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BOOKS

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

UNPUBLISHED DISSERTATIONS

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

WEBSITES

- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>

A TREND ANALYSIS ON THE USE OF VARIOUS E-PAYMENT METHODS IN INDIA

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ABSTRACT

India is a growing country in terms of its Digital Payment System. For this purpose, various policy initiatives have been started and technological developments have been made by the Government. For example, Digital India Scheme, pushed people to use mobile and internet and they became means to increase the growth of digital payment. The demonetization and COVID-19 pandemic resulted in enormous growth in digital payments. The digital payments are more transparent in their nature and they help in growth and development of Indian economy. In recent scenario, the digital payment system has completely changed like digital wallets, UPI and BHIM apps, introduced for smoothing system of digital payments. The objective of this research paper is to study the growth and recent trends of digital payment system and its methods. Result reveals that digital payments are growing tremendously and UPI is the most used method of electronic payment system. In terms of growth, UPI is the first and IMPS is the second most growing means of digital payments.

KEYWORDS

digital payments, demonetization, e-payments, electronic payment system, digital India, covid-19.

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1. INTRODUCTION**Meaning of E-Payment System**

Electronic payment system means making payment for transactions of goods or services without using cash or cheque but via internet. Electronic payment system includes use of electronic devices, internet, digital platform or websites for making payments. E-Payments can be done by using debit or credit cards, digital wallets, banking apps etc. Overall, we can say that E-Payment System means the system of doing transactions with the use of internet.

Now a days, everyone is busy in their lives and they want to do every work in the shortest possible time even if it is payment. The electronic payment system saves time and energy and it is more convenient to use. It has no boundaries; it can be used for fast money transfers across the whole world. The various methods for electronic payment system currently available are UPI, AEPS, USSD, Card payments and electronic wallets. On the basis of requirement of customers and suitability of transactions, these methods are used all over the world. Electronic payments are used for almost everywhere like daily transactions and sales, ticket bookings and service payments, banking transactions and even street vendors also accepting UPI payments.

Methods of Electronic Payment System

- **Real Time Gross Settlement** – Real Time Gross Settlement (RTGS) includes two words i.e., Real time and Gross settlement. Real time means that the instructions are processed at the time they are received; Gross settlement means that instructions for fund settlement occurs individually. From December 14, 2020, RTGS is available 24*7*365. RTGS is mainly used for large value transactions. The minimum amount that can be transferred through RTGS is Rs 2,00,000/- with no maximum limit.
- **Electronic Clearing Services** – Electronic Clearing Service (ECS) is one of the methods of electronic payment methods. It is used for those transactions which occurs frequently and on a regular time period. This method is mostly used for making bulk payments or collection of bulk amounts by institutions. It is used for transferring huge amount of money from single user source to many destination account holders. This service is currently available in 15 RBI centers and 21 SBI centers.
- **National Electronic Fund Transfer** – National Electronic Fund Transfer (NEFT) is a method of electronic payment that can be used anytime within the domestic boundaries. NEFT is only operated and owned by RBI. There is no maximum or minimum limit for the transactions done through NEFT. NEFT transactions can be done online as well as offline and there are no charges applicable for online transfers through NEFT. This service can be used on 24*7*365 basis.
- **Immediate Payment Service** – Immediate Payment Service (IMPS) is a digital payment service which is used for instant payments by banks for inter-bank transactions of electronic fund transfer. This service can be used through mobile phones, ATMs, internet on all days including bank holidays. This facility is provided and managed by National Payments Corporation of India (NPCI).
- **Unified Payments Interface** – Unified Payments Interface is a digital payment system that allows real-time payments from one bank account to another. In this method multiple bank accounts can be used in a single mobile phone by linking them to UPI app. It can be used anytime throughout the whole year. The transactions can be done by using Virtual Payment Address (VPA) or UPI ID that helps in transferring money by using Know Your Customer (KYC) linked to the account number.
- **National Automated Clearing House** – National Automated Clearing House (NACH) is a centralized clearing service introduced by NPCI which is used for high or low volume transactions that are periodic and repetitive in nature. It is a modified version of ECS. It can be used for transactions of huge amounts for distribution of dividends, interest, subsidy, pension, etc.
- **Aadhaar Enabled Payment System and Aadhaar Payment Bridge System** – AEPS and APBS are also introduced by NPCI for digital payments. Aadhaar Enabled Payment System (AEPS) is used for transactions using Aadhaar authentication of those who have a bank account and their Aadhaar is linked with it. Aadhaar Payment Bridge System (APBS) is a system used by institutions for disbursal of various government benefits to many account holders who have their account with Aadhaar.
- **Prepaid Payment Instruments** – Prepaid Payment Instruments (PPIs) are the methods that are used for purchase of goods or services within the limit of value stored in these instruments. The value may be stored by the holder through cash, debit card or credit card.
- **Banking cards** – Banking cards are cards issued by a bank for payments. These can be debit cards, credit cards, prepaid cards etc. These cards carry a logo of the company that issues it. These cards can be used for withdrawal of money, making payments for purchase or checking bank account balance.

