Transition From Cash-Based Economy To A Cashless Economy - The Contribution Of Indian Banking System

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Abstract

This paper tries to analyses the role and contribution of Indian Banking Sector for shifting India into a Cashless Economy. This study is purely based on secondary data. The period under consideration for this study is ten years, starting from 2011-12 to 2020-21. Data has been analyzed by applying multiple regression as a primary statistical tool. GDP is considered a dependent variable and automatic teller machines, mobile banking transactions, number of bank branches in rural areas, Inflation and currency in circulation are used as independent variables. Results of multiple regression reveals that the all the variables are significant impact on GDP at different significant levels. ATM, currency circulation and inflations are negatively significant and mobile banking and branches are positively significant. Therefore, this analysis proves there are some important roles to play by banks towards shifting India in to a cashless economy.

Keywords: Indian Banking System, Cashless Economy, Digital Payments, Regression Analysis

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I. Introduction

The gradual development of an economy is the mission of every country since economic growth increases GDP and can improve the quality of living (Palmer, 2012). A nation can follow two systems of the economy:a cash-based economy and a cashless economy. Since the pastimes, the Indian economy has always been categorized as cash-based economy. The cash-based economy is an economic system or part of one. Singhraul & Garwal, (2018) suggested that financial transactions are carried out in cash rather than direct debit, standing order, bank transfer, or credit card. India was a cash-based economy even at the beginning of the 20th century, whereas other countries wholly moved into a cashless economy like France, Singapore, Hongkong, Sweden etc. Running a cash-based economy also has some negative financial implications for an economy. Nachane et al., (2013) found that printing money and then distributing the same across the country has massive costs to the central bank. Some statistics suggest that the direct cost of running a cash-based economy is around 0.25% of India's Gross Domestic Product (GDP)

Moreover, there are other problems with a cash-based economy, such as corruption, money laundering, and tax evasion, since cash-based transactions are not easily traceable. In India, the cost of printing money in 2013-14 was estimated to be INR 32.1 billion. So, there should be a shift from a cash-based economy to a cashless economy is very much significant. Kotishwar (2018) studied those cashless payments like credit and debit cards, National Electronic Funds Transfer (NEFT), Real-time gross settlement (RTGS), mobile phone-based transactions, and Electronic Clearing Service (ECS) also creates positive impacts on banks

A cashless economy is described as where transactions are done using digital payment methods instead of cash. Kumari & Khanna, (2017) defines cashless economy is a physical stream of the traditional exchange of cash and coins being replaced with digital platforms such as online transactions, the introduction of plastic cards, Internet banking, mobile banking, UPI transactions etc. It also includes e-banking (mobile banking or banking through computers), debit and credit cards, card-swipe or point-of-sale machines and digital wallets. So Cashless economy ensures transparency in transactions, higher revenue, lower transaction cost, less availability for illegal activities (such as fake currency, black money etc.), convenience, proper tracking and finally, will lead to financial inclusion. Sathe, (2019) identified there are many challenges to implementing the cashless economy, such as costly swipe machines, language barriers, low literacy rates, lack of digital literacy, lack of internet availability etc.

Transparency in the economy will rise through cashless transactions and digital payment gateways, which will increase the GDP of the economy. This will enhance the credibility of the country and make a change in investments. This step of cashless is genuinely going to create ripples of immense success and it will

help attain the vision of Digital India. So, the transition from a cash-based to a cashless economy is the need of the situation. In India, the shifting process is still in the developing stage. Many stakeholders are behind the successful transition from a acash-based to a cashless economy in India, like the Government of India, Reserve Bank and Indian Banking sector, National Payments Corporation of India (NPCI), UPI Service Providers etc. This article tries to analyze the role of the Indian banking system in making India into a Cashless economy from a cash-based economy.

II. The Introduction And Growth Of A Cashless Economy In India

Indian economy is passing through a transformation stage and undergoing a major financial revolution. The introduction of the ATM was the beginning of this revolution. HSBC set up the first ATM in India in Mumbai in 1987. But it took more to popularize. In 1999, 12 years after the invention of the ATM, there were still only around 800 ATMs. But the number would explode in just a few years, crossing 10,000 in 2003. Slowly but gradually, India was getting into the ATM habit. Presently there are 2.41 lakh ATMs, 4.94 lakh micro-ATMs, and 48.16 POS terminals in India (as per NPCI Statistics as of August 2021). Gradually, debit and credit cards became popular among the people of India.

