Analysis of Banking Transactions Through UPI for Leading Banks in India During FY 20-21

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ABSTRACT -

UPI has significantly fuelled India's burgeoning growth trajectory of digital payment industry. It is one remarkable contribution of the India to the globe as Govt. of India decided to democratize the access by making it Open Source Technology which turned out be revolutionary for inclusion of digital banking and payment. This research paper is an attempt to scrutinize changing trends in UPI ecosystem during FY 20 – 21 when whole world faced disastrous covid pandemic. Hence, focus of research study is to assess the key parameters and model historical data to design regression model for prediction of monthly value of transactions dealt on UPI using monthly volume and banks live on platform. Also, the paper examined the banking transactions of India's 4 leading through UPI platform and derived some key inferences such as Zero MDR policy is resulting into being counterproductive denoted by fall in volume of debit cards payments. Research concludes that reliance on single innovation could be destructive because major players are struggling for positive bottom-line and hence appropriate policy efforts in this direction could prevent existential threat to payments industry. **JEL Classification :** D83, E71, G20, G28, G53, H41, H42.

Keywords: UPI, BHIM, Digital Payment, Digital Banking, Digital Economy, Transaction Failure, India.

Introduction

As per the study conducted by FIS Global, India emerged as a leader with 41 million real-time transactions were processed per day during 2020. This remarkable achievement hinted that India has achieved a whopping 213% increase in terms of real-time payment processed. In recent years, UPI has emerged as the preferred digital payment mode over NEFT and RTGS, Internet Banking, and Direct Money transfers. As the popularity reached the pinnacle due to its open-source nature, transaction volume is growing at a rapid pace, and technological complexities have been increasing ever since. Hence, the experience of technical errors while using digital modes of payment has become commonplace. Such technical errors can occur due to poor connectivity from the user's/Bank's end, unavailability of servers, or payment gateway errors. These glitches cost a lot to banks, users as well as payment gateway operators.

Reserve Bank of India, an apex entity for banking business in India is constantly encouraging digitalization of payments for better financial inclusion by encouraging to build a robust digital payment ecosystem. This will not only boost the "Digital India Initiative" but also help to curb the parallel cash economy. Although it cannot be achieved in the short run, the benefits, in the long run, would be worth channelize monetary stimulus. According to a report published by IIT-Bombay, budgetary support of about Rs. 2,500 crore per year is required from the government for advancements and Research and Development in UPI technology. Consequently, during the Budget announcement for FY21-22, Finance Minister took cognizance of the same and has provided a financial incentive of Rs. 1500 crore to continue the manifold growth of digital payments in India.

As the Covid-19 forced the Indian economy into lockdown mode, cashless transactions surged dramatically partly due to unavailability of cash and fear of virus transmission as the usage of digital payment has been more than double. This served as a crucial catalyst for comprehensive economic expansion to gradually converge itself from cash reliant into a "Cash-Lite" economy.

A report by the Digital Economy and Digital Payment Division of the IT Ministry stated that UPI has contributed to the extent of 27% of all digital transactions in May 2020. Such rapid transition in the adoption of UPI signifies its importance as India is set to establish the footprint in developing its digital ecosystem to deliver public services to the masses efficiently and economically.

Review of Literature

Chawla, Singhal & Bajaj (2019)in their paper evaluated the awareness level of consumers using UPI applications. BHIM UPI is built by NPCI over existing IMPS architecture. Initiative of Aadhar Merchant Pay from govt targeted 350 Mn people without access to mobile phones. Official statistics of NPCI shown volume of over 700 million transactions in May, 2019 hinting UPI's slight success to replace cash for frequent transactions. Author's emphasized on key challenges in UPI including 4 party model which allows customer of any bank to use application of any other bank or third party. This causes dilemmatic situation during transaction failure and consumer redressal becomes painful process. Paper concluded that 40 million merchants are not part of digital payment ecosystem and their inclusion can be game changer.

Gupta and Yadav (2020) focused on study of growing popularity of GPay, Phone Pay and Paytm. Report in Feb, 2020 stated that UPI was most preferred and popular payment mode compared to cards & IMPS in terms of volume while value stood at Rs 18.3 Trillion in 2019. During July, 2018 to July, 2019 Paytm has delivered more than 100% growth in all type of transaction volumes while its rival Phone Pay and GPay grown by 300% in same period. GPay's Average Transaction Value (ATV) nearly doubled in comparison to other 2 and Paytm slipped to bottom with ATV of \$2.40 due to lower per value transaction limit of Rs. 1 lakh. All these apps grew about 3 to 8 times in 2019. Research concluded with suggestion to increase security architecture which will enable more banks to partner with these apps.