2. LITERATURE REVIEW

Mamta, Tyagi and Dr. Shukla (2016) in their article the title of which was "The Study of Electronic Payment Systems", had done a study the purpose of which was to spot the problems and challenges of electronic payment systems and suggest some solution to improve the e-payment system quality. They found that the successful implementations of electronic payment systems depend on how the customers would perceive the security and other factors of electronic payment system. When they get confident about it only then this system would grow.

T S and C D (2017) in the article the title of which was "Opportunities and Challenges of E-Payment System in India", had done an investigation with the aim to know the issues and challenges of adoption of electronic payment systems and offer some suggestions for improvement in the e-payment system. The author revealed that, Digital revolution had given an easy approach for digital payments. They likewise observed that, the entrance of mobile network, Internet and power pushed digital payments to far off regions. It will help in growth of digital payments.

Jubair and Yakoob (2017) in their examination, dissected the mindfulness and reception of advanced wallets in metropolitan and rustic regions. The study uncovered that around 40% individuals knew about digital wallets both in urban and rural areas, but people in urban areas were adopting the digital payments vastly as compared to rural areas.

David et al. (2018) inspected the meaning of Distributed Ledger Technology (DLT) inside the area of installments and settlement framework close by valuable open doors, challenges connected with its drawn-out execution and reception. The study reasoned that DLT could be utilized in installments, clearing and settlement including cross boundary installments, move and record the responsibility for resources, accommodate personality the board and other developing tasks through distributed systems administration.

Ravikumar et al. (2019) in their review, examined the effect of computerized installments based on financial development in conditions of genuine Gross Domestic Product (GDP). The creators observed that among the distinctive advanced installment techniques, just retail electronic installment influence the genuine GDP in a positive manner, in the short-run, however toward the day's end, it didn't affect the real GDP by any means. Further, over the long haul, advanced installments at large and retail electronic installments didn't contribute straightforwardly to financial development in India.

Rajat Deb (2020) concentrated on the effect of utilizing pre and post portable applications with family saving-spending conduct. This study unveiled that there is 50% expansion in saving and spending choices in post-portable application use when contrasted with the pre-versatile application use.

Currently there are over 300 million users of digital or E-payments in India. There is a growth of up to 76% in digital transactions in the last 12 months. (Razorpay reports) As per their reports, the digital transactions are expected to grow up to 700 billion by the end of 2022. In the FY 2021, more than 40 billion digital transactions were recorded across the India.

3. OBJECTIVES OF THE STUDY

This paper aims to:

1. Understand the various methods of electronic payment options currently available in the market.
2. Find out the general development of electronic payments in India during the period of study.
3. Assess and analyze the difference in growth among different categories of digital payments.
4. Understand the prospects of E-Payment or Online Payment System in India.
5. Analyze the impact of digital payment system in India.

4. SCOPE OF THE STUDY

The scope of this research is limited to the following points:

1. The time period taken for the study is from FY 2016-17 to FY 2020-21.
2. Data analysis has been done for some particular modes of electronic payment system like RTGS, Retail electronic Clearing and Banking cards.
3. The data collection and analysis has been done by using RBI Annual Reports.

5. RESEARCH METHODOLOGY

This research paper is based on secondary data and it is reasonable examination paper of Digital Payment system. The data has been collected from various sources like research journals, periodicals, government publications, magazines, newspapers articles and the authenticated websites.

