen from bank accounts laundered through IPS accounts

A computer criminal stole the victim's personal data for online banking (including customer and account data) then opened a fraudulent account with an IPS provider under the name of the victim. The personal data provided in the opening of the account (phone number, home address, date of birth etc.) were fake. The email addresses given were issued by so-called "free providers" that do not conduct any identification or verification of their customers themselves.

The criminal named a reference bank account for funding the fraudulent IPS account. This reference account was the victim's. Then the criminal effected a fraudulent transaction from the victim's reference bank account to the fraudulent IPS provider account. As the funds came from the referenced bank account, the transaction appeared legitimate to the IPS monitoring system. The received funds were transferred to other accounts held with the IPS. The law enforcement authorities were neither able to trace the money flows nor find out the criminals' identity. The criminal repeated this scheme with several victims, but always using the same IPS account. Thus, he changed the reference bank account for this IPS account four times in two months; the four named reference bank accounts were held with different banks in different cities.

Source: Germany.

Source: FATF, 2010

2.4 Mode of Payment and Spending Behaviour

Any proposal to demonetise the economy entails dispensation of transactions through cashless means, these could be cheques, debit cards, prepaid cards, credit cards and mobile money. The use of cards for payment can potentially have an impact on spending habits. There exists literature that compares spending pattern of individuals when they use cash *vis a vis* when other mediums of transaction are used. To pre-empt the conclusions, the resulting change in expenditure can be of two types: i) the individuals in the economy spend more on luxury goods and ii) individuals spend more in total. These two outcomes have been studied in detail in the context of cash vs. credit card and to a lesser extent on cash vs debit card.

In what follows, an attempt is made to summarise the literature which compares spending in cash versus non-cash instruments. The first part looks at the various psychological differences attributed to different means of payment and how these play a role in determining spending behaviour. In the second part, the impact of debit cards and mobile money on spending is evaluated. The third part discusses the impact of credit cards on spending behaviour. Taking into consideration the evidence that is available the last part provides a discussion on possible scenarios that may result from the potential behavioural shift in the economy.

2.4.1. *Perceptions about Money:*

There is a growing body of literature that explores the impact modes of payment have on consumption/ spending behaviour. These differences are subtle and are result of the individual's perceptions of the instruments. The most perceivable difference between payment forms, as is always flagged in the discussions on credit card, is the time lag between purchase and payment of bills (Prelec and Loewenstein, 1998; Tokunaga, 1993). Raghurir and Srivastava (2008) call this feature *payment coupling*. The degree of coupling creates a sense of parting with money. Credit cards rank the lowest in payment coupling whereas cash and debit cards/mobile money may be thought to be at par.

The second important feature of perceptions about different payment forms is the *salience*. Individuals perceive the *pain of paying* (Prelec and Loewenstein, 1998) depending on the tangibility/salience of the outflow. The salience may also depend on the form of payment (Soman, 2003). For cash the pain associated with the payment is the highest owing to the immediacy. The

individual has to part with *tangible* cash that creates a sense of outflow. Credit cards rank the lowest in terms of *transparency or vividness* with which individuals feel the outflow. Debit cards and gift cards are intermediate forms and the pain associated with payment may be less as compared to cash.

Prelec and Lowenstein (1998) suggest that the cost associated with spending is outweighed by the pleasure from consumption. Therefore in the case where a credit card is used for purchase, if the cost is lower, it can be said that the consumption of non-essentials may increase. To this Srivastava and Raghurir (2002) add that individuals recall cash payments better than credit card expenses. They note that the degree of difference in spending behaviour is expected to vanish if the salience is increased at point of purchase (Raghurir and Srivastava, 2008, page 214). Therefore, reduction in salience can increase the propensity to spend. Similarly, Soman (2001) proposes that the payment mechanism should have an impact on spending decisions since the use of such mechanisms influence decisions through two factors-immediacy and rehearsal. That is, payments made by credit cards lead to accumulation of debt that is a commitment to pay as opposed to cash that is immediate and influences the individual's perception of a budget. In case of cheques an individual has to write down the value of item purchased which helps in mental accounting or recall. However, use of cards may lead to lower recall. Therefore the lack of these two characteristics in credit card payments may allow individuals to over-stretch their budgets.

Payment modes can also be differentiated on the extent to which they serve as a constraint on expenditures. When an individual carries only cash, she is limited by the money contained in the wallet. The individual takes into account all the expenses she may want to incur with the limited resources. In the case of debit cards, the individual may be spending from a pool of funds that are capped but from the point of view of a single shopping trip, the constraint is relatively relaxed since the pool of funds that an individual can tap into is all of her account balance. In the case of credit cards, this constraint is further relaxed since the individual is no longer limited by his account balance and she can incur debt to be repaid from future earnings (Soman, 2001). In this regard, Morewedge et al (2007) have shown that consumers perceive the purchase or consumption to be cheaper when he/she has more financial resources that are *cognitively accessible*. This implies that the individual is more likely to spend if she has, for example money in savings account as opposed

to cash in wallet. On the other hand, it is possible that the unnecessary spending may be reduced with use of debit cards since only present funds are accessed for spending (Lee et al, 2007).

The characteristics of various forms of payments are summarised.

Table 2.5: Features of Payment Systems²⁸

Payment mechanism	Saliency form of	Saliency of amount	Transparency	Temporal separation	Temporal orientation
Cash	Very high	High	High	No, Do not exist	Perception of present-present
Cheque	Medium	High	High	Low	Perception of present-present/ future
Credit Card	Medium	Medium	Medium	High	Perception of present-future
Debit Card	Medium	Medium	Medium	No, Do not Exist	Perception of present-present
Store Value Card	Low	Low	Low	Medium	Perception of present-present
Auto Pay (direct debit from bank account)	Very Low	Very Low	Very Low	Low	Perception of present-present
Digital Wallet	Medium	Medium	Medium	High	Perception of Present-present/ future

Source: Braga et al (2013).

2.4.2. Debit Cards and Consumption:

The first study to specifically look at whether debit cards encourage higher spending was Soetevant (2011). The study sought to elicit differences in spending on the basis of charitable giving. The field experiment conducted by Soetevant (2011) lent support to the hypothesis that individuals tend to donate more when in possession of debit cards as opposed to cash. However, one of the

²⁸ Saliency is the perceived pain of payment associated with a form of money; this could manifest through the form of payment as well the amount. Since cash is counted and then paid out immediately the saliency is high for this form of money. On the other hand, since cards are swiped to transact, the loss of money on account of the transaction is relatively low as is the price paid. Temporal separation is similar to the concept of coupling mentioned earlier which refers to the time gap between purchase and payment. Temporal orientation is the perceived timing of the incurring the expenditure. Lastly, transparency is the similarity between cash and other means of payment.

limitations cited of this study was that the results may have been driven by cash-on-hands constraint.

In another study, Mercantanti and Li (2014) find that in Italy there was a significant positive association between debit card usage and household consumption. This study used information provided by Italy's Survey on Household Income and Wealth (SHIW). Though this was a household survey, the authors infer about spending by taking only those households with one debit card on the assumption that the possible effect on spending would be on account of one individual possessing the card. Therefore, the study measures causal effect by taking the difference between spending of household that holds one card with the household that possesses none.

Runnemark et al (2015) find that the form of payment used by the consumer influences the valuation of the product and that cash helps control spending since payments tend to be more transparent. They find that the consumer is willing to pay more when paying through credit instruments. To establish the differences in perceptions of consumers when using debit card as opposed to cash they conducted an experiment where students were divided into three groups. The first group received payment in cash, second received payment in cash but were asked to use their debit cards and the last group received payments via PayPal and were asked to pay by card. Then the participants were asked to bid for three products - 10 beer clips, 6 coffee clip card and 10 coffee clip card. After bidding, three participants were selected randomly based on the criterion that their bids matched with the drawn sale price. The participant would then buy the product. In addition, students have to rank themselves on spendthrift –tightwad scale to control for individual's ability to control spending. The second treatment was introduced to understand if showing cash depresses bids for card payers. This study differs from Raghurir and Srivastava (2008): the former studies the impact of debit cards whereas the latter introduces complications related to gift or prepaid cards. It also addresses the limitations of previous studies by controlling for cash on hands constraint. They find that the second group tend to bid higher.

Similarly, Trutsch (2014) find that contactless payment, both in the case of debit and credit card, leads to higher spending.

Though, there is literature that provides evidence in support of budget control as the main reason for the widespread use of debit cards, there is enough work based on experiments that shows that individuals' consumption may increase with use of debit cards.

Therefore, to the extent the salience of the transaction is reduced, debit cards will tend to increase consumption expenditure. Although, the instant notification that follows any debit card purchase can increase the salience (Runnemark et al, 2015), to the extent the pain of paying is reduced the use of debit cards may encourage higher spending.

2.4.3. Credit Cards and Spending Behaviour:

The impact of credit cards on spending is relatively clear. The near absence of salience that assuages the pain of payment along with the low degree of payment coupling tends to encourage spending. Therefore, in the literature, a firm consensus exists with regard to the resulting impact of credit card usage on consumer behaviour. Some of the studies have been summarised in this section.

Hirschman (1979) used information from survey of customers shopping in several branches of a departmental store in 1977 in the USA. The study finds that individuals in possession of bank card and store issued credit cards tend to have higher levels of in-store spending. Similarly other studies such as White (1980) find that credit cards reduce the perceived costs and leads to higher use.

Feinberg (1986) observed the payment preferences of 135 customers at a local restaurant over a week. The hypothesis tested by this study was whether the possession of a credit card elicits stimulus response of higher spending. The spending does not solely relate to the lower degree of payment coupling, it in addition has to do with the salience of payments made through of the credit card. That is, since credit cards are associated with and taken for the purpose of specific kinds of expenditure, possession of the card leads to higher spending. The study finds that individuals in possession of credit cards tend to tip higher.

Soman (1999) flags the issue of recall wherein individuals with credit cards tend to forget or underestimate their recent expenses.

Prelec and Seimester (2000) extended previous work by Soman (1999) and Feinberg (1986). The authors used real-money transactions and selected *desirable goods of potentially high value*.

Experiment was used to elicit the reservation price of the respondents for purchase of tickets to a sold –out sporting events and the prizes were given on the basis of second price sealed bid , in order to avoid problems of over or under estimating. The study finds evidence that people tend to pay more when in possession of credit cards as opposed to cash²⁹.

In fact, there are studies that propose that individuals aiming to curtail their spending tend to prefer the use of debit cards rather than credit cards (Ameriks et al., 2004; Jonker, 2007; Von Kalckreuth et al. 2011; Arango et al., 2011). Fusaro (2008) provides evidence that debit card use could be associated with consumers' desire to control their spending. Using data from a sample of more than 2,000 consumer bank accounts, he found that debit card users, when making credit card payments, are more likely to be paying off a large balance. Debit users also make more frequent ATM visits than non-debit users, suggesting that debit users withdraw small amounts of cash more frequently to avoid overspending. Although self-control is associated with the behavioural approach, Fusaro's paper provides a framework for understanding self-control from a cost-based perspective: people who are credit-constrained and have revolving balances, respond to price incentives.

The review of literature reveals that the use of card for payment leads to behavioural responses that are in favour of higher spending. Thus a proposal that seeks to promote cashless means of payment must consider the two important consequences of such a change. The first change is the compositional shift in consumption that is the use of cards might lead to higher levels of conspicuous consumption (Thomas et al., 2011). Since cards reduce the pain of payment as well as encourage individuals to purchase items that are otherwise considered non-essential. On the other hand, the increase in the overall expenditure by the households more so due to the availability of credit options can lead to accumulation of household debt. Such an increase in the credit can potentially heighten the risk of crisis that may result from defaults.

One possible fall out of an increase in overall debt of consumers is a reduction in the level of savings in the economy. This could adversely affect the level of investment in the economy.

²⁹ For more recent work see Loewenstein and O'Donoghue (2006) and Thomas et. al (2011).

It is however not clear from any of these studies whether the observed difference would be a short term phenomenon related to the transition from cash based systems to other systems or whether it would be persist even after people have got used to the new regime.

2.5. Summary of Impact of Demonetisation

The Arthakranti report proposes demonetisation of high denomination currency notes. In particular, it proposes that the highest denomination in circulation should be Rs.50. The objective of this measure is to convert the economy from a predominantly cash based economy to an economy using more of non-cash instruments. The report however does not provide a roadmap or a methodology for this proposal to be operationalized.

In chapter 1, we have argued that if high denomination currency notes are to be demonetised, a reasonable level to stop would be at Rs 100. Earlier in this chapter it was argued that there are broadly two ways in which such a policy to demonetise can be operationalized – the high value notes can be completely replaced by low denomination notes or the high value notes can be replaced by an equivalent addition to bank deposits. The former has been termed as a mild version of demonetisation while the latter has been referred to as the aggressive version. It may be mentioned that the actual demonetisation may be a combination of these two extremes where partial demonetization is undertaken.

The impact of demonetisation depends on the method adopted. If the demonetisation is aggressive, i.e., transition is not gradual, there would be considerable costs on the economy, since economic activity would be suddenly compressed until the transition is completed or at least until a significant part of the economic activity shifts to non-cash instruments. In contrast, if the transition is gradual, then there are fewer costs to the economy but the transition could stretch over a long time.

From the earlier discussion it follows that demonetisation is expected to impact the economy as well as impose certain costs of transition. In response to the withdrawal of currency in circulation, the money is expected to be deposited in bank accounts thereby increasing the capacity of banks to extend loans. However, if the deposits are for short duration of time (since much of the increased deposits would be used to finance transactions in the economy) it is not clear what kind of credit expansion can be supported by such short term increase in credit.

To the extent, there is expansion in potential for credit creation, there could be a decline in interest rates as well. This increase in credit supply would auger well for the economy provided there exists enough demand for this the credit. However, if there is insufficient demand, the economy may not reap any benefits. Under such circumstances, where demand falls short of available credit, the banking sector may be tempted to make its definition of risky lending more flexible so as to be able to lend to units that were earlier ineligible. Further, the literature on consumer behaviour provides some evidence that the move to card based payment instruments could encourage higher spending and, in case of credit cards, could lead to higher debt. The prevalence of cards for payments could also lead to higher consumption of non-essentials accompanied by higher debt³⁰. Many of these studies are undertaken with students and in more developed countries. It would be worthwhile to explore whether these conclusions would be relevant for Indian consumers as well. This aspect could be studied separately in more detail to provide inputs on how a transition plan as well as financial education programme could be designed, so that it is in sync with the desired results.

The Arthakranti report mentions that the removal of higher value currencies from the economy would lead to a reduction in the black economy. If one works on the hypothesis that black economy is related to cash alone and, cannot and does not work through other mediums of exchange, then only it would be possible to arrive at the same conclusion. One more aspect to be noted, Arthakranti report does not differentiate between tax evasion and tax avoidance when referring to black economy. Tax avoidance is not necessarily based on cash transactions. For example, the discussion globally on base erosion and profit shifting provides a lot of evidence on tax avoidance. The experience of the Latin American countries shows that there was some financial disintermediation and shift to alternative currencies in the wake of introduction of BTTs. Besides, even in countries with higher cashless transactions, black economy exists.

It is also argued that demonetisation can eliminate counterfeit currency and thereby place a cap on terrorism. Terrorism may use counterfeit as one of the mechanisms of financing its activities. But

³⁰ In India there has been evidence in the past of an increase in accumulation and default on credit card debt. <http://www.cnbc.com/2015/03/17/credit-card-defaults-up-for-first-time-in-5-years.html>
<http://www.livemint.com/Home-Page/hr8D3SYDG51aKgksYkcmXO/Banks-cut-down-on-credit-card-business-over-rising-defaults.html>

it can use some alternatives as well. In the literature on money laundering there is extensive discussion on use of the financial system for terror financing (Solin and Zerzan, 2010; Cassara, 2016; FATF, 2010, 2013). The FATF report of 2013 provides a description of money laundering using various digital payments referred to as new payment mechanisms (NPMs). In terms of the impact on terrorist financing, therefore, demonetisation does temporarily slow down operations until alternative mechanisms again emerge.

Chapter 3: Banking Transaction Tax: An Assessment

The major proposal of the Arthakranti report is the replacement of all the existing taxes (excluding customs duties) by a tax on banking transactions. The report makes a case for BTT by suggesting that if it has been possible to “tax all consumption,” then using the same logic a tax be levied on all banking transactions as a sort of a fee³¹ for providing public goods. The logic of taxing banking transactions is that in a “monetized economy” the banking transactions provide the broadest base for a “simple and small” tax.