Kalra (2020)scrutinized the UPI platform to generate key insights in ecosystem of payments apps. NPCI data for Aber, 2019 indicated transaction volume of 1.31 Bn. To promote cashless digital economy, internet and smartphone availability are 2 foremost factors. In 2022, cumulative smartphone users are pegged at 859 Mn while more than 620 Mn users have access to broadband based service as of 2019. GPay entered India as third-party UPI application and has been enjoying first mover advantage to great extent. Research underlines 4 factors to drive usage and reach of UPI which includes performance, expectancy, efforts, and security of the UPI platform.

McKinsey report (October 2020) concluded that consumer spending through UPI in India has increased by 70% during the first 7 months of 2020 whereas ATM usage fell by 47% in April 2020. The report also highlighted that about 89% of cash is expected to utilize in total transactions clearly indicating the massive growth potential for UPI in the cash-based economy like India. It is noteworthy to mention that India has demonstrated 48% growth in the volume of digital transactions and a decent hike of 12% was observed in payment revenue growth during 2018-19.

Standard & Poor's 2020 India Mobile Payment Market Reportstated thatmobile payment rose by 163% in 2019 to \$286 Bn. Mobile payment and card represented 21% of retail purchases in physical stores in 2019 hinting aggressive dominance of cash. POS transactions in 2019 amounted to \$204 Mn with 24% growth. In 2019, online and offline mode for aggregate retail expenditure. One of the shortcomings of surge in growth rate of digital payments are unlikely to repeat considering economic slowdown in the post pandemic world. But the firm expects resilient mobile payment ecosystemby overtaking cards category.

Surbhi (2020) in her article for "Business Line" analysed the landscape of Indian digital payments as RBI opted to give substantial push for cashless payments as the growth story expected to continue due to WhatsApp's in app UPI integration. As pandemic took storm in India, cumulative payment transactions through digital mode went from 436.43 crore in January, 2020 to register stupendous growth as number stood at 4,764.28 crore transactions at the end of December, 2020. Central government has targeted Rs. 4,630 crores to be transacted as digital payments. Breakdown in SBI's YONO and HDFC's digital services and Yes Bank Chaos during May, 2020 highlighted the urgent requirement for investments in Indian payment architecture and platforms from Banks.

Objectives

- 1. To Analyse UPI Volume Transacted by Leading Banks in India During FY 20-21.
- 2. To Predict Monthly Value of UPI Transactions in India Based on Historical Data.
- 3. To Determine Existence of Significance of Relationship between Monthly Value and Volume dealt through UPI.

To Determine whether there is any Significant Difference Between Mean P2P Transaction Value and Mean P2M Transaction Value.

Hypothesis

1. $H_0: \beta 2= 0$, There exists no relationship between monthly volume and value.

 H_1 : β2≠ 0, There is significant relationship between monthly volume and value.

2. $H_0: \mu 1 - \mu 2 = 0$, There is no significant difference between monthly average P2P value and average P2M transaction value.

 $H_1: \mu 1 - \mu 2 \neq 0$, There is significant difference between monthly average P2P volume and average P2M transaction value.

Research Methodology

The study is conducted using secondary data from NPCI, RBI, and Electronics & IT Ministry to source the volume and value of monthly UPI transactions in India from April, 2020 to March, 2020. DigiDhan Database by Govt. of India, was utilized to extract key metrics related to developments of the digital payments ecosystem, supplemented by Digital



Economy & Digital Payment Division to fetch information regarding policy initiatives and awareness programs by govt.

A multiple regression model was constructed using software and analytical tools to model the monthly volume, value and bank data &predict monthly value of UPI transactions in Indian economy. The model is based on recent data to minimize the deviance and achieve utmost accuracy in estimation and forecasts of transaction value.Various research papers, newspaper/ magazine articles, and industry reports from consultancy firms were referred to support the research findings and conclusion. halted at the merchant level.