Mobile banking (through SMS) also started in India in 2002. Subsequently, in 2008, ICICI Bank was the first to launch a mobile banking application in India. Since then, almost all banks have followed it. Today, almost every banking transaction can be performed using a computer, laptop or smartphone. In 2018, almost all banks had mobile phone applications for financial transactions. Progressively mobile banking and online banking had shown explosive growth when smartphones were popularized.

Table 1. Growth of Cashless Payments in India

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Year	Mobile Banking Transaction Volume (million)	Total Number of Credit Card Issued (million)	Total Number of Debit Card Issued (million) Total Number of ATMs (million)		Total Number of POS (million)	
Mar-2012	3.12	17.65	278.28	9568.6	66092.0	
Mar-2013	6.4	19.55	331.19	11401.4	85429.0	
Mar-2014	10.74	19.18	394.42	16005.5	106598.4	
Mar-2015	19.67	21.11	553.45	18927.9	112673.5	
Mar-2016	49.47	24.50	661.53	21206.1	138566.8	
Mar-2017	113.65	29.84	29.84 771.65 222		252914.1	
Mar-2018	239.90	37.48	861.07	22224.7	308306.7	
Mar-2019	872.27	47.09	905.81	22170.3	372222.9	
Mar-2020	1383.03	57.74	828.5.6	23435.7	443397.3	
Mar-2021	3308.24	62.05	898.2.0	23858.8	472007.7	
Growth Y-o-Y	139%	7%	8%	2%	6%	

Source: RBI Report on Payment System Indicators

Table 1 (*Reserve Bank of India - Payment System Indicators*, n.d.)describes the growth of different cashless payment systems in the last ten years. Year-on-Year growth represents the growth in March 2021 compared to March 2020. India's digital payments market witnessed exceptional growth over the past years after the demonetization in 2016, and the COVID-19 pandemic has also fueled the growth and adoption of online transactions. Users have shifted to net banking and other digital payment facilities to avail products, including essential goods, groceries, retail, medical supplies, education, and others.

The Government of India has been presenting several special schemes and programs to speed up the transition toward a cashless economy. The programs like Pradhan Mantri Jan Dhan Yojana, Digital India program, Bharat Interface for Money (BHIM), Aadhaar Pay, Demonetization of currencies etc. Intending to make India completely cashless in a few years, the Government has introduced low-cost e-wallets so that the less privileged people of the nation are not excluded from going cashless. With the implementation of the demonetization process in India in the year 2016, the need for digital financial services has risen.

Apart from this, the Government of India has a good vision and has planned and implemented many programs over the last few years with the objective of a cashless India (refer to Table 2)

Table 2. Various Initiative by Government toward Cashless Economy

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Government Initiatives towards Cashless Transaction	Year	Statistics as of March 2021			
National Payments Corporation of India (NPCI)	2008	13 Cashless Payment Services			
Immediate Payment Service (IMPS)	2010	639 Member Banks			
Electronic Clearing System (ECS)	2010	81 Local ECS Centres			

		9 Regional ECS Centres
		1 National ECS Centres
Unstructured Supplementary Service Data (USSD)	2012	83 Live Banks
		13 languages
		4 Tele Coms
Direct Benefit Transfer (DBT)	2013	31 Live Members
Electronic Toll Collection (FASTag)	2014	35 Member Banks
National Automated Clearing House (NACH)	2014	42.37 Crore beneficiaries
		☐ 143,814.60 Crore Balance
Pradhan Mantri Jan Dhan Yojana (PMJDY)	2014	181 Live Banks
Bharat Interface for Money (BHIM)	2016	220 Live Banks
Aadhaar Enabled Payment System (AePS)	2016	138 Live Entities
DigiDhan ABHIYAAN	2016	Merchants Enabled 26.51 Lac

Source: National Payments Corporation of India (NPCI)

On July 1, 2015, PM Narendra Modi officially launched Digital India. The Government's flagship program to transform India into an empowered digital economy was ambitious, audacious even. Six years after the inception of this project, the Government of India achieved commendable growth in this field. However, there are many more developments to come in this regard. However, the Government plans the programs and schemes, most of which are implemented and facilitated through banking institutions. Therefore, the Indian banking system has an important role to play in this regard.