6. DATA ANALYSIS AND INTERPRETATION

TABLE 1: MODES OF ELECTRONIC PAYMENT SYSTEM (Value in Billion)

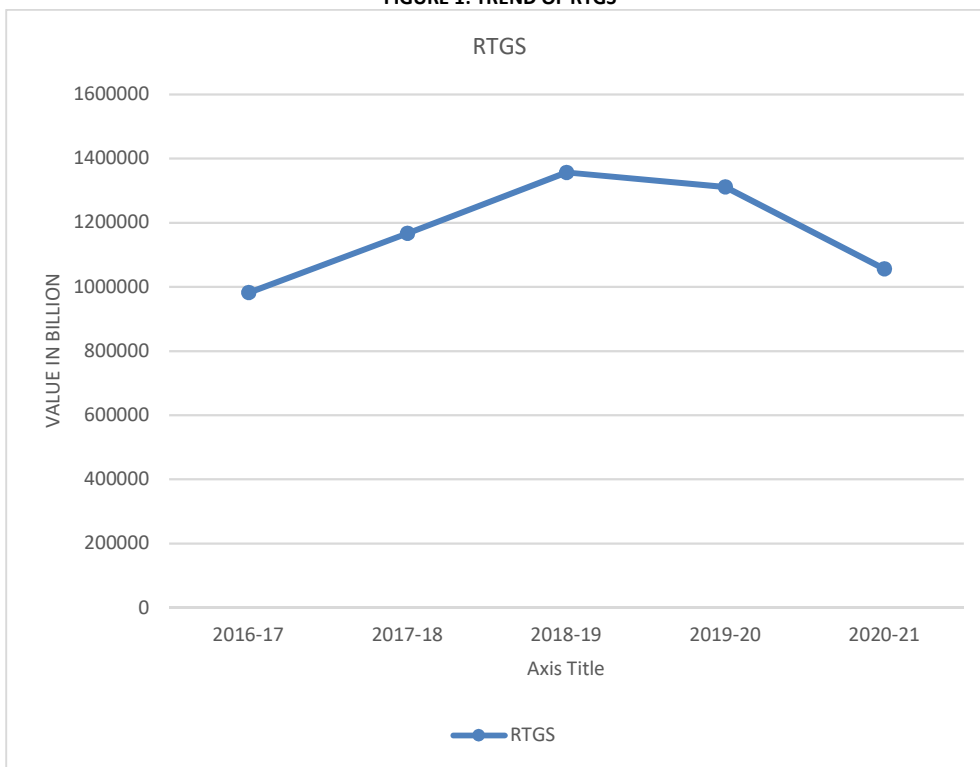
Particulars	2016-17	2017-18	2018-19	2019-20	2020-21
1. RTGS	981904	1167125	1356882	1311565	1055998
2. Retail Electronic Clearing					
a) ECS	105	105	120	51	0
b) NEFT	120040	172229	227936	229456	251309
c) IMPS	4116	8925	15903	23375	29415
d) UPI	69	1098	8770	21317	41037
e) NACH	7916	10736	14762	3250	3638
f) AePS	**	3	5	5	6
g) APBS	**	559	862	992	1127
3. Banking Cards					
a) Credit cards	3284	4590	6033	7309	6304
b) Debit cards	3299	4601	5935	7039	6627
c) PPIs	838	1416	2129	2156	1977

*source- RBI annual reports

(**Data not available)

RTGS – As we can see in the chart below, the usage of RTGS has continuously grown from 2016-17 till 2018-19, after that it has started declining. The value has decreased 19.49% in the last financial year. The chart shows its fluctuating trend but overall, it has grown 7.55% from the first financial year of the study period.

FIGURE 1: TREND OF RTGS



Retail Electronic Clearing – In the retail electronic clearing services, various means of payment have transformed drastically. Its growth, whether positive or negative, can be clearly seen from the chart below. During the period of study, ECS has vanished. It totally dropped down to zero.

NEFT has been growing continuously and in the last financial year it has shown 9.50% growth as compared to its preceding year. But if we can check from the initial phase (2016-17), it has almost been doubled the value of transactions.