The Arthakranti -BTT specifies the design of the tax that entails withdrawal of *all* taxes except for customs/ import duties, levy of BTT on all credits/receipts at an appropriate rate which Arthakranti suggests could be 2 percent. The 2 percent is estimated using four separate methods taking into account the transactions turnover³². The tax deducted will be credited to Central, State and local government in varying proportions; in this regard Arthakranti gives an example of 0.7 percent, 0.6 percent and 0.35 percent of value of transactions being credited to Centre, State and local bodies respectively. The share of the Centre will be based on the revenues that it earns from existing taxes. The transacting bank will also have its share in this deducted amount (suggested 0.35 percent of the value of the transaction, thereby the total tax would be 2 percent of the value of transaction). Cash transactions in the proposal will not attract any tax, which means that the demonetisation may not be complete. The cash transaction is left out because it is assumed that the large value transactions will now move to banks and the currency in circulation will be used by the poor. This tax is to be levied on financial transactions as well since *any* credit to the bank account will attract tax.³³ By any transaction they specify that all transactions including payments made through credit cards as well as repayment of this debt will attract tax³⁴. The Arthakranti report suggests that a part of the revenue from the BTT is to be shared with the banks which would lead to “widening and

³¹ Page 105 of the Arthakranti Report

³² Pages 150-53, *ibid*

³³ Page 142, *ibid*

³⁴ Page 170, *ibid*

deepening banking system”³⁵. The authors have built in exceptions that are to be refunded via *direct payment route*, these exceptions include transfer of money between different bank accounts of the same person /legal entity and BTT collection accounts of the government (all levels)³⁶. To ensure that this exception is not misused a single unique identifier for a legal entity is being suggested, Arthakranti proposes Aadhaar and PAN card for this purpose. Further, exports will be taxed but the subsidies could continue through credits etc. The audits in this system would entail audit of banking transactions by the revenue authorities at different levels of the government³⁷.

In this chapter, an attempt is made to assess the proposed BTT in terms of the principles of taxation (section 3.2).

3.1. History of Banking Transaction Tax:

There have been some experiments with implementing a tax on banking transactions. One of the first attempts was in the United States of America as a method to finance war expenditure during the 18th century. In more recent times, six of the countries in South America have experimented with the introduction of a banking transaction tax as a way to raise some additional revenue. In other words, the BTT in these countries has been introduced as one more tax in addition to all other taxes existing in these countries. While it can be argued that such an experience would not be directly comparable to the Arthakranti BTT proposal, the information captured in such an experience would be useful to understand the direction of impact of such a change even if the dimensions might not match.

India too has a brief experience of the Banking Cash Transaction Tax (BCTT) during 2005-2009. It levied 0.1 percent on cash withdrawals of more than Rs 50,000 (individuals) and Rs 1,00,000 for others in a single day from non-savings bank account maintained with any scheduled bank. This tax was withdrawn with effect from 1 April 2009. The design and the purpose of the BCTT in India were different from any form of the BTT levied in other countries-it was meant to track black money. Although the objective of the BCTT was not of revenue collection, it collected Rs 600 crore during 2008-09 and Rs 550 crore for 2007-08. In his Budget speech for 2008-09, the

³⁵ Page165, ibid

³⁶ Page 149, ibid

³⁷ Page 137, ibid

then finance minister of India, P. Chidambaram had said, "The BCTT has served a very useful purpose in enlarging the information system of the Income Tax Department. Since the information is also being gathered through other instruments introduced in the last few years, I propose to withdraw this tax with effect from April 1, 2009."

Six Latin American countries that have levied bank transaction taxes since the late 1980s are: Argentina, Brazil, Colombia, Ecuador, Peru and Venezuela. Although introduced as an additional source of the revenue, there is considerable variation across countries in the design of taxes on bank transactions. In the past, the BTTs have generally been introduced as an emergency means of raising revenue in times of, and in response to, economic crises. In each case the tax was introduced on a temporary basis, although in some cases it was subsequently extended. Tax rates have ranged between 0.2 and 2.0 percent, varying widely both across countries and over time. Moreover, BTTs have not been levied continuously in most countries. The list of taxable financial transactions also differs across countries. In most cases, only bank debit transactions, including cheque clearance, withdrawals from ATM outlets and loan repayments are liable for taxation. In addition, in Argentina 2001-04 and Ecuador 1999-2000, bank credits were also taxed. In Colombia, only bank credit transactions were taxed during 1999-2004. In most countries, certain institutions (e.g., government agencies and charitable organizations) and specific transactions (e.g., transactions with the central bank and among different government agencies) are exempted from taxation. In Argentina (through 1992 and April-December 2001) and Ecuador, a portion of the BTT liability was creditable against the income or value added taxes.

The taxes in Brazil and Colombia have produced revenues in the range of 0.6 to 1.33 percent of GDP for ad valorem tax rates in the range of 0.2 to 0.34 percent. This confirms that these taxes do serve, at least in the short term, their intended function. The performance of the tax in Ecuador in its first year was exceptionally strong. However, it must be noted that the tax had a broader base, applying to debits and credits, and that part of the gross revenues were creditable against other taxes. The taxes imposed in Argentina in 1988 and especially in Peru were significantly less productive as gauged by the ratio of revenues as a percent of GDP to the average statutory rate. There is also considerable diversity in what these taxes are called, including *bank debit taxes*, *bank account debit taxes* and *financial transaction taxes*. However use of the term bank transaction taxes

(BTTs) reflects accurately the fact that in several countries both debit and credit operations are liable to taxation. The table 3.1 gives the experience of the different countries with the BTT.

Baca-Campodónico et. al. (2006) find that in these countries, for a given tax rate on the banking transactions, revenue declines over time. Therefore, in order to meet a fixed revenue target in real terms, the tax rate needs to be raised repeatedly. However, they also find that successive increases in the tax rate erode the tax base by more than they raise revenue and that the higher the increase in the tax rate, the more and faster the tax base is eroded. They conclude that bank transaction taxes do not provide a reliable source of revenue, especially over the medium term. Thus, if these taxes do not provide a reliable source of revenue—their revenue yield declines while distortions increase—they should be used as a means of raising revenue only in extraordinary situations and over a short period of time. However this was based on the experience from the countries that have levied the banking transaction taxes in addition to the existing taxes.

Table 3.1: Tax Rate and Revenue (as %age of GDP) from BTT in Different Countries

Country and year	Tax rate	Gross revenue /GDP	Revenue productivity
Argentina			
1989	0.7	0.66	0.94
1990	0.3	0.3	1.00
1991	1.05	0.91	0.87
1992	0.6	0.29	0.48
2001	0.6	1.46	2.43
Brazil			
1994	0.25	0.06	0.24
1997	0.2	0.8	4.00
1998	0.2	0.9	4.50
1999	0.22	0.83	3.77
2000	0.34	1.33	3.91
2001	0.36	1.45	4.03
Colombia			
1999	0.2	0.73	3.65
2000	0.2	0.6	3.00
2001	0.3		
Ecuador			
1999	1	3.5	3.50

Country and year	Tax rate	Gross revenue /GDP	Revenue productivity
2000	0.8	2.33	2.91
Peru			
1990	1.41	0.59	0.42
1991	0.81	0.46	0.57
Venezuela			
1994	0.75	1.3	1.73
1999-2000	0.5	1.12	2.24

Source: Coelho, Ebril, and Summers (2001).

Note: Revenue productivity is defined as the revenue to GDP normalized to a tax rate of 1 percent.

While looking at the financial disintermediation³⁸ caused by the BTT, Kirilenko and Perry (2004) show that on average the introduction of a BTT results in disintermediation of between 4 and 44 cents for every dollar in revenue. According to their estimation, financial disintermediation reached maximum values of 46 cents in Argentina, 58 cents in Brazil, 64 cents in Colombia, 48 cents in Ecuador, 66 cents in Peru, and 49 cents in Venezuela. These numbers are equivalent to a loss of over 0.5 percent of GDP to disintermediation. The authors also find that disintermediation effects tend to cumulate as the taxes remain in place. Arbeláez, Burman and Zuluaga (2002) find that the BTT increased the cost of credit and led to significant disintermediation. As a result, profits of financial institutions declined in the short-term by more than the amount of revenue raised by the government. The authors recommend abolishing the tax. Albuquerque (2003) argues that a BTT has led to an increase in the cost of government borrowing in Brazil.

Lastrapes and Selgin (1997) investigate the impact of a two-cent cheque tax on the U.S. economy during the 1930s. They estimate the impact of the tax on the currency-deposit ratio and the money stock using a vector autoregressive model and monthly data from August 1921 to December 1936. They show that the tax led to significant disintermediation. As a result, the monetary contraction in the U.S. during the 1930s is estimated to have been 15 percent higher than it would have been without the tax. The authors also argue that policymakers were aware of the likely adverse effect of the tax, and yet deliberately chose to overlook it in order to raise revenue. They present the two-

³⁸ Disintermediation refers to the withdrawal of funds from financial institutions such as banks and savings and loans associations.

cent cheque tax as a typical example of the depression era policies that disregarded the impact of fiscal measures on monetary and financial outcomes.

The revenue performance of BTTs has been quite diverse. However, BTT productivity- as measured by the ratio of revenues as a percent of GDP to the average statutory rate- has been on a declining trend for most countries. In particular, there appears to be a strong negative nonlinear relationship between revenue productivity and the tax rate. Brazil however appears to be an exception where revenue productivity remained stable and was not sensitive to rates of tax. An assessment of the Brazilian experience by Cintra suggests that this could be attributed to higher financial penetration and a very well developed banking infrastructure.³⁹

Outside Latin America, Australia also had a Bank Account Debits Tax (BADT or BAD) between 1982 and 2005. The BADT was levied on customer withdrawals from bank accounts with a cheque facility. It started as the federal government tax but later, the power to levy the tax was transferred to the states in 1990. Norfolk Island did not charge the BADT. The tax was abolished by the states on dates between 1 July 2002 and 1 July 2005 as part of the reforms for the introduction of the goods and services tax (GST). The BADT in Australia was levied according to the state where the bank account was domiciled, not where the account holder lived. Since the tax applied only to cheque accounts, bank customers could choose not to have a cheque facility to avoid the tax, or could keep a separate cheque account used only when needing to write a cheque. It also encouraged alternatives such as paying cash, and processing transactions through offshore financial institutions or locating most of the accounts in Norfolk Island in Australia, where there was no BADT. Also, there were reports of errors in the manner in which banks collected BADT- the error was to the extent of \$10 million from 140,000 bank accounts and could not be completely reimbursed⁴⁰.

³⁹ Brazil has a banking system which is among one of the most developed in the world. It is particularly advanced in the area of online banking and digital transactions that evolved as a result of addressing challenges of the past and adoption of innovative policies of social inclusion by the government that depended heavily on the banking system. Brazil designed its banking structure through the "Banking Reform Law" of 1994 that had adopted the international best practices in the area of financial institutions. Also, the direct benefit transfer schemes like the Bolsa Familia encouraged people to be part of the banking infrastructure. With the help of new distribution channels, such as ATM cards for poor families who never previously had a bank account, the Bolsa Família program could target and reach out to more people. At the same time increasing level of education and social developments has brought more people into the banking network.

⁴⁰ https://en.wikipedia.org/wiki/Bank_account_debits_tax

As discussed here the experiences with BTT so far have been in countries where it was implemented as a revenue raising measure in addition to existing taxes. The proposal for a BTT however intends for it to be a tax which replaces most other taxes. In the following section an attempt is made to evaluate the proposal on widely accepted principles of taxation.

3.2. Assessment of the Proposal for Banking Transaction Tax (Feige, Cintra, and Arthakranti)

Taxes are one of the means by which governments finance their expenditure by imposing charges on citizens and corporate entities. Taxes have been in existence for ages; however, tax laws have been changing with time. In recent years, some people including researchers have suggested improvements in the tax system namely, simplification of the tax code, adoption of banking transaction tax or taxing consumption instead of earnings. But there is no consensus as to whether such a shift to an alternative tax regime will stand the scrutiny of taxation principles and score better.

In case of conflicts or confusion in choosing methods and forms of taxation, the suitability of a tax system needs to be evaluated on the basis of the broader and acceptable principles of taxation. These principles are the set of formal guidelines that has evolved over time through discussion and the experiences, and are widely accepted as guiding principles. Now days, whenever specific tax laws or amendments are proposed, discussed and implemented they are tested for their suitability on the basis of these broader guidelines. Among many, the two central principles of taxation relate to the impact of taxes on efficiency and equity. The first is related to the allocation of resources whereas the second concerns distribution of income. Other principles of taxation relate to the cost of operation of the tax system, its flexibility and certainty.

The four Maxims of Taxation by Adam Smith

There is a very long history of the tax system and the set of principles on which those taxes are justified. We start our discussion on the principles of taxation as mentioned by Adam Smith. Smith develops four principles of fair taxation (Smith (1776), Chapter 2, Book V). He argued that taxes should be proportional to how much a person benefits from living in society. He says that there should be proportionality across levels of income and sources of income such as rent, profit, and wages. At one point, Smith mentions how having some taxes that fall disproportionately on the

wealthy, such as taxes on luxuries, is not so bad. The four maxims of taxation as listed by Smith is discussed in the following section. It may be noted that even the modern set of principles of taxation has developed keeping these four maxims at their core. Thus, while discussing the principles of taxation, it makes sense to start with a discussion of these principles. While Smith advocates proportionality in the levy of taxes, he also recognises the need to tax the wealthy through higher taxes on luxury.

“The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state.” Smith uses the analogy of a joint venture to compare taxation to the “expense of management to the joint tenants of a great estate, who are all obliged to contribute in proportion to their respective interests in the estate.” The discussion on this maxim is similar to evaluating the tax systems on the principles of vertical or horizontal equity.

Smith’s second maxim is that the “tax which each individual is bound to pay ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid, ought all to be clear and plain to the contributor, and to every other person.” Having known and predictable taxes allows people to calculate and make better plans. The argument implies that clear rules of the game encourage more investment, productivity, and innovation. Most of the existing tax systems announce in advance the taxes to be levied thereby making it easy for the agents in the economy to plan their business affairs.

Smith’s third maxim is that taxes ought to be easy and convenient for the taxpayer. That means, “every tax ought to be levied at the time, or in the manner in which it is most likely convenient for the contributor to pay it.” The existing tax systems have evolved over time to be easy and convenient for the people. Technology has helped in designing the tax return forms which are simple to fill in. Also, with the development of the banking systems it has become more convenient for the people to pay their taxes.

Smith’s fourth maxim of good tax policy is limiting deadweight loss: “Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible, over and above what it brings into the public treasury of the state.” He uses “take out” to refer to money

taken from people and “keep out” to refer to unrealized income due to tax burdens, distortions, and disincentives. This maxim says that the taxes should be least distortionary.

Thus if we look at the four maxims, these prescribe a tax system which takes care of the concerns of both the taxpayers and the government at the same time while collecting taxes. However these maxims do not shed light on the alternative role of taxation as a policy tool. Neither do they consider the issues related to the tax evasion and tax avoidance. Possibly, the issues of evasion and avoidance are left to the matter of governance in the set of principles of taxation prescribed by the Adam Smith. However, the evolution of the taxation principles afterwards has looked into all these aspects.

List of Modern Principles of Taxation

In the literature relating to modern public finance, we find certain broader principles and these are discussed in the following sections. It should be mentioned here that tax regimes might not satisfy all of these principles at the same time. Making progress on one principle sometimes might result in compromising the performance on some other principle. These are the tradeoffs that the policy makers are expected to consciously make.

- ***Adequacy:*** taxes should be just-enough to generate revenue required for provision of essential public services. However, the concept of adequacy is limited by the desire of a government to finance the services including the public good. The revenue requirement from the taxes is dependent on the size of the government. Fiscal deficit always puts pressure on the government to come out with alternative sources of financing. No tax will ever be adequate to fulfil the unlimited desire to spend by the government. The current tax system in India has evolved over time as per the revenue requirement and hence cannot be summarily discarded. A new tax system should also be just-adequate for the limited government finances. BTT has been implemented by a few economies as a source of additional revenue in the past for a limited period, but its implementation as a complete replacement of the existing tax system remains a theoretical idea. As a supplementary tax, it did not introduce much distortion as it was levied at a very small rate. However, once it becomes the only tax to be levied then this rate will have to go up to collect adequate revenue.