Digital payment adoption is now very well entrenched in India. Overall, one-third of Indian households are using it in some form or the other. The banking system is also connected digitally to users via Aadhaar linkages and SMS facilities, even the lower-income groups, Familiarity with ATMs is also very high. The physical and digital infrastructure is in place for the next big push for online banking, which can significantly improve service levels to the lower-income group. Demonetization forced people to go for cashless transactions as significantly less liquid cash is available to the public.

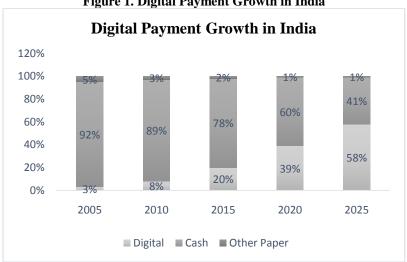


Figure 1. Digital Payment Growth in India

Source: Digital Payments 2020 Report by NASSCOM

Going from 3% of all cash and non-cash payments in 2005 to an estimated 58% by 2025, the phenomenal growth shown by digital payment modes is highly significant (Figure 1). At the same time, smartphone penetration in India has risen from 2% in 2005 to 26% in 2015 and 32% in 2020 and is expected to reach 36% by 2022. This is one critical trend that has boosted digital payments in India, leading to a 143% rise in UPI YoY and similar growth in the emerging QR-based payments, AePS payments, and other payment apps. UPI is projected to grow at a nearly 100% CAGR over the next few years.

III. Review Of Literature

Many studies discussed the importance of economic growth in India.Dash & Sahoo, (2010)concluded that India has become one of the fastest growing countries in the world after China. It also needs to maintain the growth momentum in a sustainable manner to improve the overall standard of living and reduce poverty. Economic growth is not something that can be achieved very quickly. It needs gradual development in all areas like infrastructure (Sahoo & Dash, 2009), tourism (Ohlan, 2017), imports and exports (Mishra, 2012), financial development (Tee & Ong, 2016), political stability (Sen et al., 2014), telecommunication (Narayana, 2011) etc.

Alshubiri (2017) evaluated the impact of financial banking development on economic growth. The dependent variables of economic growth were measured by nine variables and a regression test was used. Sreenu (2020) identifies the transition to a cashless economy as a path to overall economic growth that touches all sectors. India has witnessed a dramatic change in the cashless payment sector in the last ten years. Therefore, banking institutions have an exemplary role to play in this regard.

Iqbal & Sami (2017) examined the impact of financial inclusion on the growth of the economy over a period of seven years. His study found asignificant positive impact of the number of bank branches and credit deposit ratio of banks (proxies of financial inclusion) on the country's GDP. Raman (2012) investigates that the Reserve bank of India (RBI) and the Government plays a vital role in promoting financial inclusion/cashless payments for economic growth to increase the banking penetration, installation of new ATMs and implementation of various schemes in the country. Achor & Robert (2013) examines issues in economic policy drift in payment systems with reference to Nigeria's shift from a cash-based economy to a cashless society. Sahu & Singh (2017) studied factors that drivethe Indian Cash-Based Economy to Cash-Less Economy and identified bank involvement as one of the essential factors. A few studies haveanalyzed the contribution of Indian banking tothe Indian economic sector in the transition of the Indian Banking System in the transition process from cash-based toa cashless economy.

IV. The Role Of The Indian Banking Sector

India's banking system differs significantly from that of other Asian countries. The magnitude and complexity of the Indian banking sector can be understood better by looking at some primary banking data. As of July 2021, India's banking system includes 12 public sector banks, 22 private sector banks, 44 foreign banks, 43 regional rural banks, 1,484 urban cooperative banks, and 96,000 rural cooperative banks, as well as cooperative credit organizations.

By providing the necessary infrastructure and encouraging the mechanism of digital payments, the banking sector can be significant for the country's revenue and development. The increase in cashless banking will result in banks having excess funds, which banks can use in the financial sector for lending, playing in call money markets and making investments in the capital markets, thereby increasing the size of the country's economy.