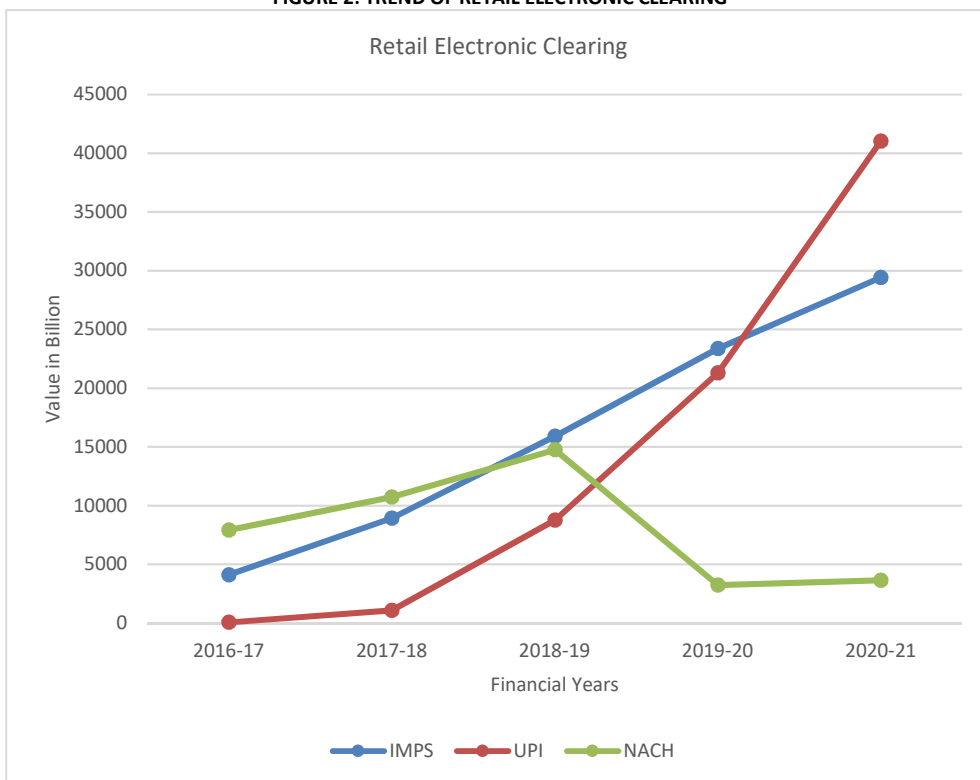
IMPS is also one of the most used methods of digital payment. It has grown 25.84% in 2020-21 as compared to 2019-20. In the study period of research, it has shown an overall growth of 614.65% which means it has grown almost seven times.

UPI is the most and fastest growing method of electronic payment system. Its value of transactions increased 92.51% more in 2020-21 as compared to 2019-20. In every financial year, it has grown with the speed of five-six times more than the previous year. Overall, it has shown a drastic growth in its value of transactions which almost 60,000 times in just 5 financial years.

NACH has shown growth till 2018-19 with good values but after that it starts declining. In 2019-20, it almost decreased by 80%. In the last financial year of study period, it has shown a growth of 11.94% but overall, it came to half of its initial value of transactions.

AePS and **APBS**, both have shown an overall growth of 100% which means their value of transactions have just doubled from the period of 2017-18. In 2020-21, AePS and APBS have grown by 20% and 13.61% respectively as compared to 2019-20.