Feige (2000) argues that the BTT can transfer same amount of revenue to the government as does the present system and that too at a substantially lower cost without imposing greater efficiency losses. Arthakranti proposal under the canon of productivity mentions that the tax should be of such a nature as to yield sufficient income to the government (5.1.3.5) and claims that BTT can achieve this with a small rate of tax. Under the BTT, adequacy is proposed to be achieved by levying a small tax on a broader base. The underlying assumption is that if we consider all the banking transactions as the tax base then it constitutes a very large base. But the idea of taxing all the banking transactions had a cautionary note in the literature and even by Cintra. He argues that financial transactions in the developing economies should be kept outside the base of the BTT. However, if we keep the financial transactions outside the tax base, it remains to be established that with a small rate of tax adequate amount of revenue can be generated⁴¹. This issue is addressed in detail in section 3.3.2. Considering the fact that not all transactions in the economy will be done via banks only, alternatives to the banking transactions will easily emerge to bypass the BTT. This may take the form of transaction in cash or the vertical integration in the production units.

Thus, in developing economies, adequacy of revenue with a small rate of BTT remains to be established. Further, if rates are increased or the base is expanded, the negatives of the system outweigh the benefits.

- **Efficiency:** Myles (1995), while presenting the arguments about efficiency vs. equity, states “the use of policy will cause a loss due to resources used in the implementation process and from the economic distortions that the policy will cause. Minimising these losses is the efficiency aspect of policy design.” In other words, in the context of tax policy, efficiency has two components: minimising distortions to market processes which is also referred to as neutrality, and minimising the cost of compliance and administration.

Taxes are considered neutral when they do not favour any one group or sector over another, and are not designed to interfere-with or influence individual decision-making. Thus the term neutrality is used to describe a tax system where differences in incidence of tax do

⁴¹ Cintra suggests keeping the financial transactions outside the BTT in the developing economies.

not distort consumption decisions or investment decisions of agents namely consumers and producers.

The other component of efficiency relates to minimising the cost on the agents participating in the tax system namely the taxpayer and the tax administrator. The cost of compliance for the taxpayer includes not just the cost associated with filing a return and paying taxes but also the cost of understanding the tax regime, maintaining requisite documentation and the like. The cost of collection on the other hand is the cost of running the tax administration.

BTT is proposed to be a uniform flat tax with low rate and large base without any concessions and exemptions. However, it is a tax on transaction values. When taxes are levied on the value of transactions, the effective tax rate as a proportion to value added will vary considerably across activities. Also, the cascading that results from the existence of multiple stages of production and distribution would contribute to raising the total tax liability built into the price of a commodity even in presence of a uniform flat rate of tax. If the value added in a segment is low, it would result in high tax incidence and agents in these segments might choose to vertically integrate backward or forward to increase the value added and thereby reduce the incidence of tax. It could also be argued that if the rates of tax are perceived to be different across sectors, people might perceive this as a signal to move to sectors which face a lower incidence of tax. In other words, the proposed uniformity in tax rates across the economy under the BTT does not translate into uniform effective tax rates and hence neutrality is difficult to achieve. The extent of distortion would depend on the rate of tax of BTT as well. In section 3.3.2 we discuss the likely incidence of BTT under alternative tax rates⁴². With higher tax rates the incentive to vertically integrate or to leave the banking system altogether could be higher. The Arthakranti's argument that vertical integration is not a serious concern would then be undermined.

In comparison, the existing tax system too is struggling to achieve neutrality. There are continuous efforts by the policymakers to reduce the deadweight loss caused by the tax structure. Tax reforms from first point sales tax to VAT and further on to the proposed

⁴² The analysis in the next section shows that BTT would be revenue neutral only at rates higher than 4%.

comprehensive GST are efforts in this direction. Also, technology has led to simplification of the way people pay their taxes leading to improvement in overall efficiency of the tax system.

- **Equity:** Tax theory suggests that taxation should be governed by people's ability to pay, that is, wealthier individuals or firms with greater incomes should pay more in tax while those with lower incomes should pay comparatively less: vertical equity. Also the taxes should equally burden all individuals or entities in similar economic circumstances: horizontal equity. However, at the same time there will be discussion in line with the benefit principle i.e., taxes paid should be proportionate to the benefits received from publicly provided services. The existing inequality in the society makes it difficult for the policymakers to choose a single tax for entire economy which is either in line with the ability to pay principle or the benefit derived principle.

The equity and fairness of a tax system depends on both the tax base and the tax rate. In case of the BTT it depends on the tax base which is a transaction. Feige (2000) argues that transactions are more skewed than the conventional income or the consumption expenditure. However, the assumption is that all the transactions are part of the tax base and hence people with higher income will do much larger number of transactions than those with the lower income. Cintra quotes from a study on Brazil to conclude that BTT is a proportional tax if not mildly progressive. Other studies on Brazil such as Paes-Bugarin (2006) and Coelho (2009), however are not unequivocal on this aspect.

While discussing the equity aspect of the BTT under the section Canon of Equity, the Arthakranti report says that the “Bank Transaction Tax is perfectly in accordance with this principle - higher the income, higher the total amount transacted, and hence higher the contribution to the tax collection but with the same rate of taxation”⁴³. However, a closer scrutiny reveals that it is difficult to achieve the said equity through the proposed BTT.

⁴³ section 5.1.3.1, Arthakranti report

In the design of BTT by Cintra (2009), financial transactions were not proposed to be a part of the tax base especially for developing countries. Even in the Arthakranti report there is recognition of the fact that transfers between accounts with the same name should be exempt suggesting thereby that some financial transactions may not be subject to tax. To understand the equity implications of this proposal let us consider the case of any agent in the economy. If the tax is imposed on credits into bank accounts alone, then the tax would be proportional to the incomes earned by the individual, if we assume that taxes on credits from sale of goods and services are passed forward as higher prices to the buyer. Further, there would be tax on all goods and services consumed by the agent since it has been assumed that all these taxes are passed forward. The equity implications of this component of the tax would depend on the differential incidence of cascading across different commodities and services and the profile of consumption of the individual agent. Here it should also be kept in mind that the consumption tends to be inversely related to incomes, i.e., with increase in income, a smaller proportion of income is consumed. On savings, if the asset purchased is either gold or real estate, the tax would apply instantaneously. On the other hand if the savings is invested in financial assets, the tax would accrue only when the asset is disposed of. In other words, the tax liability would depend on the consumption patterns, the extent of embedded taxes in the commodities and the nature of assets acquired through savings. If for instance, higher income households invest relatively more in financial assets, then the incidence of tax in the current period would be lower for these households/individuals when compared to those who invest in other assets such as gold and real estate.^{44 45}

In comparison, the present tax regime provides a certain degree of progressivity, since the goods consumed by the poor are taxed a little less than the rest of the goods and services

⁴⁴ If the investment in financial assets is taxed on the principle amount but only on the incomes earned from this investment- such a model is proposed to encourage investment in the economy which is considered especially important for developing countries – then the liability of tax on agents investing in financial assets would be lower not just in the present but inter-temporally as well.

⁴⁵ In order to undertake a more detailed analysis of tax incidence, one needs to work with income consumption survey data which provides information not just on all income categories in the country but also on the investment assets chosen by each of the surveyed households. Such data is not available in the Indian context.

and income tax is progressive. Thus the equity characteristic of the BTT is difficult to establish.

- **Broad Basing:** Taxes should be spread over as wide a base as possible. It should expand to include all sections of the population, or sectors of the economy, so that individual tax burden is minimised. For a new tax system to be acceptable it needs to create a significantly larger tax base. This, it is argued, will improve compliance in the economy. The BTT proposes to expand the tax base since it is supposed to have no exemption. However, in developing countries Cintra (2009) advocates limiting taxes on financial transactions to incomes earned through the transactions and not on the transaction value per se. A similar view is presented by in the Arthakranti proposal as well.
- **Simplicity/Convenience:** There is consensus that the tax system should not be incomprehensible to the lay person, nor should it appear unjust or unnecessarily complex. This is to minimize discontent, evasion, avoidance and costs. Tax assessment and determination should be easy to understand by an average taxpayer. Also, the taxes should be enforced in a manner that facilitates voluntary compliance to the maximum extent possible. The proposed tax system under the BTT, however, is argued to be more appealing for its simplicity compared to the existing tax system.

On the aspect of convenience, the proposed BTT does appear more convenient since the cost of compliance decreases– the only action required for the tax payer is to undertake all transactions through the banking system.

- **Earmarking:** In the existing tax system, the tax revenue from a specific source can be dedicated to a specific purpose only. Earmarking is used as a tool to achieve certain objectives by the government in the developing economies like India which otherwise would have been difficult due to limited revenue. The proposed BTT in its original form does not have scope for such dedicated sources of the revenue.
- **Restricted exemptions:** Exemptions should be avoided in the comprehensive tax system as more the exemptions, higher will be the tax rate. Also, selective exemptions have cost in terms of the efficiency loss due to the distortions. Tax exemptions must only be for specific purpose and for a limited period. However, as soon as exemptions are included in the BTT, it loses its advantage of a low rate due to reduction in the tax base. The first such exemption,

as discussed above, which would have far reaching impact on the tax base, would be the exemption for transaction values in some of the financial transactions. When such regime is implemented there will be demand for many more exemptions from different segments of the economy. For instance, it could be argued that funds donated to charity should not suffer a tax or that transfers from one family member to another or transfers between friends on non-commercial terms should not be subject to tax. Incorporating such demands could make the regime more complex.

- ***Predictability/Uncertainty:*** Collection of taxes should reinforce their inevitability and regularity. While discussing the Canon of Certainty (Section 5.1.3.2, Arthakranti), the Arthakranti report mentions that with the tax rates fixed and the transactions to which it applies known, the Bank Transaction Tax provides certainty. There are two elements of certainty discussed under this principle: one where the taxpayer knows what her tax liability is and the second, is the certainty of revenue that the government gets. The former is related to having consistency in tax policy. To the extent there is discretion in the interpretation of tax policy there arises the possibility that people do not perceive the tax liability to be certain. In the case of BTT it would appear that there is more certainty. What however needs to be pointed out is that if there exist or emerge alternative payment mechanisms that are not covered by the BTT, then individuals or organisations might choose to move transactions to these modes. To counter this government might then choose to notify such new payment forms as banking transactions thereby resulting in certain amount of uncertainty for taxpayers. The second aspect is consistency in revenue to the government. When the tax is presented as a broad based tax at a very low rate like 2 percent, it would appear that people would be quite willing to pay the tax and comply with the tax department. But as shown in later sections, the effective tax rate from a BTT would be substantially more. So it would be incorrect to assume that there would be no incentive to evade or avoid the tax. Some of the measures that can be taken to reduce the tax liability would be to adopt some new forms for financing transactions or to vertically integrate. Both these measures can reduce the amount of revenue that accrues to the government. It is a difficult comparison to make between the present regime and the proposed BTT, on this count.

The Arthakranti report has sought to establish the desirability of the BTT regime by discussing two other canons: canon of elasticity and canon of variety.

Under the canon of elasticity the Arthakranti report says: “every tax imposed by the Government should be elastic in nature. In other words, the income from the tax should be capable of increase or decrease according to the requirements of the country.”⁴⁶ It further adds that since the Bank Transaction Tax is collected automatically and instantaneously from a wide tax base i.e. bank transactions, when higher government expenditure is required at the time of emergency or crisis, it is possible to meet this expenditure with a slight increase in BTT rate.

Elasticity is thus an inherent characteristic of such a not-easily evadable tax. However, this is a problematic assertion since once again in some of the countries where the tax has been levied, the productivity has declined over the years and an increase in tax rate tends to induce a larger change in the behaviour of individuals.

Under the canon of variety the Arthakranti report says: “the tax system should contain a large variety of taxes on persons as well as commodities. The reason is that if government levies a single tax, it will become easier for the tax payers to evade it. In a monetized and well-banked economy, payments for the variety of economic transactions happen through banks. Thus taxing a credit side of every bank transaction ensures requisite variety. Additionally the Bank Transaction Tax is collected automatically and instantaneously; it is non-evadable and hence meets the requirement of this canon.”⁴⁷ However, the concept of a variety of taxes is related not only to all sectors in the economy being subject to tax but also to the notion that taxes should have different kinds of bases so that there can be cross verification across taxes and an exemption or preference in one tax does not necessarily leave any sector or activity completely out of the tax net. In the latter sense, the BTT actually concentrates the revenues in one instrument and therefore raises the risk to revenue in case there are any changes in the economic environment and/or in the behaviour of individuals. It is therefore incorrect to argue that BTT contains a lot of variety.

⁴⁶ Section 5.1.3.8 of *Arthakranti report* .

⁴⁷ section 5.1.3.9, *Arthakranti report*.

Summary

We have examined the proposed BTT *vis a vis* the existing system on widely accepted principles of taxation. Thus, conceptually, the proposed BTT does not emerge as a singularly superior tax on all parameters. It fails to achieve the extent of equity that we have in the current system. It promises a broader base for taxes in its design but ends up advocating some exemptions which ultimately shrink the tax base and takes the shine of BTT away. The BTT scores better in terms of easy implementation and monitoring through the banks. However, multiple objectives that policy makers seek to achieve through taxation would not be possible through the original and appealing version of the BTT.

We also argue that even if the banking system matures enough and then a tax is levied on every transaction there are chances that some of the transactions would try to bypass the system. In that event, the proposed system may not be evasion proof. In conclusion, therefore, it would appear that BTT performs well on some principles but there is no clear superiority in others when compared to the present regime. It might even appear that in some principles, the present regime performs better than the proposed regime, suggesting there by that any consideration of the implementation of such a regime would be based on some tradeoff in the principles.

3.3. Implications of Introducing a BTT

3.3.1 Design of BTT:

The proposed design of the BTT involves a uniform tax on all banking transactions. Two key words in this concept are “bank” and “transaction”. For the tax to be levied, these terms need to be defined and at the same time with changes in the economy, these definitions need to be revised. For this purpose, it is necessary that there be a designated authority who examines the evolution of institutions and instruments which might serve the purpose of “Bank” and “transaction” so as to expand the scope of the tax and thus ensure that the effectiveness of the regime remains undiluted.

- i. ***What is a bank:*** Within the set of financial institutions, there is a subset of institutions which are formally designated as banks. These institutions have the right to collect deposits from agents in the economy, which are returnable on call. In India for instance, we have scheduled commercial banks, cooperative banks, regional rural banks and of late, payment banks. All of these are allowed to accept deposits which can be retrieved on request and to

different degrees, these institutions are allowed to create credit. There is another set of institutions which accept deposits for long term purposes, like mutual funds and company deposits. The latter do not offer the facility of withdrawing money at will but with development in technology, it would be increasingly difficult to differentiate between these instruments. For instance, in mobile payment apps, the subscriber can deposit money at will but the withdrawal would take a few days. Would these therefore be called accounts where money is retrieved on request or not? If these are also to be treated as taxable transactions, then the definition of transaction as well as the definition of “bank” needs to be broad enough to include them. If these potential anomalies are not taken into account there would emerge a number of institutions and a number of instruments which can perform the functions of a bank, without actually being called a bank. In other words, there would be possible leakages from the system if this issue of definition is not dealt with and revisited on a regular basis. For comprehensive coverage, all institutions which accept deposits of any form should be part of the system.

- ii. ***What is the transaction that should be subject to tax:*** The Arthakranti proposal suggests that the credit into bank accounts should be taxed. However, no clear rationale for this choice is presented. In similar other proposals, other options have been proposed – for instance, Cintra proposes a tax on both credit and debit while Feige was ambiguous on which side of the transaction should be taxed. Colabella and Coppinger (1999) on the other hand proposed a tax on bank debits. Given these differences and in the absence of an argument on why the tax should be on the credits into bank accounts, in what follows, we explore both these possibilities to understand whether a case can be built on which side of the transaction should be taxed.