Banking institutions in India are an asset to the Indian economy. These banks are helping to make India a cashless economy in a positive way. For that, the RBI brings in a lot of innovative products and services every year. The following section describes a few such things.

1. Introduction of Innovative Bank Payment Systems

Over the past few years, in addition to the traditional payment methods, Indian banks have developed innovative, easy-to-use payment methods that anyone can use anywhere, from a smartphone to the Internet. The statistics of these payment and settlement systems favor a cashless economy. The payment systems recorded a strong growth of 26.2 percent in volume during 2020-21. According to RBI Report on Payment System Indicators, the portion of digital transactions in the total volume of non-cash retail payments increased to 98.5 percent during 2020-21, up from 97.0 percent in the previous year. Surprisingly the ratio was 75% in the 2014-15 financial year. The share of paper-based transactions in total transactions continued to show a declining trend over the years (Paper-based Instruments payments were 1123.8 million in 2018-19 and decreased to 670.4 million in 2020-21). The nationwide lockdown due to the COVID-19 pandemic resulted in a decline in payments during its initial stage. However, the value and volume of payments later picked up with the gradual relaxations in lockdown.

2. Development of Unified Payments Interface – Instant Mobile Payments

National Payments Corporation of India has developed the Unified Payments Interface (UPI) and the Reserve Bank of India (RBI) and the Indian Banks Association (IBA). Unified Payments Interface (UPI) is a digital system that allows several bank accounts into a single mobile application of any participating bank, integrating several banking features, seamless fund transferring & merchant payments into one place.

NPCI directed a pilot launch with 21 member banks on April 11, 2016, by Dr. Raghuram Rajan, Governor RBI at Mumbai. Banks began uploading their UPI-enabled mobile Apps to the Google Play store on August 25, 2016. NPCI owns and operates the Unified Payments Interface (UPI) platform. NPCI is a non-profit org set up by RBI and funded by different significant banks. State Bank of India, Canara Bank, Punjab National Bank, Union Bank of India, Bank of Baroda, Bank of India, Citibank, ICICI Bank, HDFC Bank, and HSBC are the ten key promoter banks. In 2016 the shareholding was widened to 56 member banks to include more banks representing all sectors.

The Unified Payments Interface (UPI) usage in India has jumped 70 times in the last four years, a study report by the State Bank of India (SBI) has said. SBI report says as many as 4,218.65 million transactions worth □ 7714.44 billion were recorded through UPI in October 2021, making a jump of 100 percent, while transaction value jumped nearly 103 percent compared to October 2020. As of October 2021, 261 banks are living on UPI. Axis Bank, ICICI Bank, Yes Bank, HDFC Bank and SBI bank are the Sponsor Banks of UPI applications in India.

3. The Advent of the National Electronic Toll Collection (NETC) fastag

National Payments Corporation of India (NPCI) has established the National Electronic Toll Collection (NETC) project to manage the electronic tolling activities of the Indian market. They offer an interoperable nationwide toll payment solution, including clearinghouse services for settlement and dispute management. FASTag is a device that utilizes Radio Frequency Identification (RFID) technology for making toll payments directly while the vehicle is in motion. FASTag (RFID Tag) is affixed on the vehicle's windscreen and helps a customer make toll payments from the account linked to FASTag.

FASTag offers the convenience of cashless payment and benefits like savings on fuel and time as the customer does not have to stop and wait at the toll plaza. Banks can issue FASTag to their customers. There may be an Issuer bank and an Acquirer bank. The Acquiring bank requests the National Electronic Toll Collection (NETC) Mapper to validate the tag details. NETC System will switch the debit request to the respective issuer bank for debiting the customer's account.

With the advent of FASTag, there has been a new awakening to cashless payments rather than the long queue. As of October 2021, 35 banks were providing FASTag services. Currently, more than four crore fast tags have been issued to consumers. More than Rs 3357 crore was collected in October 2021 through cashless transactions

4. Issue of Plastics Cards and Development of Mobile Banking Apps

Card Payments and Mobile banking are also top-rated services provided by banks nowadays. Payments handled by mobile devices are soaring in India, driven by the popularity of bank accounts as an in-app payment method, says SP Global Market Intelligence 2020 India Mobile Payments Market Report. Banking cards offer account holders more convenience, security and control than any other cashless payment method. The wide variety of cards available, including credit, debit and prepaid, offers enormous flexibility. They save customers' and merchants' time and money and thus enable them to ease the transaction.