4. The researcher could not widen the scope of the study as research was conducted in a short span of time.

Data Analysis & Interpretation

The following table summarized the macroeconomic data for FY 20 – 21 including monthly total volume (in Mn) and Value (in Cr) for UPI with its bifurcation for P2P and P2M category. Also, no of banks live and outstanding debit cards at the end of the month are collected.

		Total		P2P		P2M		
Months	No of Banks Live	Volume (Value (In Min) In Cr)	Volume (I Value (I	n Min) 2 n Cr) 3	Volume (In Min) 4 Value (In Cr) 5		No. of outstanding debit cards as at the end of the month
April	153	999.57	151140.66	550.35	128029.94	449.23	23110.72	829446698
May	155	1234.5	218391.6	738.43	189655.44	496.07	28736.16	835349120
June	155	1336.93	261835	819.08	228052.84	517.85	33782.16	845414384
July	164	1497.36	290537.86	919.21	251145.19	578.15	39392.67	852355001
August	168	1618.83	298307.61	992.55	256433.43	626.28	41874.18	858710451
September	174	1800.14	329027.66	1092.32	282401.74	707.82	46625.93	865435000
October	189	2071.62	386106.74	1227.17	330684.11	844.45	55422.63	874165072
November	200	2210.23	390999.15	1324.68	329953.41	885.55	61045.73	892702010
December	207	2234.16	416176.21	1283.71	348006.06	950.45	68170.15	885659754
January	207	2302.73	431181.89	1294.11	360545.93	1008.62	70535.96	888065146
February	213	2292.9	425062.76	1281.8	354819.42	1011.1	70243.34	894001925
March	216	2731.68	504886.44	1515.53	421810.19	1216.15	83076.25	897429834

Limitations of the Study

- 1. The study is based on Financial Year 2020-2021.
- 2. 4 leading banks based on the volume of UPI transactions are included as part of the study.
- 3. Data for Paytm Payments Banks may be underestimated due to Covid Pandemic since major revenue & volume generation

Given graph below helps to visualize the linearized growth pattern of monthly volume in UPI for total 214 banks during 12 months. It is notable to see that pandemic has helped digital payments industry especially products built on UPI platform as touchless cash transfer gained traction and UPI provided secure, quick, and free transfer of funds with attractive cash back offers and partners rewards. There is 2.7 times growth in monthly volume compared to April, 2020 figure.





Key Summary Statistics for FY 20 - 21 Table

Average No of Debit Cards O/S	868227866
CAGR Debit Cards O/s	8.20%
CMGR Debit Cards O/s	0.66%
No of Banks Live	216

	Тс	otal	P2P		P	2M	
Particulars	Volume (Mn)	Value (Cr)	Volume (Mn)	Value (Cr)	Volume (Mn)	Value (Cr)	
Total	22330.65	4103653.58	13038.94	3481537.70	9291.72	622115.88	
Total Annual Share	100%	100%	58.39%	84.84%	41.61%	15.16%	
Monthly Mean	1860.89	341971.13	1086.58	290128.14	774.31	51842.99	
Per Day	61.18	11242.89	35.72	9538.46	25.46	1704.43	
CAGR	173.29%	234.05%	175.38%	229.46%	170.72%	259.47%	
CMGR Average (%)	8.74%	10.57%	8.81%	10.45%	8.65%	11.25%	
During FY 20-21	100.00%	100.00%	58.64%	85.10%	41.36%	14.90%	

Exhibits

1. Exhibit A: Results of Multiple Linear Regression

SUMMARY OUTPUT

Regression Statistics					
Multiple R	0.99333859				
R Square	0.986721553				
Adjusted R Square	0.983770788				
Standard Error	12974.16211				
Observations	12				

ANOVA					
	df	SS	MS	F (Calculated)	Significance F
Regression	2	112576695182.80	56288347591	334,3950649	0.0000000036
Residual	9	1514959943	168328882.5		(P Value)
Total	11	114091655125.37			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	71051.02289	66910.06363	1.061888437	0.315948776	-80310.05681	222412.1026	-80310.05681	222412.1026
No of Banks Live (£1)	-866.6623383	657.2604142	-1.318598107	0.219870004	-2353.488692	620.1640156	-2353.488692	620.1640156
Volume (in Mn) (£2)	231.0082829	30.57643919	7.55510743	0.000034858	161.839572	300.1769938	161.839572	300.1769938