Broadly, we can think of two transactions an individual agent might engage in, with a bank – making deposit with the bank and withdrawal of money from the bank. These can also be called credit and debit. For the levy of the tax, it is essential to determine which kind of transaction would be subject to the proposed tax. In the literature there is no clear view articulated on which kind of transaction should be subject to tax. In some of the countries

which implemented the BTT, the tax was on withdrawals from bank while in others the tax was levied on both the transactions.⁴⁸

One cannot however, rule out differing behavioural responses of the economic agents depending upon the decision to tax debits or tax credits in a bank account.

The debit side of a normal bank account may broadly consist of the following:

- Payment for personal expenses (Consumption expenditure)
- Payment for investment (Plant, machinery, and others)
- Payment to mutual funds, insurance companies etc. for savings
- Payment for business expenses like purchase of raw material and transport
- Payment of salaries and wages (in case of business)
- Loans and advances
- Payment of interest on loan
- Payment of rent
- Repayment of loan
- Transfer payments (loans/ gifts)
- Distribution of dividends in case of companies
- Payment of taxes/cess/charges

Depending on the incidence of the final tax, if every debit is subjected to tax, it is possible that people would try to reduce the debits. The easiest way to avoid the tax legally would be to reduce or postpone the non-essential consumption expenditure. In that event, this may affect the consumption led growth.

Since repayment of loans will also be subject to the tax, it is obvious that, *other things remaining the same*, the cost of borrowing will also go up. This, in turn, is likely to affect growth in those industries that are dependent on outside finance rather than internal accruals. Start-ups and tech companies are particularly dependent on external borrowing for a long period and the introduction of the tax may affect their growth.

⁴⁸ The Arthakranti Report proposes that the tax should be on the credit to the account.

That apart, since there will be no law banning transactions in cash (even if in low denominations), it is possible that the incidence of payment by cash may actually increase if the parties to a transaction connive or even if one party is in a dominant position to impose its will. This may lead to financial disintermediation, a result that has been observed in the experiments with BTT in Latin American countries (except in the case of Brazil). This will be the exact opposite of the desired objective to reduce the use of cash in the economy.

The economic agents will obviously do a cost benefit analysis and in case the cost turns out to be more under the proposed system, various measures can be undertaken to beat the system. It is possible that people will shift to quasi currencies to avoid the tax unless the definition of banks is expanded to plug the use of all such routes (Paytm, Mobikwik and the like). People may also devise their own quasi currencies (IOU) to stay out of the system. Considering the prevalence of hawala in India, it will be quite easy to take money out and settle transactions outside. The use of international debit/credit cards has been observed in India and the settlement of the transactions can be made outside from funds generated or kept outside.

What if credits are taxed?

The credit side of a bank account will generally consist of the following:

- Salary/wages/ fees received
- Interest on loans/ advances/ deposits
- Repayment by debtors of the loans/ advances
- Rent from properties
- Dividends from companies
- Proceeds from sale of properties/ investments
- Loans and advances received
- Gifts/ transfer payments received
- DBT from government
- Investments into the business including foreign investment

Here also, depending on the final incidence of the tax, there may be attempts to resort to cash transactions and consequent disintermediation and use of alternate channels as in the case of debit discussed above.

Since investments will also be taxed and the impact of the proposed tax on the financial sector is likely to be higher, investment activities including foreign investment is likely to be adversely affected on account of repeated taxation of such flows. If the proposed tax increases the cost of borrowing and investments, that is likely to have a dampening effect on the economy as a whole.

However, since a large chunk of the receipts will be from the government in case of salaries/ wages and even in case of other credit items, there will be somewhat greater control of the authorities in ensuring that the payments are effected through the bank accounts and consequently there may be somewhat lesser probability of financial disintermediation and resulting leakage of the proposed tax.

Thus both the debit and credit taxation are likely to have some adverse impacts on the economy. In fact, experience of the tax in Latin American countries apparently show that there are quite some dead weight losses from the tax ranging from 40 percent in Colombia to almost 90 percent in Ecuador. It is therefore likely that there will be deadweight losses here also. Available literature does not suggest which side of taxation will have more of the same.

One option could therefore be to have the tax on both the credit and debit side and perhaps at a somewhat lower rate. This is what was done in the securities transactions tax. But in that case, the problems mentioned earlier may be even compounded.

On balance, therefore, if it is decided to have the tax as proposed as the only tax in lieu of income tax and other indirect taxes, considering the likely behaviour of the agents, it will, perhaps be better to tax the credit side since the government will have more control on such credits.

iii. Would there be any exemptions from the tax: Another important question is would there be and should there be any exemptions from tax? For instance, it can be argued that

transfer of balances from a savings account to an investment account or a fixed deposit would mean that whichever transaction is taxed, the tax would be levied two times, one when the investment is made and second when the investment is withdrawn for consumption. This in turn would mean that to get the same rate of return on investment, the nominal rate of interest needs to be higher. In other words, the cost of investment might be higher thereby adversely affecting the potential for growth in the economy. In the context of financial transactions, since margins tend to be small and there doesn't exist any possibility of passing the taxes forward, the number and value of financial transactions could be significantly impact by the presence of a tax on the transaction values. In the case of commodity transactions tax in India, it has been documented that even a small tax of 0.01 percent has resulted in a decline in value of transactions by about 50 percent in the case of gold futures, by 60 percent in copper and crude and about 70 percent in the case of silver.⁴⁹ These numbers suggest two things: one, that financial market trades could be very sensitive to such taxes even at low rates and second, the revenue potential from such a tax could be very volatile and unreliable source for governments. Another similar tax is in operation in India: the Securities Transactions Tax (STT). This tax has been criticised on the ground that it places a high liability of tax in cases where there are frequent or repeated transactions thereby hindering the process of price discovery which is not useful for healthy functioning of the market. In literature, Cintra argued that in the interest of encouraging investment in the economy, especially in developing countries, it would be important to keep transactions that relate to saving and investment beyond the scope of this tax. However, in countries where there are such exemptions it is argued that introducing exemptions will willy-nilly open the gates for an expanded coverage of exemptions thereby reducing the base that would be available for taxation. It is therefore, important to recognise that the strength of any proposal on these lines would lie in its ability to have as broad a base as possible. At the same time, the acceptability of the tax might be impeded by allowing for the broadest possible coverage.

⁴⁹ <https://thewire.in/103427/time-reconsider-commodities-transaction-tax/>

3.3.2 What is the Revenue Potential of the Tax:

The Arthakranti report uses three methodologies for determining the revenue neutral rate. The first method uses information about value of banking transactions from the RBI publication “Payment System Indicators – Annual Turnover” as an estimate of the taxable base. In the second method, the report starts with the level of “narrow money”, i.e., the sum of currency with the public and demand deposits and makes an assumption that 20 percent of this value is used for daily transactions. Using 300 days in a year, the corresponding annual value of transactions was computed. The third method uses ASI information on the relation between value added and value of output to derive the value of output corresponding to the total value added in the economy. To this is added a correction of 60 percent on account of hitherto unaccounted transactions entering the formal economy.

Taking the first methodology, there could be two problems: first, there could be double counting of transactions. For example, when a financial instrument like demand draft is purchased by a customer, the money will be credited to the issuing bank’s account. When the demand draft is presented by the receiver, her account will be credited. In other words, for a single transaction there are two accounts which receive a credit and can potentially be taxed. This issue is important even for the design of the tax in as much as it raises the larger question as to whether and which credits into a bank’s account are to be taxed. The second issue relates to whether transactions on government securities too should be subject to tax. If investments in government securities are subject to tax, the effective rate of return on these securities would be affected. This once again is a policy issue that needs to be resolved.⁵⁰

The second methodology arbitrarily assumes that the daily requirement of money in the economy is 20 percent of the narrow money. This gives us a velocity of money in the economy at 60 (300×0.2). In other words, it is being assumed that money travels over 60 times in a given year. While estimate by this method produces a rate of BTT very close to that produced by the first method there is no explanation given on how this 20% was arrived at.

⁵⁰ It is important to have better comprehension on both the nature and dimensions of different kinds of banking transactions as well as the scope of transactions to be brought into the BTT regime for assessing the base of the tax using this methodology.

The third methodology uses information from the ASI to determine the ratio of value of output to value added. As discussed earlier, the National Accounts Statistics provides information on value of output and value added for all sectors in the economy other than financial services. Adding across these sectors, for 2014-15, the ratio of value of output to value added is 2.16 as against the estimate of 6 incorporated in the Arthakranti estimate. Reducing the ratio to 2.16, the estimate of the base reduces. Similarly, the Arthakranti report uses an assumption of addition to the tax base of 60 percent of GDP since unaccounted incomes are expected to come within the formal sector. Changes in these assumptions too would lower the tax base.

In other words, there are strong assumptions within each of the methods used. In addition, the revenue neutral rate too varies across these methods, raising questions about the conclusions drawn on revenue neutrality with a very low rate of tax.

Our calculation of the revenue neutral rate does not accord with the Arthakranti analysis. To assess the revenue performance of the tax, the sum of value of transactions through ECS, NEFT, RTGS and mobile based transactions is taken. While this constitutes a part of the total base for the proposed tax, this is an approximation on which data is readily available. Using information for the year 2015, along with the revenue projections for 2015-16⁵¹, table 3.2 shows that the average tax rate needs to be about 2.8 percent if inter-bank transactions are not subject to tax and about 2.4 percent if inter-bank transactions too are subject to tax. In other words, the proposed regime would need a tax rate of over 2 percent. The tax rate suggested by the Arthakranti report is 2 percent. If the proposed regime brings in more transactions into the banking system then the rate of tax of 2 percent might be revenue neutral.

⁵¹ For our calculations we consider tax revenue collected by central government and state governments. The Arthakranti report does its analysis using information of tax revenue for Centre, state as well as total revenue for local bodies. Since information on local bodies is not available on a year to year basis and local bodies collect relatively small fraction for the total revenues collected in India therefore this component has not been incorporated into the analysis.

Table 3.2: Rate of Tax for BTT (2015 Data)

Transaction		Value of transactions	Tax rate (BTT)
		(Rs billion)	
ECS	Credit (A)	1303.66	
	Debit (B)	1849.3	
NEFT	(C)	75992.04	
RTGS	Inter-bank (D)	117201.1	
	Customer(E)	676959.6	
	Total (D+E)	794160.6	
Mobile based transactions (F)		2862.57	
Cheque Clearances(G)		85560	
Consumer transactions are taxed	Credit based (A+C+E+F+G)	842677.8	2.53
	Debit based (B+C+E+F+G)	843223.5	2.52
Total (all Transactions are taxed)	Credit based (A+C+D+E+F+G)	959878.9	2.22
	Debit based (B+C+D+E+F+G)	960424.5	2.22
Revenue (2015-16(B.E.))		21280.73	

Source: RBI.

It should be mentioned here that these estimates could be over-estimates to the extent payments by governments or payments to governments pass through the payment system. Similarly, payments between two accounts of the same individual or legal entity too would pass through this system but are not to be taxed in the proposed regime. Further if foreign exchange transactions are carried out through these channels, further clarity is needed to understand whether such transactions are intended to be taxed or not. On the other hand, to the extent payments between two accounts in the same branch are not reflected in this system, there could be some under-estimation as well.

The next question to ask would be which sectors would be paying the tax and how much. To answer this question, we used information on value of output available in the National Income Accounts. For all sectors other than the financial sector, National Accounts Statistics provides information on the total value of output in addition to the value added in the sectors.⁵²

⁵² For a few sectors, the National Accounts Statistics do not provide information on the value of output. In these cases, the ratio of value added to value of output from the Input-Output Table for 2006-07 has been used to compute the value of output corresponding to the reported value added.

The way the tax is proposed, the tax would apply on all credits into bank accounts. If one considers a company, the sales of the company are purchases either by other companies or purchases by individuals in the economy. The other set of transactions which would get taxed are the payments made to factors of production, i.e., like wages and salaries, interest, rent, dividend. To derive the base for the banking transactions tax from productive activities in the economy, we take the total value of output and the value added in the each of the sectors. Since the tax would be payable on all transactions in which an enterprise is engaged in, the tax would apply to both sales as well as purchases of goods and services and to the payments made to factors of production. Since the purchases are sales for some other agent, to compute the base for taxation, it is adequate to consider the total value of sales and the value added in each enterprise. Since financial services operate on a completely different system of payments and receipts, this sector is kept out of the analysis. Applying a 2 percent tax on the value of output and the value added in all sectors other than financial services, we get a total tax revenue of Rs 860864 crore in 2014-15. This amounts to 45 percent of the revenue requirement of the present tax regime for 2014-15 (i.e., Rs. 19,09,462 crore). In other words, a whopping 55 percent of the revenue requirement would have to be met from taxation of transfers and financial sector transactions (Table 3.3).

Table 3.3 Tax Burden to Financial Services (including Banking and Insurance Services)

	Description	2014-15(RE) (Rs. Crore)
A	Combined Tax Revenue of Union & State Governments	20,98,175
B	Customs Duty	1,88,713
C=A-B	Revenue needs to be compensated from Banking Transaction Tax (BTT)	19,09,462
D	Tax Revenue from BTT (excluding BTT on Banking and Financial Services)	8,60,864
E	Residual tax on Financial Transactions	10,48,598

Source: Computed from NAS (CSO, 2016), Indian Public Finance Statistics (GoI, 2016).

At present, the tax on financial services includes two kinds of levies: Securities transaction tax on transactions involving shares is payable at the rate of 0.1 percent by both the buyer and the seller. The rate of tax is lower on intra-day trade and on futures and options contracts. There is also a tax

of 15 percent on dividends distributed to shareholders, payable by the company⁵³. On transactions in the form of bank deposits, a tax is payable only on the interest payment at the applicable rate of income tax. The tax collected through STT in 2014-15 was Rs 7398 crore. While there is no data available on the revenue collected from Dividend Distribution Tax, the PwC report on corporate India for 2008 suggests that dividend distribution tax returns about 10 percent of corporate tax collections. Using similar ratios for 2014-15, the dividend distribution tax would amount to Rs 4289.24 crore. The interest paid by scheduled commercial banks in 2014-15 was Rs 570135 crore. If the average rate of tax is 15 percent, the revenue that would be collected from interest income would be Rs 85520 crore. In other words, the revenue that is collected from the financial sector would be about Rs 1 lakh crore. In addition the government collects another Rs 1 lakh crore from stamp duties which are taxes on transfer of property across individuals. The tax rate on transfer of property is levied at rates of 5-7 percent in most of the states. With a BTT of 2 percent, the revenue from interest, dividend and property transactions would be lower than at present while the revenue from sale and purchase of shares can be substantially higher at about 10 times the present collection. Even with this level, the revenue collection from these sectors would be substantially lower than the expected revenue from financial services at over Rs 10 lakh crore from a BTT regime. Further, in the case of financial transactions, it is argued that the value addition is a very small fraction of the total value of the transaction and hence any tax on the total value of the transaction could cripple the sector. As per the design suggested by Cintra (2009) in their respective proposals for a Banking Transaction Tax, capital transactions were to be kept out of the base. If such a large liability on financial sector is not feasible, then rate of tax on the productive sectors would have to be higher than the proposed 2 percent. For deriving a similar amount of revenue, the rate of tax would need to be at least twice the proposed 2 percent, even if one assumes that the BTT regime can increase the tax liability of financial sector to double its present level. This would mean a tax of 4 percent on all transactions.

In addition, if there are costs of transferring money from one account to another or from one agent to another – consider merchant discount rates on debit cards and credit cards or the fees levied to revert balances from mobile wallets to bank accounts – then the actual cost of the banking transaction tax to the taxpayer would be at least 1 percent higher than the 4 percent tax derived

⁵³ Effective tax rate comes to 17.647% because if grossing up.

above. Some examples of the kinds of charges payable by the users of digital services are summarised in the Tables 3.4A-C.