Mobile banking is an online service provided by a bank and other financial institutions that allows its customers to conduct different financial transactions remotely using a mobile device such as a mobile phone or tablet. It uses software; usually an app, provided by banks or financial institutions. Each bank provides its mobile banking app for Android, Windows and iOS mobile platform(s). Mobile payments in India are growing faster than card payments as more consumers and businesses adopt digital payments amidst the pandemic, according to the 2021 India Mobile Payments Market Report. Payments handled by mobile devices are soaring in India, driven by the popularity of bank accounts as an in-app payment method

5. Introduction of Innovative Banking Models

The Indian banking industry has recently witnessed innovative banking models like payments and small finance banks. The Reserve Bank of India (RBI) grants two kinds of banking licenses to financial institutions. — Small Finance Banks and Payment Banks. Small Finance Banks are run to provide financial inclusion by supplying credit to small business units, farmers and micro industries, and other unorganized sectors through high technology and cost-effective operations. They are niche banks that provide savings vehicles for marginalized demographic sections. Some of the operational Small Finance Banks in India are Ujjivan Small Finance Bank, Janalakshmi Small Finance Bank, Equitas Small Finance Bank, A U Small Finance Bank, Capital Small Finance Bank, ESAF Small Finance Bank, Utkarsh Small Finance Bank, Suryoday Small Finance Bank etc.

Payment Banks also operate to increase financial inclusion. They provide services like small savings accounts, payments/remittance services to migrating labor workforces, minor businesses, low-income families, etc. They aren't allowed to lend any capital to customers, issue ATM/Debit/Credit cards, or host netbanking and mobile banking services. India currently has six Payment Banks: Airtel Payment Bank, India Post Payment Bank, Fino Payment Bank, Paytm Payment Bank, NSDL Payment Bank and Jio Payment Bank.

Both Small Finance Banks and Payment Banks provide responsive banking services to the underserved and unserved households in India, facilitated by customer-centric products, high-quality service and innovative technology. This new banking model aims to enable individuals, small businesses, merchants and others to utilize full-fledged digital banking services.

6. RBI Permits Banks to Open More Branches in Rural Areas

During this period, the bank tried to bring the scope and functioning of the bank to more places and people. Banks have increasingly focused on villages, leading to more cashless services for the people living there. If this continues, many people will be part of this one process. The number of bank branches per 100,000 adults rose to 14.6 in 2019 from 13.6 in 2015, higher than Germany, China and South Africa.

As per the existing annual branch expansion plan policies, banks must open 25 percent of their new branches in unbanked rural areas. Banks exceeding the target of opening branches in rural areas in a year will be permitted to carry forward the additional number to the next fiscal year, RBI said. Credit will be provided for branches opened in unbanked rural centers above the mandated 25 percent in a year and they can carry forward to the following year of the inclusion plan. The RBI report says that there is a 25% increase in the branches opened as of March 2021 (52789 Functioning Offices in Rural Area)compared to March 2014 (41933 Functioning Offices in Rural Area).

V. Research Methodology

To study the contribution of the Indian banking system toward building the cashless economy, the following methodology was adopted. The data collected and variables selected are discussed in detail below;

1.Data

This study is purely based on secondary data. They are mainly collected from the Reserve Bank of India Reports, NPCI Report, Government of India, trend and progress of banking in India report, research articles, various reports published by financial organizations like World Bank, S&P Global, State Bank of India etc. The period under consideration for this study is ten years, starting from 2011-12 to 2020-21. Data has been analyzed by applying multiple regression as a primary statistical tool (Allison, 1999).

2. Variables

Literature reviews state that the cashless economy will reduce corruption, black money, tax evasion, and money laundering and also create higher revenueand enhance employment which will directly lead to which will lead to financial inclusion and economic growth (Garg & Panchal, 2017). Gross domestic product (GDP) is an important economic indicator to find out the development of a country and it is widely used in many articles by researchers (Agrawal & Khan, 2011), (Jain et al., 2015), (Jilani & Asim, 2010). GDP is considered a dependent variable (Tee & Ong, 2016) and automatic teller machines (ATM) (Iqbal & Sami, 2017), mobile banking transactions (Mago & Chitokwindo, 2014), number of bank branches in rural areas (Iqbal & Sami, 2017) and currency in circulation (CIC) (Banuso, 2013) are used as independent variables. These bank-specific variables are considered banks' contributions toward a cashless economy. Inflation (Mubarik & Riazuddin, 2005)was used as a control variable to isolate the effect of independent variables on the dependent variable.