2. Exhibit B: Results from t-Test: paired two sample for Means (P2P Value and P2M Value)

t-Test : Paired Two Sample for Means (P2P Value and P2M Value)

Particulars	P2P Value (in Cr.)	P2P Value (in Cr.)
Mean	290128.0869	51842.99
Variance	6909393588	363510309.1
Observations	12	12
Pearson Correlation	0.977744802	
Hypothesized Mean Difference	0	
df	11	
t Stat	12.77676289	
P(T<=t) one-tail	3.0448E-08	
t Critical one-tail	1.795884819	
P(T<=t) two-tail	6.0896E-08	
t Critical two-tail	2.20098516	

Y (Value) = Intercept + β 1 * X1 (No of Banks Live) + β 2 * X2 (Volume), Where, Value is in Crore Rs and Volume is in Mn. Y = 71051.0228 - 866.6623 *X1 + 231.0082 * X 2.

During April, 2020 to March, 2021, Total volume of UPI transactions amounted to 22, 330.5 Mn amounting to Rs. 41, 03, 53.58 crores with 216 banks live on UPI platform at the end of March, 2020. In terms of Volume, Person to Person transactions on an average accounted for 58.64% for the observation period while Person to Merchant transactions averaged at 41.36%.

61.18 Mn transactions are processed with Rs. 11,242.89 on per day. This indicates annual CAGR of 173.29% for volume while growth trajectory of value doubled as CAGR expanded to 234.05%.

For the study period, total P2P transaction volume stood at 13,038.94 Mn for Rs. 34,81,537.7.i.e. on per day basis, UPI handled 35.72 Mn transactions worth Rs. 9,538.46 crores. P2P yearly volume contributed to 58.39% out of total annual volume whiletwelve monthly valuehad significant share at 84.14% in total yearly value. P2M segment had total volume of 9,291.72 Mn amounting to 41.61% of annual volume but this has not been satisfactory in terms of total value Rs. 6,22,115.88 with smaller share at 15.16% of yearly value. When per day statistics is calculated for this section, per day at 25.45 Mn worth Rs. 1704.43transactions occurred which is significantly lower (proved using t-test).

Since, t stat > t critical stating reject H0 and accept H1 claiming significant difference between mean transaction value between P2P and P2M transactions. Moreover, a generalized statement is that average ticket size of P2P transaction and P2M transaction varies on micro level. In 2019, average ticket size stood around Rs. 1600 to 1900. A multiple regression model is created using 12month data for UPI platforms where total volume and no of banks live are explanatory variables and total value of transactions is dependent variable to predict the transaction value for subsequent periods. Given model has yielded R squared value of 98.67% implying efficiency of explanatory variables namely no of banks and volume to explain the variation in monthly total value transacted using UPI based application platforms. It indicates better regression model fitting near the observations. Second regressor in the model, volume has t statistics of 7.55 and p – value of 0.000034858 which is near zero hinting that regression coefficient (β 2) is highly significant. Hence, it is positive determinant of monthly value of transactions. Value of β 2 states that one-unit change in volume is capable to bring 231.0082 units increase in Monthly Value.

Therefore, we can reject H0 and accept H1 and infer that there exists significant relationship between volume and value of transactions on UPI.

The paper has considered 4 leading banks in India based on their combined remittance and beneficiary volume through UPI platforms. These banks are given in sequence of their rankings and ranking derived from combined volume for study.

1. State Bank of India

SBI due to large base of account holders, extensive strategic partnership with third party UPI applications to act as partner bank and its own app named BHIM SBI Pay are some of the key determining factors behind the CAGR of 159.86% for volume which is shown below. Also, consistent business decline from remitting customer's end indicates need to educate customers about technical knowledge of platforms which could make for lost business. Technical decline was below benchmark level but sudden spike was observed between September to December, 2020. It is important to note that SBI is not part of acquirer bank's list.