Table 3.4A: Transaction Costs with Banking Services for Customers

Service	Rate
SMS Sent to Customers	Rs. 15/ per quarter for saving account Rs. 25/- for current account. (applicable if the number of SMSs go beyond 5 in a quarter)
Online NEFT Outward Transactions upto Rs. 10,000/	Rs. 2.50/ - per transaction + ST @ applicable rate
Online NEFT Outward Transactions upto Rs. 10,0000/	Rs. 5/ - per transaction + ST @ applicable rate
Online RTGS Outward Transactions Amounts above Rs 2 lakh and upto Rs 5 lakh	Rs. 5/ - per transaction + ST @ applicable rate
Online RTGS Outward Transactions Amounts above Rs 5 lakh and above	Rs 50-55 + Service Tax + ST@ applicable rate
NEFT & RTGS inward transactions	FREE
IMPS upto Rs. 1 lakh	Rs. 5/ - per transaction + ST @ applicable rate
IMPS between Rs. 1 to 2 lakh	Rs. 15/ - per transaction + ST @ applicable rate
USSD (Unstructured Supplementary Service Data) Max limit Rs. 5000/-	Rs. 1.5 /- per transaction
NUUP (National Unified USSD Platform) Max limit Rs. 5000/-	Rs. 1.5 /- per transaction
Debit Cards (Annual Fees)	Rs. 100 to 150 /- per annum (Basic Card) Rs. 200 to 500/- per annum (Platinum/ Business Card)
Credit Cards (Annual Fees)	Rs. 0 to 10000/- Depending the product and addons.

Source: Reserve Bank of India, National Payments Corporation of India and different banks and card operators.

Table 3.4B: Transaction Costs with IRCTC Services for Customers

Payment Mode	Transaction Charges Details
Payment by Credit Cards	
AXIS PG	For all Master / Visa Credit Cards (Not International Credit Cards). Transaction charges of 1.65%+Service Tax.
	For all Domestic Debit Cards transactions Amount upto Rs. 2,000: Transaction charges of 0.75%+Service Tax. Amount above Rs. 2,000: Transaction charges of 1%+Service Tax.
ICICI PG, CITI PG, HDFC PG and American Express	For all MASTER / VISA Credit Cards (Not International Credit Cards) / Debit cards (If enabled by card Issuer). Transaction Charge 1.8%+Service Tax as applicable
RuPay Card (Powered by Kotak Bank)	Transaction charges of Rs.10/-+ Service Tax as applicable
Payment through Credit Cards EMI Option	
CITI Bank EMI	Pay in 3 instalments with your Citibank/Diners Club Credit Cards. Transaction charges 2.8%.
Payment through ATM cum Debit Card	
All Nationalised Banks cards	Transaction charges of Rs.10/- or 1.8% whichever is higher + Service Tax as applicable
Payment through Net/Mobile Banking facility	
All Nationalised Banks cards	Transaction Charges of Rs.10/- + service tax and cesses as applicable
IMPS	Transaction charges Rs. 5 for TXN Amt. up to Rs. 5000/- and Rs. 10 for above
Nepal SBI Bank	Transaction charges of NPR. 19/- + Exchange Commission & Service Tax as applicable
IRCTC Prepaid Instruments	
IRCTC-UBI Prepaid Card	Transaction charges of Rs.10/-+ Service Tax as applicable
Payment through Cash Cards	
ITZ Cash Card, I Cash Card, OxiCash	Transaction charges Rs. 10/- or 1.5% whichever is lower
Payment through eWallets	
IRCTC eWallet	Transaction Charges of Rs. 5/- per transaction.
Paytm Wallet	1.30% + Service Tax as applicable.

Source: IRCTC websites. The cost of is excluding the bank charges, which are almost equal to the IRCTC fees.

Table 3.4C: Transaction Costs with Banking Services for Businessmen

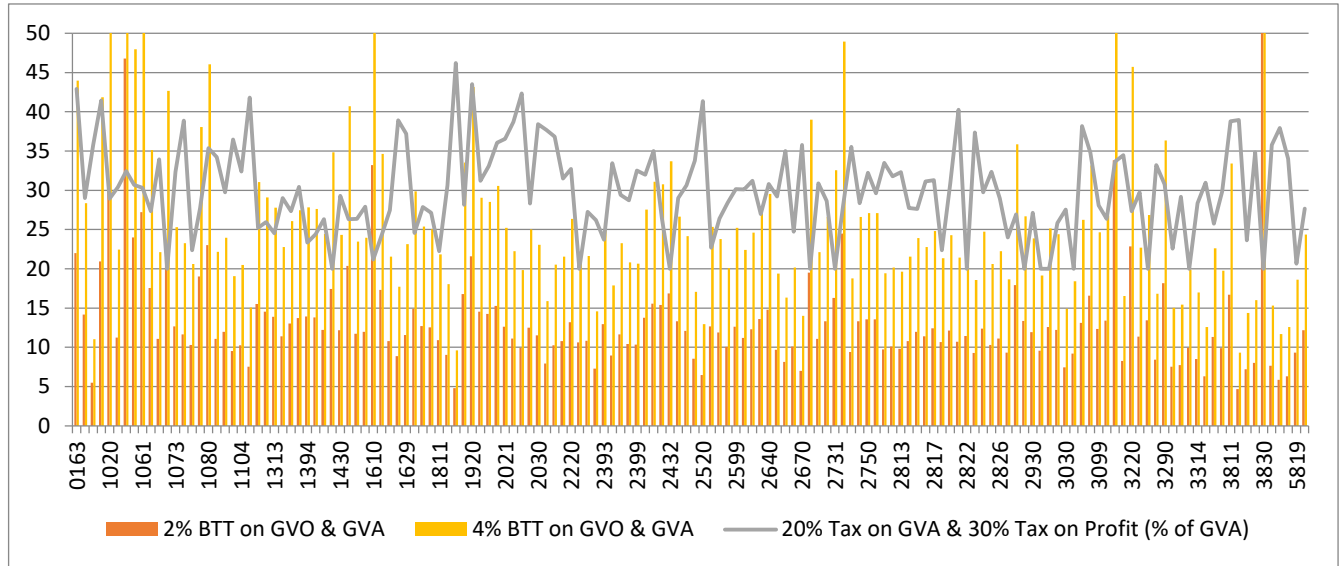
Different cost Components	Transaction Charges Details
Merchant discount rates (MDRs)	0.75 to 1% for debit cards 1.5 to 2 % for other cards
Monthly Service Charge	Rs. 150 – 200/- Per Terminal
Annual Maintenance charge	Rs. 500 to 750/- Per Terminal
Internet/ Power Charges	Depending on the usage and local rates

Source: RBI and Various Bank websites. The values indicate the range.

3.3.3 What is the Incidence of Tax Across Sectors:

The second issue that one can explore is the difference in tax liability across sectors, if one moves from the present regime to a BTT. For exploring this, two different data sources are used: one, Annual Survey of Industries which provides information on organised manufacturing and second, the survey of unincorporated enterprises which provides information on the unorganised sector. In organised manufacturing, industries face a CenVAT at 12 percent, a state VAT in the range of 5 percent to 15 percent and in addition there would be a tax on profits as well as on wage incomes generated. There are a number of exemptions and concessions, and in addition, there is the possibility that companies are not completely compliant. While it is not possible to take into account all these factors, the chart below presents a comparison of the effective tax rate for the present regime assuming the effective tax rate is 20 percent for all sectors and a 30 percent tax on profits and the effective tax rate for BTT regime, with rate of 2 percent and a rate of 4 percent.

Figure 3.1 Effective Tax Rate for Organised Manufacturing (as % of GVA)



Source: CSO (2016).

The chart above shows that as compared to the present regime represented by a 20 percent tax on value added and a 30 percent tax on profits, the BTT regime with 2 percent rate of tax would have few industry categories which face a higher liability. This number increases somewhat if the rate of tax is 4 percent. Under a BTT regime with tax rate of 2 percent, 2.56 percent of the value added in organised manufacturing would be taxed at a rate higher than that in the present regime. In contrast, if the rate for BTT is 4 percent, the number climbs to 19.

Table 3.5 Share of Industries which would Face Higher Liability under BTT

Tentative tax rate	Share of Value Added which would face higher liability in BTT
2 % BTT on GVO	2.56
2% BTT on GVO & GVA	2.56
4% BTT on GVO	14.90
4% BTT on GVO & GVA	19.42

Note: If the tax on factor payments is not passed back to the employer of factor inputs, the scenario would be 2 percent BTT on Gross value of output (GVO). If on the other hand, the taxes are passed on, then the scenario would be 2 percent BTT on GVO +Gross value added (GVA).

A similar analysis can be done for the unorganised sector. For this exercise, the unit level data from survey of unincorporated enterprises of the 67th round survey of National Sample Survey Office

(NSSO) (NSSO 2012) has been used.⁵⁴ The survey captures the unincorporated enterprises engaged in manufacturing, trading and services. Unlike ASI database, this database is unique as sample enterprises are mostly unregistered for taxes and operate in the informal system⁵⁵. Repeating the same exercise as above, table 3.6 reports the effective tax rate for different categories of economic activities.

For the liability under the BTT, a 2 percent tax is applied on total turnover as well as on value added. For determining the liability under the present regime, all firms that should have a liability of state VAT (with turnover above Rs 10 lakh) and all firms which should have a liability of CenVAT (those with turnover over Rs 1.5 crore) are identified and the standard rate for these taxes is applied to these firms. For each sector, the sum of liabilities under VAT and CenVAT are taken together to determine the total liability under the old regime. From the data, it is clear that there are hardly any firms which would have incomes above the exemption threshold and hence the income tax liability is taken to be zero. The effective tax rates with BTT of 2 percent, BTT of 4 percent and the present regime are presented in the table 3.5. The results are similar to that obtained from an analysis of organised manufacturing.

Table 3.6: Effective Tax for Unorganised Manufacturing (as % of value added)

Activity Code	Activity description	2% BTT on GVO	2% BTT on GVO & GVA	Present regime
M1	Cotton ginning, cleaning and bailing	29.7	31.7	21.6
M2	Manufacture of food products	10.0	12.0	12.1
M3	Manufacture of beverages	4.3	6.3	9.5
M4	Manufacture of tobacco products	8.0	10.0	7.7
M5	Manufacture of textiles	5.6	7.6	8.7
M6	Manufacture of wearing apparel	3.3	5.3	3.3
M7	Manufacture of leather and related products	4.7	6.7	7.9
M8	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	5.7	7.7	7.6
M9	Manufacture of paper and paper products	7.7	9.7	21.0

⁵⁴ According to NSSO (2012), unincorporated enterprises imply not registered under the Companies Act, 1956. Further the domain of 'unincorporated enterprises' excluded (a) enterprises registered under Sections 2m(i) and 2m(ii) of the Factories Act, 1948 or bidi and cigar manufacturing enterprises registered under bidi and cigar workers (condition of employment) Act, 1966, (b) government/public sector enterprises and (c) cooperatives. Thus the coverage was restricted primarily to all household proprietary and partnership enterprises. In addition, Self Help groups (SHGs), Private Non-Profit institutions (NPIs) including Non-Profit Institutions Serving Households (NPISH) and Trusts.

⁵⁵ For detailed analysis of indirect tax compliance in these units see Mukherjee and Rao (2015).

Activity Code	Activity description	2% BTT on GVO	2% BTT on GVO & GVA	Present regime
M10	Printing and reproduction of recorded media	5.6	7.6	12.3
M11	Manufacture of coke and refined petroleum products	11.0	13.0	11.2
M12	Manufacture of chemicals and chemical products	14.6	16.6	15.8
M13	Manufacture of pharmaceuticals, medicinal chemical and botanical products	9.6	11.6	24.5
M14	Manufacture of rubber and plastics products	9.3	11.3	20.7
M15	Manufacture of other non-metallic mineral products	5.2	7.2	17.9
M16	Manufacture of basic metals	9.0	11.0	19.6
M17	Manufacture of fabricated metal products, except machinery and equipment	5.9	7.9	10.6
M18	Manufacture of computer, electronic and optical products	11.7	13.7	19.3
M19	Manufacture of electrical equipment	7.9	9.9	17.5
M20	Manufacture of machinery & equipment n.e.c.	7.6	9.6	18.6
M21	Manufacture of motor vehicles, trailers and semi-trailers	8.3	10.3	18.6
M22	Manufacture of other transport equipment	9.4	11.4	18.4
M23	Manufacture of furniture	5.9	7.9	8.0
M24	Other manufacturing	6.5	8.5	11.0
M25	Repair and installation of machinery and equipment	3.8	5.8	4.6
T1	Trade & repair of motor vehicles & motor cycles	13.4	15.4	14.5
T3	Other wholesale trade	27.6	29.6	24.9
T4	Other retail trade	18.1	20.1	15.1
S2	Food service activities	212.1	214.1	150.0
S3	Land transport	1,049.3	1,051.3	924.5
S5	Warehousing and storage	257.5	259.5	566.0
S7	Information and Communication	142.2	144.2	255.0
S8	Financial service activities except insurance and pension funding	5.8	7.8	16.4
S9	Other financial activities	306.5	308.5	1,215.5
S10	Real estate activities	576.4	578.4	1,837.7
S11	Professional, Scientific & Technical activities	674.4	676.4	6,862.1
S12	Administrative and support service activities	183.1	185.1	219.2
S13	Education	1,225.5	1,227.5	4,132.1
S14	Human Health and Social work	226.8	228.8	717.2
S15	Other community, social and personal service activities	53.9	55.9	30.8
	ALL ACTIVITIES	16.4	18.4	22.7

Note: There are a number of sectors with very high tax rates – this happens because the value addition is very small as compared to the turnover of these activities.

In other words, the analysis above indicates that the effective liability of tax under BTT is not consistently below that in the present regime. While this is intuitive since the reform should be revenue neutral and if a few sectors are expected to pay less some other sectors should be paying more, the fact that some sectors might have to pay more would mean that there could be some resistance to the change.

Here it is useful to examine the claim presented in Cintra (2009) that suggests that BTT would result in lower tax incidence on all sectors of the economy and at the same time generate more revenue. Cintra undertakes an extensive analysis of tax incidence both under the proposed BTT regime and the existing regime of indirect taxes for Brazil. He uses the Input Output table to derive the tax incidence across 110 sectors of Brazil. The analysis is used to conclude that

- at a low rate of 2.81 percent tax, the incidence of tax under the BTT regime is considerably lower than that in the present regime for all the sectors in the economy
- even at this low rate of tax of 2.81 percent, the system generates 27 percent of GDP as tax revenue in comparison to a little over 10 percent generated by the present tax regime.

There are two difficulties with the analysis: first, the author derives the rate of 5.62 percent by determining the tax base from the revenues collected from the CPMF, (the BTT implemented in Brazil) and computing the rate of tax required to generate the same revenue as all the taxes to be subsumed in the proposed BTT produce, i.e., 27 percent of GDP. Since he proposes that the tax would be on both debit and credit, the rate of tax would be halved to give 2.81 percent. In the discussion on the methodology adopted, the analysis does not reflect the fact that the rate of tax is applied on both sides of the transaction. It is therefore reasonable to assume that the rate applied in the analysis is the stated rate of 2.81 percent and not the revenue neutral rate of 5.62 percent.

To derive the incidence of tax on a sector, one can either assume that the tax is passed on to the next link in the chain of transactions or that it is borne by the agent paying the tax. In the former case, the tax would be applicable at 5.62 percent on each transaction and not at the rate of 2.81 percent. On the other hand, if the tax is not passed forward, the incomes of all segments of the economy would be compressed by that extent. While the compression might happen for a few sectors, it would not be correct to assume that all sectors will suffer the incidence of tax and not be able to pass it forward. Working therefore on the assumption that the taxes are passed forward, the rate of tax on transactions should be 5.62 percent. In other words, the incidence of tax would

be double that reported in Table 12 of Cintra (2009) and in a comparison with the incidence of tax under the present indirect tax regime, the BTT regime shows up a lower incidence in 55 sectors and a higher incidence in 54 sectors.

The second difficulty relates to ensuring that the revenue estimates from the CPMF revenues and those from the Input Output table are consistent with each other. For instance, the banking transaction tax should apply not just on GDP producing activities but also on a range of transfers. This would suggest a lower average incidence of tax on GDP producing activities which is not reflected in the table 3.7.