VI. Data Analysis And Interpretation

Table 3 reports the descriptive summary statistics of the variables selected for the regression. There are ten observations. The GDP reported in Billions of US \$, ATM, Mobile Banking in Lakh, Currency in Circulation in Billion and inflation in percentages. The highest GDP was 2870.5 billion US \$ reported in the year 2018 – 19 financial year and the lowest was 1827.64 Bn \$ in the year 2011-12. Inflation was highest in 2012-13, i.e., 11.39% and lowest reported at 3.33% in 2016-17. The highest value of the currency in circulation in 2020-21 and the lowest value in the year 2011-12 and 2016-17 also, the currency circulation value declines due to demonetization. The digital banking elements like Mobile banking and ATM transactions showed steady growth in the study period.

Table 3. Descriptive Statistics

Variables	Obs.	Mean	Std. Dev.	Min.	Max.	
GDP	10	2366.29	387.6655	1827.64	2870.5	
ATM	10	191046.5	51066.27	95686	238588	
MB	10	6007.158	10585.16	31.2	33082.4	
Branch	10	46454.3	6645.663	34532	52789	
CIC	10	17043.53	5847.281	10528	28268.63	
Inflation	10	6.068	2.498292	3.33	11.06	

Source: Author's Calculation using STATA 17.0

Diagnosis test results are displayed in Table 4 below. Normality of the data was tested by using Shapiro-Wilk W test for normal data (Royston, 1992). The p value is greater than 0.05 that is 0.45, meaning that reject alternative hypothesis. So, residuals are normally distributed. Then authors checked whether this model has heteroscedasticity or not. Null hypothesis is residuals are homoscedasticity (constant variance) and alternative hypothesis is that residuals are heteroscedastic. The test used is Breusch-Pagan / Cook-Weisberg test for heteroskedasticity (Waldman, 1983)and the probability value of the test is 0.18 which is greater than 0.05, hence accept null hypothesis is that residuals are having constant variance. Durbin's alternative test for autocorrelation (White, 1992) statistic is a test statistic used to detect the presence of autocorrelation. The test proves that the p value is greater than 0.05. Therefore, residuals are not serially correlated.

Table 4. Diagnostic Test Results

	Shapiro-Wilk W test for normal data						
Variable	Obs	W	v	Z	Prob>z		
U	10	0.9312	1.06	0.101	0.45978		
	На	: Residuals a	re normally distributed	!			
	На:	Residuals are	not normally distribut	ed			
В	reusch-Paga	n / Cook-We	isberg test for hetero	skedasticity			
	chi2(1)	Prob > chi2					
	1.73	0.1889					
	Ho: Residuals are homoscedasticity (constant variance)						
		Ha: Residual:	s are heteroscedastic				
	Durbin's alternative test for autocorrelation						
lags(p)	chi2	df	Prob > chi2				
1	1.717	1	0.19				
Ho: Residuals are not auto correlated							
Ha: Residuals are auto correlated							

Source: Author's Calculation using STATA 17.0

Table 5 indicates the model summary of multiple regression analysis which is carried out through Stata. The results of the model shows that the value of R is .99ie, which indicates a high correlation between dependent gross domestic product (GDP) and independent variables. The value of R square is .99 and Adjusted R square is .998.

Table 5. Regression Results

Table 3. Regression Results						
Regression Results: Dependent Variable = GDP						
Variable	Coef.	Std. Err.	t	P> t		
_cons	-4933.202	244.5283	-20.17	0.0000***		
ATM	-0.028	0.0010976	-26.27	0.0000***		
MB	0.015	0.0014388	11.09	0.0000***		
Branch	0.294	0.0099928	29.5	0.0000***		
CIC	-0.053	0.0044655	-11.99	0.0000***		
Inflation	-11.831	5.489386	-2.16	0.0970*		
	Number of obs	ervations = 10				
	F (5, 4)	= 1217.68				
	Prob > F = 0.0000					
	R-squared	1 = 0.9993				
·	Adjusted R-so	quared = 0.9985	•			
	Root MSE	E = 14.9				

Source: Author's Calculation using STATA 17.0

The p value of the model is 0.000 which is less than .05 represents that the regression model is statistically significant and therefore the model is fit. Results of multiple regression reveals that the all the variables are significant impact on GDP at different significant levels. ATM, currency circulation and inflations are negatively significant and mobile banking and branches are positively significant.