Particulars	Remittance	Beneficiary
Total Annual Volume (Mn)	6397.27	3539.88
Net Annual Volume	6285.3	3433.00
Average Gross Monthly Volume (Mn)	533.11	294.99
Average Monthly Volume (Net)	523.78	286.08
Daily Gross Volume (Mn)	17.53	9.70
Mean Net Daily Volume (Mn)	17.22	9.41
Yearly Average of Approved Transaction	90.19%	96.95%
Annual Average Business Decline	6.97%	0.70%
Yearly Average Technical Decline	2.84%	2.12%
Average Debit Reversal Success	91.72%	NA
Average Deemed Approval	NA	0.26%
Total Debit Reversal Count (in Mn)	111.97	NA
Average Debit Reversal Count	9.33	NA
CAGR Volume	159.86%	171.57%
CMGR Volume	8.28%	8.68%
Average No of Debit Cards O/S	288600538	NA
CAGR Debit Cards O/S	5.30%	NA
CMGR Debit Cards O/S	0.43%	NA

Following table shows key summary statistics for SBI, FY 20 – 21.

SBI Remittances & Beneficiary Volume (Gross & Net, In Mn) FY 20-21





SBI Business Decline, Technical Decline & Deemed Approval (%) For FY 20-21



SBI Transaction Approval & Reversal Rate (%) for FY 20-21



2. Paytm Payments Bank

Paytm pioneered the digital payments space in India by introducing direct money transfer services using bank account. This early boomer advantage was encashed by Paytm and subsequently it transformed itself from mobile based wallet service to a payment bank. It is India's one of the largest payment bank founded in 2017. Paytm's major userbase consists of small retailers, hawkers, and business, i.e. Merchant segment users which are usually on credit side of the transaction, receiving the money. Hence, the volume in P2M category has been more than double compared to remittance side.

Particulars	Remittance	Beneficiary
Total Annual Volume (Mn)	1493.16	3324.85
Net Annual Volume	1480.13	3290.75
Average Gross Monthly Volume (Mn)	124.43	277.07
Average Monthly Volume (Net)	123.34	274.23
Daily Gross Volume (Mn)	4.09	9.11
Mean Net Daily Volume (Mn)	4.06	9.02
Yearly Average of Approved Transactions	91.94%	NA
Annual Average Business Decline	8.00%	0.96%
Yearly Average Technical Decline	0.05%	0.05%
Average Debit Reversal Success	96.41%	NA
Average Deemed Approval	NA	0.01%
Total Debit Reversal Count (in Mn)	12.45	NA
Average Monthly Debit Reversal Count	1.04	NA
CAGR Volume	151.88%	251.02%
CMGR Volume	8.00%	11.03%
Average No of Debit Cards O/S	60838240	NA
CAGR Debit Cards O/S	10.54%	NA
CMGR Debit Cards O/S	0.84%	NA

Following table shows key summary statistics for Paytm Payments Bank, FY 20 – 21.





Paytm Remittance & Beneficiary Volume (Gross & Net, In Mn)

Paytm Business Decline, Technical Decline & Deemed Approval (%) For FY 20-21







Paytm Transaction Approval and Reversal Rate (%) FY 2021

3. ICICI Bank

ICICI bank is considered among India's leading private banking since 1994 and it has expanded its retail reach in the country with multi fold growth. ICICI bank is operating as payment service provider to 6UPI applications and issuing &acquiring bank as well. It has leveraged the POS systems by creating strong merchant network across cities. It has adopted the UPI well but a warning indication in terms of declining debit card users can harm the bank's overall business as well as UPI transactions since it is mainly based on linking bank account to any application using debit card details associated with that account.



Particulars	Remittance	Beneficiary
Total Annual Volume (Mn)	1447.98	2545.41
Net Annual Volume	1432.22	2520.67
Average Gross Monthly Volume (Mn)	120.67	212.12
Average Monthly Volume (Net)	119.35	210.06
Daily Gross Volume (Mn)	3.97	6.97
Mean Net Daily Volume (Mn)	3.92	6.91
Yearly Average of Approved Transactions	94.30%	NA
Annual Average Business Decline	5.20%	0.63%
Yearly Average Technical Decline	0.50%	0.28%
Average Debit Reversal Success (%)	84.24%	NA
Average Deemed Approval (%)	NA	0.13%
Total Debit Reversal Count (in Mn)	15.09	NA
Average Monthly Debit Reversal Count	1.26	NA
CAGR Volume	167.21%	54.97%
CMGR Volume	8.54%	3.72%
Av ^{erage} No of Debit Cards O/S	45302570	NA
CAGR Debit Cards O/S	13.91%	NA
CMGR Debit Cards O/S	1.24%	NA

Following table shows key summary statistics for ICICI Bank, FY 20 – 21

ICICI Remittances & Beneficiary Volume (Gross & Net, In Mn)