Table 3.7 Cintra's Computation of Tax Incidence: Corrected Table

S.No.	Sector	Single tax	Traditional tax	Single tax corrected double incidence for
1	Rice	16.26	31.2	32.52
2	Corn	15.21	32.46	30.42
3	Wheat and other cereals	16.59	33.89	33.18
4	Sugar cane	16.97	34.51	33.94
5	Soybean	16.49	34.04	32.98
6	Other agricultural products	14.57	32.07	29.14
7	Manioc	15.07	32.66	30.14
8	Tobacco	16.86	52.01	33.72
9	Cotton	16.1	33.65	32.2
10	Citric fruits	16.65	34.2	33.3
11	Coffee	16.74	31.66	33.48
12	Forest products	14.87	32.01	29.74
13	Cattle and other live animals	17.68	34.04	35.36
14	Cow milk	17.76	28.69	35.52
15	Live pig	17.98	34.33	35.96
16	Live Poultry	17.86	34.12	35.72
17	Chicken eggs	15.05	29.22	30.1
18	Fish	17.63	28.53	35.26
19	Oil and natural gas	15.11	30.22	30.22
20	Iron ore	18.23	35.98	36.46

S.No.	Sector	Single tax	Traditional tax	Single tax corrected double incidence for
21	Coal	16.87	32.24	33.74
22	Non-ferrous metallic minerals	16.49	33.91	32.98
23	Non-metallic minerals	15.96	33.81	31.92
24	Meat processing	17.38	31.73	34.76
25	Fresh, refrigerated or frozen pork	17.98	32.91	35.96
26	Fresh, refrigerated or frozen poultry	17.07	31.51	34.14
27	Processed fish meat	18.11	32.36	36.22
28	Canned fruit, legumes and other vegetables	18.72	33.4	37.44
29	Non-refined soybean oil and by products	19.61	33.94	39.22
30	Vegetables except corn and animal oils	18.61	32.86	37.22
31	Processed soybean oil	17.67	30.75	35.34
32	Refrigerated, sterilized and pasteurized milk	17.83	32.09	35.66
33	Dairy products and ice-cream	16.95	32.02	33.9
34	Processed rice and byproducts	15.84	29.13	31.68
35	Wheat flour	19.16	33.47	38.32
36	Manioc flour	16.05	30.09	32.1
37	Corn oil and corn products	17.4	31.64	34.8
38	Sugar products	18.95	33.33	37.9
39	Ground coffee	17.13	30.3	34.26
40	Instant coffee	18.62	32.91	37.24
41	Other food products	17.05	31.28	34.1
42	Beverages	18.38	54.82	36.76
43	Tobacco products	18.89	58.49	37.78
44	Processed cotton	16.13	35.2	32.26
45	Textiles	15.27	34.25	30.54
46	Other textile products	15.66	34.75	31.32
48	Leather products except shows	16.17	40.37	32.34
49	Shoes	15.91	36.1	31.82
50	Wood products except furniture	16.6	39.44	33.2

S.No.	Sector	Single tax	Traditional tax	Single tax corrected double incidence for
51	Cellulose and other paper inputs	16.97	34.39	33.94
52	Paper cardboard and packaging	15.58	37.93	31.16
53	Newspapers, magazines and sound recordings	13.84	26.25	27.68
54	Liquefied oil gas	17.28	30.31	34.56
55	Gasoline	20.35	35.12	40.7
56	Gas alcohol	16.87	30.99	33.74
57	Heating oil	18.83	31.92	37.66
58	Diesel oil	17.49	29.23	34.98
59	Other oil products	17.1	29.71	34.2
60	Alcohol	18.07	33.27	36.14
61	Inorganic chemical products	14.95	30.36	29.9
62	Organic chemical products	14.13	27.75	28.26
63	Resin and elastomer	14.25	29.67	28.5
64	Pharmaceutical products	12.29	31.35	24.58
65	Pesticides	15.78	32.81	31.56
66	Perfumery, soaps and cleaning products	15.76	47.95	31.52
67	Paints, varnish, enamels and lacquers	15.71	34.35	31.42
68	Other chemical products	14.83	38.5	29.66
69	Rubber products	15.79	37.21	31.58
70	Plastic products	15.39	34.11	30.78
71	Cement	16.86	34.33	33.72
72	Other non-metallic mineral products	16.37	34.82	32.74
73	Pig iron	17.8	38.77	35.6
74	Semi-finished rolled steel and steel tubes	16.53	36.49	33.06
75	Non-ferrous metallic products	16.65	32.28	33.3
76	Cast steel	18.32	35.85	36.64
77	Metal products-except machinery and equipment	15.83	37.38	31.66
78	Machinery and equipment	15.59	31.96	31.18

S.No.	Sector	Single tax	Traditional tax	Single tax corrected double incidence for
79	Home appliance	16.13	38.15	32.26
80	Office and computer equipment	15.09	35.9	30.18
81	Electric machines and equipment	15.36	35.92	30.72
82	Electronics and communication equipment	13.2	34.01	26.4
83	Medical and hospital equipment	12.93	40.94	25.86
84	Automobiles, vans and pick- ups	17.9	35.72	35.8
85	Buses and trucks	17.13	38.22	34.26
86	Auto industry parts and equipment	15.21	31.72	30.42
87	Other transport equipment	16	34.39	32
88	Furniture	13.7	36.08	27.4
89	Recycled scrap	17.65	39.11	35.3
90	Electricity, gas, water , sewer and urban sanitation	13.76	34.08	27.52
91	Construction	15.2	30.35	30.4
92	Trade	12.17	32.58	24.34
93	Freight	15.72	31.32	31.44
94	Passenger transport	14.15	30.59	28.3
95	Mail	14.98	27.61	29.96
96	Information services	12.46	24.2	24.92
97	Insurance and finance	11.9	23.31	23.8
98	Real estate rental	9.87	21.07	19.74
99	Imputed rental values	18.42	27.97	36.84
100	Maintenance and repair	12.53	26.23	25.06
101	Lodge and food	14.53	37.73	29.06
102	Services to firms	11.57	22.21	23.14
103	Private education	11.87	23.53	23.74
104	Private health services	18.15	30.31	36.3
105	Services to families	12.7	26.94	25.4
106	Community services	14.15	26.19	28.3

S.No.	Sector	Single tax	Traditional tax	Single tax corrected double incidence for
107	Domestic services	18.62	30.89	37.24
108	Public education	18.42	29.48	36.84
109	Public health care	17.49	28.01	34.98
110	Government and social security	17.53	26.24	35.06

Source: Cintra (2009).

3.3.4 What are the Likely Implications on the Economy of Introducing the Tax?:

The proposed change in the tax regime would alter the structure of taxes in the country. It is therefore important to explore what the likely impacts on the economy might be. The major change would be to conceptually move from the taxation of value added in the economy⁵⁶ – to a tax on transaction values. Clearly, transaction values would be considerably higher than value added corresponding to any transaction and this would allow for the levy of the tax at a lower rate as compared to a tax on value added. These are akin to turnover taxes that used to be levied in many countries before VAT regimes were introduced. However, there are reasons why countries across the world choose to move from taxes on value of output to taxes on value added – the underlying reason is cascading of taxes. This, it is argued would lead to distortions in economic decision making by for instance encouraging vertical integration. This could affect our global competitiveness as well. The first issue to explore therefore is whether there would be cascading in the new regime. The second issue to explore is how this tax stands on the principle of neutrality, when compared to the present system of taxation. The third issue to assess is the likely impact on saving and investment decisions. The next issue would be to explore whether with the introduction of the tax, there would added incentives within the economy to utilise alternatives to the official currency. These issues are explored in some detail in this section.

1. ***Cascading taxes:*** As argued above, introduction of BTT would mean a tax on all transactions. To get a sense of the extent to which this tax would cascade, we use the input-

⁵⁶ Even income tax is a tax on value added in the economy although it is levied and collected after the value added is distributed as factor incomes.

output framework⁵⁷. CSO constructs the I-O table from the transactions reported by a sample set of firms. It therefore captures the extent of purchased goods and services reported by the units in the economy. To understand the impact of cascading of 2 percent tax on turnover, we have used a simple I-O framework for 48 sectors. The results are reported in table 3.8. The results show that tax cascading would be 43 percent of total tax incidence and 75 percent of direct tax incidence. This means for every 1 percent tax on turnover there will be additional 0.75 percent tax through cascading.

Table 3.8: Incidence of Tax through Cascading

(Rs. Crore)

	Tax Cascading	Direct Tax Incidence (DTI)	Total Tax Incidence
Total	258,164	95,554	353,718
% of Total Tax Incidence	72.99	27.01	
% of DTI	270.18		

Source: Estimated based on 2007-08 I-O Table

The second issue of interest here is, whether cascading affect all sectors in the same manner. For estimating the total tax liability in the case of BTT, the input output table has been used. The methodology adopted is briefly as follows: price is estimated for two scenarios, one with BTT and the other without. Using the input output matrix A, P_T , the price with tax (2% BTT), is estimated by

$$P_T' = [I - (diag[\hat{T}A])^{-1}\bar{V}]'$$

Where P_T' is the transpose of the price (with tax) price vector, I is an identity matrix of the same order as A, \hat{T} is a tax matrix where all elements are (1+t) (t is the tax rate) and having same order as A, $diag[.]$ is a function which takes only diagonal elements of the matrix inside the function. It is to be mentioned here that $[I - (diag[\hat{T}A])^{-1}]$ builds the tax

⁵⁷ In the I-O table, the transactions between sectors reflect the value of inputs purchased. Therefore, the BTT revenues are reasonably captured. The only case where the values do not reflect the value of inputs purchased would be in inputs used within the sector (a_{ii})

corresponding to inputs. \bar{V}' is transpose of value added vector where all elements are multiplied by $(1+t)$. It builds the tax corresponding to value added.

P_0 is the price without tax, and it is estimated by setting $t=0$ in the above equation. Tax Cascading is estimated across sectors by $\left[\left(\frac{(1+t)P'_T}{P_0} - 1\right) * 100\right]$, where all prices are multiplied by $(1+t)$ to get $(1 + t)P'_T$ which is the tax corresponding to sales.

Table 3.9 shows the percentage change in price using this methodology. The number reported in each row shows the total tax liability from the regime on that sector. Since the final tax would be 2 percentage points on all transactions – the rest of the tax incidence is attributable to cascading of taxes from other stages in the production process. The numbers in the table highlight the fact that there is considerable variation in the total tax incidence across sectors with the rates going as high 13.8 percent. These rates would lower than those in the present regime, for a number of sectors and the new regime might appear to be more attractive for all agents who face a lower tax liability. For agents who were not paying taxes in the existing regime, it is an open question whether the lower rates of tax would be adequate to bring them into the system or not.⁵⁸

Table 3.9: Sector-wise Incidence of BTT and Cascading

Sector Sl No.	Sector Description	Tax Cascading (%)
1	Crops and livestock products (including fishing)	5.24
2	Forestry and logging	4.40
3	Coal and lignite (including coal tar products)	5.25
4	Natural gas	4.48
5	Crude petroleum	4.87
6	Metallic minerals	4.43
7	Non-metallic minerals	4.41
8	Food products & beverages (including edible vegetable oils)	21.29
9	Tobacco products	5.95
10	Textiles (including apparels)	10.72
11	Furniture and fixtures-wooden	7.29

⁵⁸ This way of estimating the effects of a tax does not measure the overall impact of the change on the economy. To explore this aspect further, a general equilibrium approach would be more useful. However, such a model to analyse sectoral and overall impacts is not readily available in the Indian context.

Sector Sl No.	Sector Description	Tax Cascading (%)
12	Wood and wood products (excluding furniture)	7.51
13	Paper, paper prods. & newsprint	10.17
14	Printing and publishing	9.27
15	Leather products (including footwear)	9.81
16	Rubber and plastic products	10.05
17	Petroleum products	14.38
18	Chemicals	10.84
19	Non-metallic mineral products (including cement)	8.05
20	Ferrous and non-ferrous basic metals	10.30
21	Metal products (excluding machinery)	10.13
22	Machinery and machine tools (including tractors & agri. implements)	10.56
23	Electrical machinery & appliances	11.18
24	Electronic and communication equipments	11.83
25	All transport equipments (excluding motor vehicles other than 2 wheelers)	11.54
26	Motor vehicles	13.81
27	Medical, precision & optical instruments including watches & clocks)	8.02
28	Jems & Jewelry, misc. manufacturing	10.56
29	Construction	7.51
30	Electricity	7.12
31	Water supply	5.58
32	Railway transport services	5.40
33	Land transport (including via pipeline)	6.85
34	Water transport	5.45
35	Air transport	6.35
36	Supporting and aux. transport activities (including storage & warehousing)	5.80
37	Communication	4.69
38	Trade	4.54
39	Hotels and restaurants	8.41
40	Banking and insurance	4.48
41	Ownership of dwellings	4.14
42	Education & research, medical & health, public administration	4.31
43	Business services	5.91
44	Computer & related activities	4.76
45	Legal services	4.51
46	Real estate activities	4.78
47	Renting of machinery & equipment	4.73
48	Other commercial, social and personal services, other services	4.73

Source: Estimated based on 2007-08 I-O table.

The other aspect that needs to be taken into account is the impact on exports and the competitiveness of domestic products with respect to imports. As per the agreements within the WTO, while any taxes that are built into the price of a good being exported out of the economy is not considered an incentive, any payments which are made on any basis other than an estimate of taxes embedded are considered incentives which can be neutralised by the importing country by way of counter-veiling duties. In a VAT regime, it is possible to identify the taxes paid towards the manufacturing and supply of the good being exported. A refund of these taxes would therefore be enough to neutralise the impact and these refunds are not considered incentives. However, if one shifts to a BTT, there would arise difficulties in defining or estimating the amount of taxes that should be refunded. Cintra (2009) suggests that the way around this problem is to construct elaborate I-O tables which can then be used for estimating the taxes embedded. However, the process of constructing I-O tables means that these tables usually come with a significant lag – in India, the latest available table relates to 2007-08 which makes it over 7 years old. Further, there is difficulty in identifying the coefficients of the I-O matrix when one has a cascading regime, since only the taxes at the penultimate stage and the ultimate stage are perceived by the units which are surveyed to construct the tables. These can constitute a reasonable basis for academic studies but may not be reliable enough to base the computation of tax refunds on. In the absence of a suitable and acceptable mechanism for correcting for inbuilt taxes, the exports might be adversely affected. Similarly, there could exist adverse impact on domestic production since to ensure a level playing field, the government would have to levy import duties in line with the taxes faced by the domestic industry.

- 2. *Neutrality of BTT:*** One of the principles of taxation, as mentioned earlier, is neutrality. The term neutrality is used to describe a tax system where differences in incidence of tax do not distort consumption decisions or investment decisions of agents. Given that we are taking about both consumers and investors, there are two possible ways of looking at tax incidence: one way is to look at the tax incidence for any given stage of production or supply and the other way is to look at the total incidence of tax built into the price of a commodity. The former would focus on the investor while the latter would focus on the consumer. Using the first approach, the incidence of tax would be related to the extent of

value addition at that stage. For instance, if one compares two industries one with a high share of value added in value of output and the other with a low share of value added in value of output. The same tax of 2 percent on value of output would translate into different levels of tax on value added, suggesting thereby that one activity might be perceived to be more highly taxed than the other. Table and chart in the preceding section shows a comparison of the effective tax rates for different segments of the economy. Table 3.10 presents a summary of the results for ASI units. These tables highlight the fact that although the announced tax rate is a uniform 2 percent for the entire economy, its impact can be significantly different across sectors. The incidence as measured by the second approach is affected by the number of steps in the process of production and distribution of a commodity – the cascading that results from the existence of multiple stages of production and distribution would contribute to raising the total tax liability built into the price of a commodity. This aspect was explored in the subsection on cascading. The analysis once again demonstrates that while there is a uniform rate of tax at 2 percent, the effective rate of tax varies across sectors. In other words, the proposed uniformity in tax rates across the economy does not translate into uniform effective tax rates and hence the claim to neutrality is not upheld.

Table 3.10 Transaction tax as Percentage of GVA – Annual Survey of Industries: 2013-14

2% BTT on GVO	Share in ASI Total GVA	Average GVA/TO
< 7 %	12.52	40.49
7-12 %	53.25	21.34
12-17 %	16.14	14.39
17-22 %	14.68	10.33
22-27 %	1.67	8.40
27-32 %	1.06	6.60
32% and Above	0.67	3.00
All	100.00	22.03

Source: computed using CSO (2016).

The analysis above suggests that the effective rate of tax on different segments of the economy would be different. It is an open question whether this would distort people's decisions in the economy. For instance, if the value added in a segment is low, it would

perceive a high tax incidence and might choose to vertically integrate backward or forward to increase the value added and hence reduce the incidence of tax. It could also be argued that if the rates of tax are perceived to be different across sectors, people might move to sectors which face a lower incidence of tax. The magnitude of this response however cannot be measured easily.