It gives a clear idea that increasing number of ATMs, currency in circulation and inflations are degrading the transition of cash-based economy to cashless economy. Mobile transactions and number of branches at rural area have significantly contributing towards cashless economy. Therefore, this analysis proves there are some important roles to play by banks towards shifting India in to a cashless economy. These above findings are consistent with the findings of (Oruo, 2013) who established that financial sector plays a crucial role in economic development.

VII. Conclusion

The Indian economy has traditionally dominated by cash. But, the increased adoption of smartphones, together with a favorable regulatory environment, is pushing the economy to a less cash dependent state and promoting the usage of digital and innovative card payments. Given the advantages of going cashless and developments in innovative technologies, India is also striving to become a digital economy to transform itself into a digitally empowered society and knowledge economy. Digital transactions in India increased by 55% in 2018, compared with 48% in China and 23% in Indonesia, as per data from the Bank for International Settlements (BIS). Cashless payments are taking off in India, growing faster than in other countries around the world. The shift has attracted many tech companies, backed by deep-pocketed foreign investors, battling for market share. Apart from the Indian Government and RBI, the Indian banking system also makes a good stride in this sector. The results proves that the Indian banking sector have significant contribution towards the transition process. Increasing the number of mobile banking transaction and number of banking offices at rural area has contributed a lot towards the transition process. The number of currencies issued by the Government increasing every year. It will only do harm to the process of transition. Apart from the support from banking system India still need change in mindset of people, evaluation of technology, internet facilities and government initiatives to achieve 100 percent success in this mission.

Conflict Of Interest

The authors have no conflicts of interest to declared. All authors have seen and agree with the contents of the manuscript andthere is no financial interest to report. We certify that the submission isoriginal work and is not under review at any other publication.