ICICI Transaction Approval and Reversal Rate (%) FY 2021

ICICI Business Decline, Technical Decline & Deemed Approval (%) For FY 2021





4. Axis Bank

During FY 20 – 21, Axis Bank positioned itself among top 5 beneficiary as well as remitter bank consistently. Currently the bank is in the middle of cloud first transition to create a robust digital ecosystem to handle large volume of UPI transactions and cater various on the go banking product leading to 79% increase in total capital and operating expenditure on technology. Bank has 17% market share in UPI transactions during Q42021. Notably, Axis bank is part of selected acquirer bank and has own UPI platform called BHIM Axis Pay along with acting as partner bank to apps like GPay and Phone Pay.

Particulars	Remittance	Beneficiary
Total Annual Volume (Mn)	1902.23	1841.54
Net Annual Volume	1887.83	1829.54
Average Gross Monthly Volume (Mn)	158.52	153.46
Average Monthly Volume (Net)	157.32	152.46
Daily Gross Volume (Mn)	5.21	5.05
Mean Net Daily Volume (Mn)	5.17	5.01
Yearly Average of Approved Transactions	96.35%	NA
Annual Average Business Decline	3.15%	0.48%
Yearly Average Technical Decline	0.50%	0.28%
Average Debit Reversal Success (%)	65.59%	NA
Average Deemed Approval (%)	NA	0.48%
Total Debit Reversal Count (in Mn)	14.19	NA
Average Monthly Debit Reversal Count	1.18	NA
CAGR Volume	101.05%	281.26%
CMGR Volume	.99%	11.80%
Average No of Debit Cards O/S	23699517	NA
CAGR Debit Cards O/S	10.94%	NA
CMGR Debit Cards O/S	0.96%	NA

Following table shows key summary statistics for Axis Bank, FY 20 - 21.





Axis Remittance & Beneficiary Volume (Goss & Net, In Mn)

Axis Transaction Approval and Reversal Rate (%) FY 2021





Axis Business Decline, Technical Decline & Deemed Approval (%) For FY 20-21



Conclusion & Discussion

Fintech has not only revolutionized the payment methods & expanded financial products but also acting as key enabler for financial inclusion of masses in economical and sustainable manner within 5 years from inception. Bank's ability to capitalize on customer faith, to effectively promote UPI as preferred mode of transaction and cutthroat competition from mobile wallets will be among thedecisive factors.

BCG and Google jointly issued report in 2016 stating that UPI will capture the payment market in the country with 59% payment transactions by 2024-25. Also, it estimated that digital payments will achieve \$500 Bn hallmark figure and in 2020. For reality check, Credit Suisse's report mentioned that India has grown 10 times in digital payment modes over last 5 years. Firm also mentioned that total industry is sized at \$450 Bn with 30% share. This clearly indicates India's potential in FinTech space and its ever-green growing trajectory is expected to continue. Focus on digital financial literacy can pave the way forward for UPI to increase its reach till end masses as reinforcement of broadband service to non-metro cities, town and villages.

Accenture's recent report said that by 2023 India is expected to shift 6,660 crore cash transactions worth \$270.7 Bn to digital payments with an expected increase to \$856.6 Bn forecasted by the end of 2030. Report's guesstimate expects that goods & services will be the key drivers to the revenue stream in the international digital payment industry in thesubsequent years, as transaction value of \$4.5 Tn will be achieved by end of 2023. It will be interesting to monitor developments in payment industry especially in Indian context as BCG' forecast 4 years ago, was successfully translated into reality as policy efforts grew and UPI also became landmark case study for public good.

There is Caveat in Current UPI Model as NPCI is not yet monetized at retail level as UPI transactions are essentially free for P2P users and operating applications are not able to monetize that opportunity. Hence, the ecosystem and apps build around UPI are started to became profitability until recently yet question about viability of business model of UPI persists as apps are diving into huge losses.

Although revenue model in this ecosystem is weak, NPCI introduced Bharat Bill Payment System to incentivize the merchants and payment processing platforms and Bharat QR code was developed recently for seamless scan and pay mechanism across different applications using different APIs, emergence of Zero MDR Policy by Indian Govt. could lead into negative externalities as players (especially non-bank payment providers) and their contribution towards financial inclusion will take hit.

Conflict of Interest

The Authors have declared no conflict of interest.

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