3. ***Distortions in saving and investment decisions:*** Arthakranti's Banking Transaction Tax does not propose any exemptions from the tax. In other words, all transactions including inter-personal transfers for non-economic reasons too are to be subject to a tax. This means that all savings which are routed into any instrument whether it is a physical instrument or a financial instrument would be subject to tax. Consider an agent who saves Rs 1000 and invests in a bond. At the time of investment, the value of the investment would be Rs 980 because of the BTT. In subsequent years, the effective rate of return on the investment would be lower than the stated rate since there would be a tax on the interest income earned from the bond. In other words, the return to investment would be lower and to get the same amount of return, the asset would need to be held for a much longer period. In the literature on proposing the efficacy of the Banking Transaction Tax, Cintra (2009) discuss these difficulties and therefore suggest that investment should not be subject to tax. In countries like Brazil, ring-fenced accounts were created where movement from one asset to another did not attract a tax – the tax was only payable if it left the set of investment instruments. If this modification is not undertaken, there could be distortions in the saving investment decision and if these modifications are undertaken, it would open the possibility of constructing a variety of instruments which mimic the properties of an investment asset but serve the purpose of financing consumption expenditure.
4. ***Could currency substitutes emerge:*** The tax system proposed depends on the bulk of the transactions passing through the banking channel. As established above, the actual liability of tax is not a small 2 percent of the value added in any given activity. Therefore, there would remain some incentive to attempt to evade or avoid the tax. One such mechanism would be through the use of cash as a basis for transactions through financial disintermediation or through the evolution of new alternative payment methods that might not be covered by the definition of bank or banking transactions. Within the global financial

system, there are a number of innovations in instruments to be used as money. At one extreme, one has a variety of crypto-currencies such as bitcoins, litecoins and so on. These don't have a tangible form. They can be used for purchase of goods and services. Transactions mediated by crypto currencies will remain out of the purview of banking system and hence of the BTT. The scope and spread of these currencies however is rather limited at present. There is a limit on the amount of currency that can be issued in these forms.

Turning to another alternative mechanism to bypass the banking system would be to develop a system of substitute currencies. These could be hyper local currencies which are emerging in a number of developed countries to encourage a closer relation between the local people and the local businesses. Some examples are Ithaca hours, Brixton Pounds, Berkshares and Equal Dollars. These are sometimes exchanged for the official currency at a fixed exchange rate and used only for local transactions within the community. The advantage of these currency substitutes is that there is an increased demand for the local products. In terms of the present discussion, these forms of currency once again will keep transactions out of the banking system. If these systems are sustained, they will keep not one transaction but a series of transactions out of the banking system.

A third alternative is a currency which is issued in return for some goods being sold on a portal or a service being provided. This currency once again entitles the owner to avail of services or goods available on that portal only. These are like more sophisticated barter exchanges. These transactions too will remain outside the purview of the banking system and hence will also remain outside the taxation system.

A further alternative is the Sodexo type of coupons that are issued by a single agency and can be redeemed at a large number of merchant outlets. Within the Indian experience, there was at least one such coupon issued to facilitate transactions in the Rythu Bazaar in Hyderabad by IDFC on the request of Government of Telangana. While these are meant to serve only one specified purpose, they hold the possibility of mediating in a series of other transactions as well, provided the commitment by IDFC to redeem the coupons remains unaltered. Clearly, transactions that pass through this channel would have bypassed the BTT since at least one transaction is not mediated through banks.

In recent times, a variety of mobile wallets too have emerged. While some of them are backed by a payment bank, others are not. The money in the wallet could potentially move from one wallet to another without being withdrawn into a bank or bank like institutions. Once again unless these transactions are designated as banking transactions, they too would slip out of the BTT network.

What all these alternatives indicate is that the possibility that people will look for alternatives is a real possibility led on by the fact that the effective rate of tax under the BTT regime even with a 2 percent tax would be a reasonably high tax rate.

5. ***BTT and international tax:*** Most countries operate a residence based tax system where the country of residence taxes the global profit of its residents. When the country where the investment is deployed also taxes a part or the whole of income of the taxpayer, double taxation occurs. Currently, an elaborate system of bilateral tax treaties has been put in place to avoid such double taxation. Under the current rules, the source countries get lesser right of taxation and where these countries exercise such rights, there is a system of giving credit by the country of residence for the taxes paid abroad.

The current system of these double taxation avoidance agreements is not fair and efforts are on at international level through initiatives like the Base Erosion and Profit Shifting to correct some of the loopholes by which multinationals exploit the system and often end up paying very little tax overall.

However, despite obvious problems associated with the present dispensation, the system is based on taxation of income. There may be myriad ways of defining income by various countries but what is important is that the tax is generally on income.

India has entered into almost 100 tax treaties. In all these treaties, of course with some variations, the term tax is defined as follows:

—Article 2: TAXES COVERED (UN Model 2011)

1. This Convention shall apply to taxes on income and on capital imposed on behalf of a Contracting State or of its political subdivisions or local authorities, irrespective of the manner in which they are levied.
2. There shall be regarded as taxes on income and on capital all taxes imposed on total income, on total capital, or on elements of income or of capital, including taxes on gains from the alienation of movable or immovable property, taxes on the total amounts of wages or salaries paid by enterprises, as well as taxes on capital appreciation.
3. The existing taxes to which the Convention shall apply are in particular:
 - (a) (in State A):
 - (b) (in State B):

4. The Convention shall apply also to any identical or substantially similar taxes which are imposed after the date of signature of the Convention in addition to, or in place of, the existing taxes. The competent authorities of the Contracting States shall notify each other of significant changes made to their tax law.”

The short point about the current DTAAAs is that it is about taxes on income. Article 23 then lays down how double taxation is to be avoided by the countries concerned.

A sample article 23 is along the following lines: (India- Thailand, December, 2015)

“1. The laws in force in either of the Contracting States shall continue to govern the taxation of income in the respective Contracting States except where provisions to the contrary are made in this Agreement.

2. Double taxation shall be eliminated as follows:

(i) In India,

(a) Where a resident of India derives income which, in accordance with the provisions of this Agreement, may be taxed in Thailand, India shall allow as a deduction from the tax on the income of that resident, an amount equal to the tax paid in Thailand. Such deduction shall not,

however, exceed that portion of the tax as computed before the deduction is given, which is attributable, as the case may be, to the income which may be taxed in Thailand.

(b) Where in accordance with any provision of the Agreement income derived by a resident of India is exempt from tax in India, India may nevertheless, in calculating the amount of tax on the remaining income of such resident, take into account the exempted income.

(ii) In Thailand,

(a) Where a resident of Thailand derives income which, in accordance with the provisions of this Agreement, may be taxed in India, Thailand shall allow as a deduction from the tax on the income of that resident, an amount equal to the tax paid in India.

Such deduction shall not, however, exceed that portion of the tax as computed before the deduction is given, which is attributable, as the case may be, to the income which may be taxed in India.

(b) Where in accordance with any provision of the Agreement income derived by a resident of Thailand is exempt from tax in Thailand, Thailand may nevertheless, in calculating the amount of tax on the remaining income of such resident, take into account the exempted income.”

Under the present arrangement, the moot point is that tax to be credited should be a tax on income. Existing jurisprudence lays down a general proposition that any tax the subject of which is income can be regarded as a tax on income. However, where the tax is in respect of a different subject but is merely calculated with reference to profits or income, then the same will not be considered as a tax on income.

By way of an example, a property tax computed with reference to income still remains a property tax and does not become an income tax. That is certainly as per Indian jurisprudence and it is quite possible, that the other State does not accept the same point of view and in fact considers such a property tax as income tax.

Now, what is the practical implication of such a difference of view? The non-resident taxpayer concerned paying the tax in India will claim a credit of the same in her country of residence on the ground that it is an income tax. If the state of residence agrees with that

view, that state is free to give credit from the taxes paid even if India does not agree with the same. However, if the state of residence does not consider it as income tax, which is the more logical view, it would not give credit and then there will be double taxation.

If India were to tax income only at the rate of 2, that would not be a problem, since the tax will be on income and there are rules to specify which country can tax what income and under what circumstances. A BTT is not an income tax. In fact, the proposal is to abolish income tax altogether. Therefore, the argument that the new levy will be in addition to or in substitution of income tax will also not be possible.

In such an event, it will be necessary to either rescind all our DTAAAs or try to renegotiate our tax treaties in a way that the new tax is taken into consideration. It is also necessary to appreciate that even if India abolishes income and corporation tax, it is unlikely that other countries will adopt the same method of taxation, at least in the near future. Indian companies investing abroad will then not get credit for the taxes paid there. It is possible to argue that the Indian companies will pay income tax only in the other country and there will be no double taxation. But that view may not be correct since all such incomes when repatriated would be taxed under the BTT regime.

If on the other hand, the BTT is considered by the other State as income tax, then the consequences will be that the tax cannot be levied unless there is a permanent establishment of the enterprise in India.

In other words, the system of international taxation which has some agreed conventions would be disturbed by the introduction of a BTT replacing all other direct taxes. There are two possible consequences of this change:

- a. If the effective tax rate from BTT is perceived to be high, one could witness an outflow of investment, unless the Double Taxation Avoidance Agreements are renegotiated so that the investor can claim credit for any taxes paid in India.
- b. If the effective tax rate from BTT turns out to be lower than the tax rate faced by corporations in the residence country, then India might attract investment which seeks to locate here to benefit from the lower effective tax rate. Assuming that we transit to

the BTT and its effective rate is less than 10%, in that case, India risks being categorized as a tax haven and put on various black lists prepared by countries for various purposes including for transfer pricing and CFC legislations. The European Union is preparing such a list that will include such low tax jurisdictions. It may be noted that Brazil has recently put Ireland on its blacklist. The criteria adopted by Brazil are: countries that have no tax, hide banking or trade information or have a corporate income tax rate of less than 20%.

The short point is that market economies normally have corporate income tax with some reasonable rate and in this age of tax competition, might look askance at India trying to lower the bar.

That apart, in case there is no income tax and no tax administration, it is very likely that money launderers and terrorist financiers will feel emboldened to use India as a haven for their activities. At present, even if anti-money laundering operations are administered by the enforcement directorate, the existence of income tax together with the monitoring for tax purposes by the tax administration prevent blatant use of the financial system by such operators.

6. ***Tax administration:*** The proposal for introduction of BTT is also presented as a change in the entire culture of tax compliance and administration, since it constitutes a move from declaratory taxes to non-declaratory tax regime. One of the virtues of the proposed single BTT is supposed to be the virtual elimination of tax evasion and fiscal corruption, and a reduction of the underground economy since the tax collection would take place automatically upon each debit or credit transaction within the banking system. According to Cintra, to make tax evasion practically disappear it would suffice to monitor the bank clearing system.⁵⁹

Every tax faces problems of evasion and avoidance. In BTT, avoidance would relate to the use of instruments which are not included in the list of instruments subject to tax. For

⁵⁹ Cintra (2009), Page 54

reducing the scope for avoidance, some agency would have to be assigned the task of tracking the emergence of such methods.

Besides, there is no reason to assume that there may not be attempts at tax evasion even of the proposed BTT. Cintra, for example, mentions the Brazilian example of implementing the CPMF where the Brazilian Central Bank uncovered the existence of mechanisms, which banks offered to their largest clients that avoided collection of the CPMF.⁶⁰ Therefore, BTT like every other tax will also need an administration who will monitor the clearing system.

In any tax, the essential elements are the registration, filing and verification and collection. While there may not be any need for any registration in the proposed BTT, there will still be need of filing of some kind of periodic returns and verification of the correctness of the same and collection of the shortfall from the delinquent banks.

There is another aspect of the monitoring of the accounts. Presently, any amount that is credited in the bank account is subject to potential scrutiny by the tax department. In the absence of any scrutiny of the accounts, any kind of money can come in the bank accounts including drug money, terrorist money. If there is no tax on any other kinds of transactions apart from the BTT, in the absence of tax departments, it would be difficult to validate the source of income. It is possible to imagine that the financial intelligence unit that currently monitors the transactions in the financial sector is given the responsibility. But, if each and every banking transaction needs to be checked and monitored, it is unlikely that there will be much reduction in the bureaucracy.

In other words, without substantial work on the nature of administration required in a BTT regime, it would be difficult to establish that BTT regime could result in redundancy of workforce in the tax departments. The Arthakranti report suggests that the BTT regime will need only a small tax department and the extra staff would be redeployed⁶¹.

⁶⁰ Ibid, FN 79, page 55

⁶¹ Page 157 of the Arthakranti Report.

The proposal by Arthakranti suggests that the banks should be paid a part of the revenue they collect. In particular, it is suggested that the banks could be paid 0.35 percent of the transaction value. The report argues that this process would allow banks to expand their activities. It may be noted that there are two consequences of the above allocation of revenue to the banks. First, the cost of collection of tax would be significantly higher than the cost of collection of taxes in the present regime – the cost of collection would increase from about 2 percent of the revenue collected to 17.5 percent if the tax is collected at 2 percent of the value of transactions. Second, the banks would treat this receipt as incomes and not as loanable funds. In other words, the profits of the banks would increase substantially without any tangible benefits to the economy. It would be incorrect to assume that because of this incentive, the banks could perform the function of policing the taxpayers to ensure that they use only the formal sector cash substitutes since they would not have the sanction of law for the same. If the sanction of law is accorded, then the benefits from the lack of interface with a tax department would not fructify.

Restriction on Cash Transactions

The Arthakranti report suggests that in order to encourage transactions to remain within the fold of formal non-cash instruments, the government should place a cap on the value of transactions that can be undertaken with cash. The report proposes a cap at Rs 2000. There are however, two issues with this approach. First, the legal sanction for transactions has meaning only in an economy where customers generally approach the courts for enforcement of their rights with respect to transactions undertaken. If however, people still rely more on informal mechanisms for enforcement than the formal institutions, the cap on transactions might have very little impact in influencing behavior of individuals. Second, in attempting to induce a change in behavior of agents from using cash as a medium of exchange to using other instruments, there are again two possible mechanisms: one using incentives where the agents are persuaded to shift to non-cash instruments and the other by compulsion -rules may be framed to make certain kinds of transactions illegal. The former would come with fewer costs of administration while the latter would require more administrative effort, thereby placing discretion into the hands of the administrator encouraging rent seeking behaviour.