References

- [1]. Achor, P. N., & Robert, A. (2013). Shifting Policy Paradigm From Cash-Based Economy To Cashless Economy: The Nigeria Experience. 4(4), 16.
- [2]. Agrawal, G., & Khan, M. A. (2011). Impact Of Fdi On Gdp: A Comparative Study Of China And India. International Journal Of Business And Management, 6(10), 71.
- [3]. Allison, P. D. (1999). Multiple Regression: A Primer. Pine Forge Press.
- [4]. Alshubiri, F. (2017). Evaluating The Impact Of Financial Banking Development On Economic Growth: An Empirical Investigation In Sultanate Of Oman. Indian Journal Of Finance, 11(6), 21–29.
- [5]. Banuso, F. B. (2013). Does Currency In Circulation Promote Economic Performance In Developing Countries? Evidence From Nigeria. International Business Research, 6(4), 36–51.
- [6]. Dash, R. K., & Sahoo, P. (2010). Economic Growth In India: The Role Of Physical And Social Infrastructure. Journal Of Economic Policy Reform, 13(4), 373–385. https://doi.org/10.1080/17487870.2010.523980
- [7]. Garg, P., & Panchal, M. (2017). Study On Introduction Of Cashless Economy In India 2016: Benefits & Challenge's. Iosr Journal Of Business And Management, 19(04), 116–120. https://Doi.Org/10.9790/487x-190402116120
- [8]. Iqbal, B. A., & Sami, S. (2017). Role Of Banks In Financial Inclusion In India. Contaduría Y Administración, 62(2), 644–656.
- [9]. Jain, D., Nair, K., & Jain, V. (2015). Factors Affecting Gdp (Manufacturing, Services, Industry): An Indian Perspective. Annual Research Journal Of Scms Pune, 3, 38–56.
- [10]. Jilani, S., & Asim, M. (2010). Exploring Impact Of Macro Economic Variables On Gdp Of Pakistan. Ibt Journal Of Business Studies (Jbs), 2(2).
- [11]. Kotishwar, A. (2018). Impact Of Digitalization On Select Banks. Indian Journal Of Finance, 12(12), 32–51.
- [12]. Kumari, N., & Khanna, J. (2017). Cashless Payment: A Behaviourial Change To Economic Growth. 2(2), 22.
- [13]. Mago, S., & Chitokwindo, S. (2014). The Impact Of Mobile Banking On Financial Inclusion In Zimbabwe: A Case For Masvingo Province. Mediterranean Journal Of Social Sciences, 5(9), 221–221.
- [14]. Mishra, P. K. (2012). The Dynamics Of The Relationship Between Imports And Economic Growth In India. South Asian Journal Of Macroeconomics And Public Finance, 1(1), 57–79.
- [15]. Mubarik, Y. A., & Riazuddin, R. (2005). Inflation And Growth: An Estimate Of The Threshold Level Of Inflation In Pakistan. State Bank Of Pakistan Karachi.
- [16]. Nachane, D. M., Chakraborty, A. B., Mitra, A. K., & Bordoloi, S. (2013). Modelling Currency Demand In India: An Empirical Study. Reserve Bank Of India Discussion Paper, 39.
- [17]. Narayana, M. R. (2011). Telecommunications Services And Economic Growth: Evidence From India. Telecommunications Policy, 35(2), 115–127.
- [18]. Ohlan, R. (2017). The Relationship Between Tourism, Financial Development And Economic Growth In India. Future Business Journal, 3(1), 9–22.
- [19]. Oruo, J. (2013). The Relationship Between Financial Inclusion And Gdp Growth In Kenya [Phd Thesis]. University Of Nairobi.
- [20]. Palmer, N. T. (2012). The Importance Of Economic Growth. Retrieved May, 18, 2017.
- [21]. Raman, A. (2012). Financial Inclusion And Growth Of Indian Banking System. Iosr Journal Of Business And Management, 1(3), 25–29. Https://Doi.Org/10.9790/487x-0132529
- [22]. Reserve Bank Of India—Payment System Indicators. (N.D.). Retrieved July 20, 2022, From Https://Www.Rbi.Org.In/Scripts/Psiuserview.Aspx

- [23]. Royston, P. (1992). Approximating The Shapiro-Wilk W-Test For Non-Normality. Statistics And Computing, 2(3), 117-119.
- [24]. Sahoo, P., & Dash, R. K. (2009). Infrastructure Development And Economic Growth In India. Journal Of The Asia Pacific Economy, 14(4), 351–365.
- [25]. Sahu, G. P., & Singh, N. K. (2017). Paradigm Shift Of Indian Cash-Based Economy To Cash-Less Economy: A Study On Allahabad City. In A. K. Kar, P. V. Ilavarasan, M. P. Gupta, Y. K. Dwivedi, M. Mäntymäki, M. Janssen, A. Simintiras, & S. Al-Sharhan (Eds.), Digital Nations – Smart Cities, Innovation, And Sustainability (Pp. 453–461). Springer International Publishing. https://Doi.Org/10.1007/978-3-319-68557-1_40
- [26]. Sathe, P. V. (2019). Challenges And Benefits Of Cashless Economy In India. International Research Journal Of Multidisciplinary Studies, 5(6).
- [27]. Sen, K., Kar, S., & Sahu, J. P. (2014). The Political Economy Of Economic Growth In India, 1993-2013.
- [28]. Singhraul, B. P., & Garwal, Y. S. (2018). Cashless Economy–Challenges And Opportunities In India. Pacific Business Review International, 10(9), 54–63.
- [29]. Sreenu, N. (2020). Cashless Payment Policy And Its Effects On Economic Growth Of India: An Exploratory Study. Acm Transactions On Management Information Systems (Tmis), 11(3), 1–10.
- [30]. Tee, H.-H., & Ong, H.-B. (2016). Cashless Payment And Economic Growth. Financial Innovation, 2(1), 1-9.
- [31]. Waldman, D. M. (1983). A Note On Algebraic Equivalence Of White's Test And A Variation Of The Godfrey/Breusch-Pagan Test For Heteroscedasticity. Economics Letters, 13(2–3), 197–200.
- [32]. White, K. J. (1992). The Durbin-Watson Test For Autocorrelation In Nonlinear Models. The Review Of Economics And Statistics, 370–373.