Appendix 3A: Estimating revenue from BTT at 2 percent

	Value of Output (Rs. Crore)	Gross Value Added (Rs. Crore)	Revenue from 2% Tax on GVA & Value of Output (Rs. Crore)
AGRICULTURE & ALLIED ACTIVITIES (Cropping)	15,36,092	12,11,252	54,947
AGRICULTURE & ALLIED ACTIVITIES (Irrigation)	48,900	41,159	1,801
AGRICULTURE & ALLIED ACTIVITIES (Livestock)	7,33,054	5,00,405	24,669
FORESTRY & LOGGING	1,64,976	1,38,137	6,062
FISHING & Aquaculture	1,22,775	1,04,297	4,541
MINING AND QUARRYING	5,50,800	3,04,300	17,102
Manufacturing - Corporate Sector	76,10,263	16,72,915	
<i>Manufacture of food products, beverages & tobacco</i>	9,98,198	1,53,892	23,042
<i>Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats</i>	2,46,592	23,209	5,396
<i>Manufacture of dairy products</i>	1,23,141	13,937	2,742
<i>Manufacture of grain mill products, etc. and animal feeds</i>	2,60,555	28,540	5,782
<i>Manufacture of other food products</i>	2,60,902	46,335	6,145
<i>Manufacture of beverages</i>	68,071	23,685	1,835
<i>Manufacture of tobacco products</i>	38,938	18,185	1,142
<i>Manufacture of textiles, apparel & leather products</i>	7,69,299	1,78,372	18,953
<i>Manufacture of textiles + cotton ginning</i>	5,64,042	1,25,503	13,791
<i>Manufacture of wearing apparel, except custom tailoring</i>	1,46,617	38,454	3,701
<i>Manufacture of leather and related products</i>	58,640	14,415	1,461
<i>Manufacture of metal & metal products</i>	12,25,060	3,24,650	30,994
<i>Manufacture of basic iron and steel + casting of iron and steel</i>	8,17,681	2,20,988	20,773
<i>Manufacture of basic precious and non-ferrous metals + casting of non-ferrous metals</i>	1,99,333	45,122	4,889
<i>Manufacture of fabricated metal products, except machinery and equipment</i>	2,08,045	58,540	5,332
<i>Manufacture of machinery & equipment</i>	13,40,275	3,58,094	33,967
<i>Manufacture of computer, electronic & optical products</i>	1,47,201	41,883	3,782
<i>Manufacture of electronic component, consumer electronics, magnetic and optical media</i>	73,483	19,276	1,855
<i>Manufacture of computer and peripheral equipment</i>	28,531	7,762	726
<i>Manufacture of communication equipment</i>	24,953	6,643	632
<i>Manufacture of optical and electronics products n.e.c</i>	20,233	8,202	569
<i>Manufacture of electrical equipment</i>	2,49,601	58,884	6,170
<i>Manufacture of machinery and equipment n.e.c</i>	3,27,025	1,05,187	8,644
<i>Manufacture of transport equipment</i>	6,16,449	1,52,141	15,372
<i>Manufacture of coke, petroleum, rubber, chemical and related products</i>	28,54,112	5,77,092	68,624

<i>Manufacture of coke & refined petroleum products</i>	15,32,815	1,70,412	34,065
<i>Manufacture of chemical and chemical products except pharmaceuticals, medicinal and botanical products</i>	5,77,087	1,36,287	14,267
<i>Manufacture of pharmaceutical; medicinal chemicals and botanical products</i>	2,47,544	1,13,600	7,223
<i>Manufacture of rubber & plastic products</i>	2,42,639	65,510	6,163
<i>Manufacture of other non-metallic mineral products</i>	2,54,026	91,284	6,906
<i>Others</i>	4,23,318	80,814	10,083
<i>Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting material</i>	30,858	7,315	763
<i>Manufacture of paper and paper products</i>	98,368	24,672	2,461
<i>Printing and reproduction of recorded media except publishing</i>	48,710	15,681	1,288
<i>Manufacture of furniture</i>	27,052	5,852	658
<i>Other manufacturing</i>	2,09,435	23,349	4,656
<i>Repair and installation of machinery and equipment</i>	8,894	3,944	257
Manufacturing - Household Sector	7,23,673	2,66,476	
<i>Manufacture of food products, beverages & tobacco</i>	1,70,052	48,660	4,374
<i>Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats</i>	12,400	2,058	289
<i>Manufacture of dairy products</i>	6,554	1,271	157
<i>Manufacture of grain mill products, etc. and animal feeds</i>	49,519	12,299	1,236
<i>Manufacture of other food products</i>	77,324	19,835	1,943
<i>Manufacture of beverages</i>	2,814	1,377	84
<i>Manufacture of tobacco products</i>	21,441	11,820	665
<i>Manufacture of textiles, apparel & leather products</i>	2,19,126	97,213	6,327
<i>Manufacture of textiles + cotton ginning</i>	1,69,272	73,801	4,861
<i>Manufacture of wearing apparel, except custom tailoring</i>	22,902	11,632	691
<i>Manufacture of leather and related products</i>	26,952	11,781	775
<i>Manufacture of metal & metal products</i>	95,544	30,627	2,523
<i>Manufacture of basic iron and steel + casting of iron and steel</i>	29,675	4,026	674
<i>Manufacture of basic precious and non-ferrous metals + casting of non-ferrous metals</i>	1,537	373	38
<i>Manufacture of fabricated metal products, except machinery and equipment</i>	64,332	26,228	1,811
<i>Manufacture of machinery & equipment</i>	53,451	21,102	1,491
<i>Manufacture of computer, electronic & optical products</i>	14,391	6,111	410
<i>Manufacture of electronic component, consumer electronics, magnetic and optical media</i>	8,393	3,582	240
<i>Manufacture of computer and peripheral equipment</i>	5,455	2,328	156
<i>Manufacture of communication equipment</i>	256	109	7
<i>Manufacture of optical and electronics products n.e.c</i>	287	92	8
<i>Manufacture of electrical equipment</i>	14,406	6,147	411
<i>Manufacture of machinery and equipment n.e.c</i>	12,744	5,438	364

<i>Manufacture of transport equipment</i>	11,909	3,405	306
<i>Manufacture of coke, petroleum, rubber, chemical and related products</i>	68,694	22,841	1,831
<i>Manufacture of coke & refined petroleum products</i>	520	146	13
<i>Manufacture of chemical and chemical products except pharmaceuticals, medicinal and botanical products</i>	4,854	972	117
<i>Manufacture of pharmaceutical; medicinal chemicals and botanical products</i>	3,561	713	85
<i>Manufacture of rubber & plastic products</i>	10,801	3,032	277
<i>Manufacture of other non-metallic mineral products</i>	48,958	17,977	1,339
<i>Others</i>	1,16,805	46,033	3,257
<i>Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting material</i>	40,944	17,535	1,170
<i>Manufacture of paper and paper products</i>	4,640	1,640	126
<i>Printing and reproduction of recorded media except publishing</i>	4,369	1,544	118
<i>Manufacture of furniture</i>	60,890	22,770	1,673
<i>Other manufacturing</i>	5,064	2,161	145
<i>Repair and installation of machinery and equipment</i>	899	383	26
ELECTRICITY GAS & WATER SUPPLY	7,93,338	2,88,935	21,645
CONSTRUCTION	27,80,208	10,03,903	75,682
TRADE, Repair Services, HOTELS & RESTAURANTS	20,05,195	13,52,240	67,149
TRANSPORT SERVICES	12,67,684	5,72,760	36,809
STORAGE, COMMUNICATION & SERVICES RELATED TO BROADCASTING	5,13,110	2,15,368	14,570
REAL ESTATE, OWNERSHIP OF DWELLINGS AND PROFESSIONAL SERVICES	23,19,952	17,08,919	80,577
OUTPUT & VALUE ADDED FROM OTHER SERVICES	11,82,922	8,26,296	40,184
Financial Services		6,50,360	
Potential Revenue from BTT (2014-15)			8,60,864
Source: National Account Statistics			

Chapter 4: Summary and Conclusions

4.1 Demonetisation

As discussed in the chapter on demonetisation, there are potentially two different methods for doing demonetisation: one, where the demonetised high value currency would be replaced by low value currency to the extent the same is demanded by the people, which we call the milder form of demonetisation and second, where the demonetised high value currency is replaced by an equivalent addition to bank deposits. The latter we refer to as aggressive demonetisation since it imposes the need for sharp behavioural change in the economic agents. The transition to a “cash less” economy would be faster in the latter case than the former. In both cases the effect of demonetisation would depend on the speed with which the new regime replaces the old regime. If the transition is stretched over a period of time where the old currency ceases to be legal tender but is not replaced instantaneously by new currency there could be considerable costs of transition. In the following analysis we assume the transition to be instantaneous. The former model of demonetisation would have few consequences for the economy since economic activities are not disrupted. With time, as and when people perceive that there is a cost or inconvenience associated with transacting in low denomination currency, they would gradually shift to non-cash forms. This gradual transition would bring more people into the banking channels as well as allow the service providers the time to upgrade their facilities to accommodate the changing levels of transactions. However the latter form of demonetisation can have completely different effects which are summarised below.

1. Compression in economic activity because of the absence of money for mediating in transactions until the agents in the economy learn to use cash substitutes
 - a. To bring more people into the banking system and to encourage the use of noncash instruments, government might choose various mechanisms to incentivise such a move. For instance, the government could choose to populate bank accounts with some basic amount to provide an incentive for people to utilise these accounts at least to withdraw the said the amount. This could be in the form of a minimum basic

income or as a discrete one time transfer or by transforming some services provided into cash equivalent.

- b. Transactions in the digital environment also have security implications that need to be addressed before people can find these media reliable. There have been instances of data theft, phishing, vishing, identity theft, as well as broader concerns of security of data in transactions through internet. In the event of a loss due to any such activities, the customers' interests are not adequately protected.
 - c. At the same time, it could bring in incentives for people to move to non-cash forms of transactions. Here, it should be noted that prizes given through lotteries may not be adequate since there is only a remote chance that any given individual will get the lottery. Similarly, merely trying to reduce the transaction cost might not be enough. For instance, if people were not paying taxes by transacting in cash, the reduced transaction cost might not be enough to compensate for the higher tax liability. The government might want to position the incentive as a lower rate of tax on non-cash transactions as compared to cash transactions if the demonetisation were happening within the present tax regime. While there is potential risk to revenue in this case, it might bring in a larger behavioural response.⁶²
2. With lower GDP, the demand for imports might decline resulting in a reduction in the current account deficit. By itself, this could lead to an appreciation of the domestic currency, this could in turn lead to a compression of exports.
 3. The compression in demand may take time to reverse due to "persistence" in economic variables. Besides, if the process of transition to non-cash instruments is slow, investment in the economy too could slow down, resulting in further compression.
 - a. This situation can be corrected if the government seeks to stimulate economic activity through public expenditure either on transfers to bank accounts to stimulate

⁶² See for example - http://www.nipfp.org.in/media/medialibrary/2015/10/Development_of_an_Analytical_Model_for_Widening_of_Taxpayers_Base.pdf (Pp. 102-103).

demand or through expenditure on infrastructure through the PPP mode where the private sector gets involved and the credit available can be utilised.

4. There would be multi-dimensional effect on the banking sector
 - a. The banking sector and all other services providers for digital transactions need to augment the investments in capacity creation for dealing with a significantly larger volume of transactions flowing through these media. They also need to augment the security levels of these media well in advance to provide comfort and credibility to the people who are expected to move to these forms of transactions.
 - b. The compression in demand in the economy could mean that banks would be facing higher level of NPAs. This, along with the additional deposits with the banking system would put pressure on the bottom lines of the banking institutions.
 - c. It may be argued that with additional balances being placed at the disposal of the banks, there would be an expansion in the supply of credit. It could also be accompanied by a lowering of interest rates. However, for expansion in demand for credit to be realised, economy should be performing well and near close to full capacity. If not the demand for credit might not be realised.
 - d. The need to generate more credit might push the banking system to extend credit to more risky investments which can have long term consequences for the banking sector as well as the economy.
5. Potential evolution of cash substitutes which might remain outside the realm of formal sector: it is difficult to predict how many or how significant these would be with respect to the size of the Indian economy. But any encouragement to these, and there would be a larger policing role that the monetary authorities would need to undertake to regulate the financial part of the economy.
6. For the consumers, there can be some consequences in the shift from tangible currency to intangible non-cash instruments. Studies have shown that these shifts could result in more

expenditure and potentially more debt.⁶³ While it is not yet clear whether these are long term effects, even if they are short term effects, there might be more people landing up in debt. In a country where there is no social security system and bankruptcy laws are weak, this could place considerable burden of this transition on the citizens of the economy.

4.2. Banking Transaction Tax

Conceptually, the BTT appears to be a simple tax which can be implemented at a low rate. This makes it sound like an attractive replacement for the present regime of taxes which are complex, impose considerable compliance cost on the taxpayer and are besieged with problems of evasion and avoidance. However, by examining the proposed BTT regime in detail in Chapter 3, a few salient facts emerge:

1. It was found that the effective tax liability of the tax would be considerably higher than the proposed headline rate of 2 percent. The effective rate of tax for organised manufacturing comes to 14.3 percent with a 2 percent BTT, where a range of activities would have effective tax rates higher than 20 percent.
2. Further, it was also established that if the regime does not bring into the tax net, a range of financial transactions, it would not be revenue neutral at a low rate of 2 percent. It would have to be implemented at a rate of at least 4 percent. Even if one assumes that the unaccounted incomes are 30 percent of the economy and all of these get reflected in banking transactions, it would still not be enough for the tax to be revenue neutral at 2 percent.
3. In addition to the higher rate of 4 percent, it needs to be kept in mind that there are costs associated with non-cash transactions since these transactions are mediated by private corporations which need to earn incomes so as to make these services viable. Thus, the cost to the taxpayer is not 4 percent but perhaps 5 percent assuming that the costs are only about 1 percent of the transaction value.

⁶³ See Chapter 2 for detailed discussion.

4. Contrary to what is argued in the Arthakranti Report, the BTT is not neutral – the effective tax rate varies across sectors; it cannot be positioned as an efficient tax regime – it is a cascading tax where the tax rate can build up from 2 percent to over 6 percent, or if the tax rate is higher at 4 percent, to over 12 percent.
5. It does not allow Government to pursue any other objectives other than revenue raising since this will be the only tax apart from customs duty. Also, it needs to be implemented without exemption if one wants to maintain a low rate of tax. This could be viewed both as a good feature and a constraint, depending on one's point of view.
6. In the version presented by Cintra, he proposed that taxes levied for non-revenue considerations might be retained alongside BTT. This is not the view taken in Arthakranti. If the former view is taken, it might open up the possibility of having BTT as well as other taxes, which might considerably undermine the attraction of BTT.

4.3. Simultaneous Implementation of both these Policies

To understand the effect of simultaneous implementation of both these policies, we consider two scenarios: one with milder version of demonetisation with BTT and the other with the aggressive version of demonetisation.

Scenario 1: Milder Demonetisation with BTT

In the milder demonetisation, as discussed earlier, there is no major shock to the economy. People can continue to transact in whichever medium of transaction they were using. This would mean that in the short run, the base for BTT would remain the same as at present. From the analysis of the revenue productivity of BTT, it was established that the revenue from the present set of bank transactions would not be able to generate enough revenue at 2 percent rate of tax, if financial transactions are not taxed at the same rate. Given that this is difficult and not recommended for developing countries, it was established that the tax would have to be levied at 4 percent. This can have two possible consequences. One set of agents can perceive that this is a low rate of tax and choose to come within the fold of banking transactions, while another set of agents might want to step out of the banking system because the effective rate of tax would remain high: with the prevalence of or easy availability of cash, this might remain feasible. In other words, the “black

money” as in incomes on which taxes have not been paid, can still persist in this economy. In addition, there would remain mechanisms to finance corruption as well.

Scenario 2: Aggressive Demonetisation with BTT

In principle, for the BTT regime to be more productive than the present regime, it is essential for all transactions in the economy to be mediated by formal financial institutions. By expanding the level of transactions, it would be possible to implement BTT not at 4 percent but at a lower rate.

In this form of demonetisation, the bulk of the cash which served as a medium of exchange would be eliminated from the system. For transactions to remain at the same level, a majority of transactions would have to migrate to non-cash forms. If this transition takes time, since it involves behavioural adaptation by agents as well as changes in the underlying infrastructure, in the transition there may be substantial costs imposed on the economy, which in turn can have consequences for the revenues from the BTT regime as well.

The aggressive demonetisation as discussed earlier, would result in a compression of demand, which in turn would result in a reduction in production as well as employment and income generation. In turn, investment by corporate sector would be reduced since they would find that they are operating at less than full capacity. Alongside there would be a compression in imports as well, since the latter depend on the level of economic activity. In other words, there would be a compression of the base to be taxed under BTT because of these reasons. On the other hand, by bringing a lot of cash into the banks, the move might induce some agents to move from cash to non-cash instruments. Thus apart from customs, BTT being the only tax revenue for the government in the new regime, the net impact on total government revenues would depend on the relative sizes of the compression in demand and the expansion in banking transactions by hitherto cash transactions. In the short run, it is reasonable to expect the former to be larger than the latter – a scenario which can change over time.

If the government chooses to adhere to its FRBM commitments, the total government expenditure too can be compressed further compounding the problems of the economy. In this scenario, the incentives to evade taxes and therefore to currency substitutes that remain beyond the coverage of the BTT might rise. Given that the banks are flush with funds with few takers, the government

might have access to low cost credit and could choose to relax its FRBM restrictions to provide a fiscal stimulus.

This shock in the short run can have consequences for the exchange rate and for FDI/FII flows into the country as well. For instance, the reduction in the interest rates in the domestic economy might induce an outflow of FIIs, which might be further compounded by the fact that there is a demand compression with low investments. Such a move can adversely affect exchange rate with the Rupee depreciating against major international currencies. If the need to stimulate the economy through government spending has to be sustained beyond a year or so, the credit rating of the country too could take a beating, which in turn can affect FII/FDI flows.

A lot might depend on the kind of expenditure government undertakes and the likely expansionary effect it would have. It is generally recognised that expansion in consumption expenditure would have a more immediate effect on the GDP, while capital expenditure tends to have a gestation lag and hence might not work as fast. In the proposed context, the government could also use part of the available resources for encouraging a shift to non-cash forms of transaction. Each of these measures will work through different channels to correct the economic situation.

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