FIGURE 2: TREND OF RETAIL ELECTRONIC CLEARING

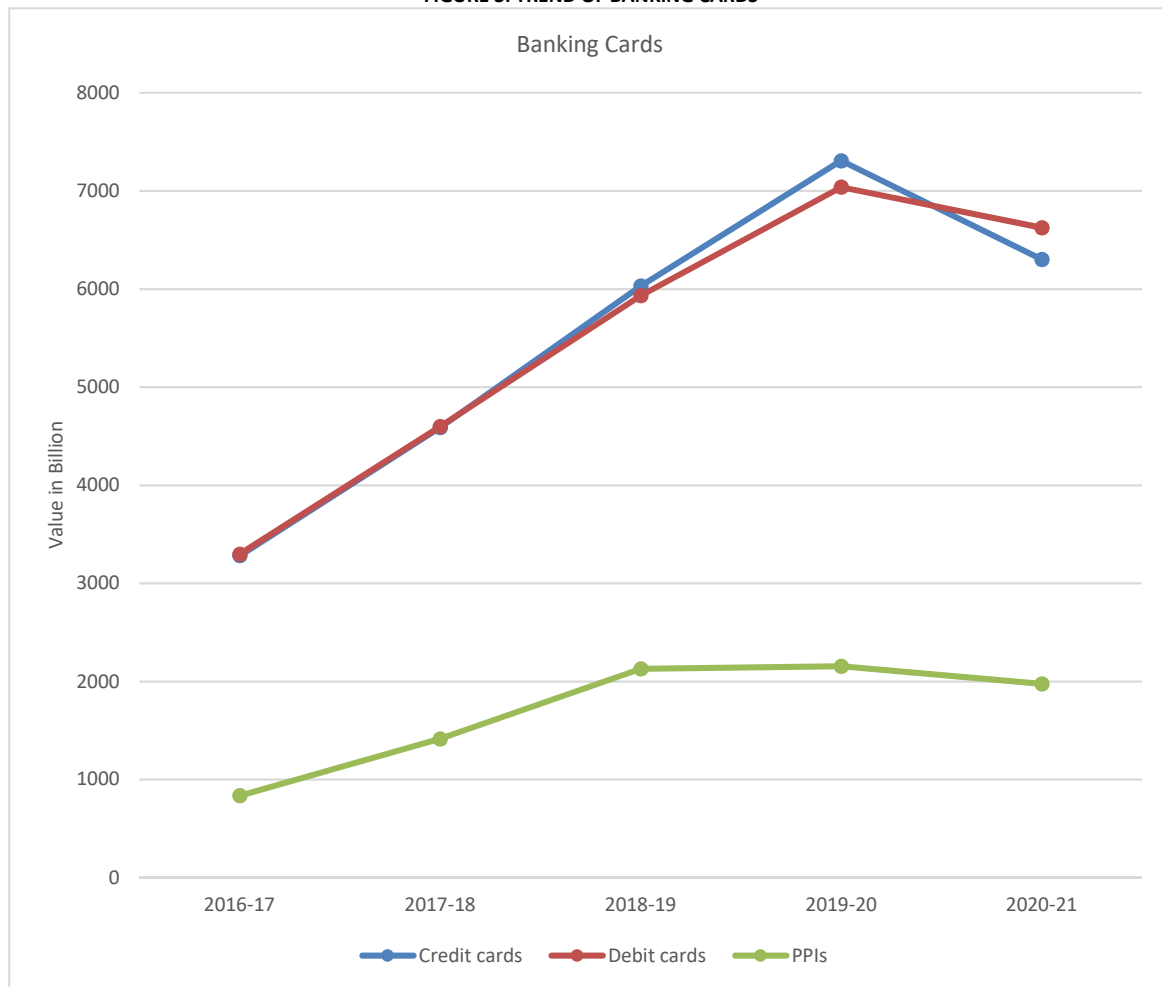


Banking Cards – While taking a look at banking cards like credit cards, debit cards, PPIs, etc., we can see that they tend to grow in almost same direction and with the same volume. The value of transactions of Credit cards has been decreased by 13.75% in last year of study period but overall, it has shown a growth of 91.96% which is almost double of its initial value.

In the same way, the value of transactions of Debit cards has been decreased by 5.85% in 2020-21 as compared to 2019-20 but while looking from 2016-17, its value of transactions is also being doubled.

PPIs has shown a decline by 8.30% in 2020-21 as compared to 2019-20 but overall, its growth is 135.92% which is more than double of its initial value of transactions in 2016-17.

FIGURE 3: TREND OF BANKING CARDS



CONCLUSION

After the analysis of data in this research paper, we can conclude that the digital payments or transactions in India are increasing day by day. The trend of converting to digital system from the cash system is exponentially increased in the year 2020 due COVID-19 pandemic. Now a days, UPI is the most used methods of digital payment and it's also increasing with a very fast pace. There are various reasons for adopting UPI like more than half population of India are youth, they are educated and have digital literacy, they have smartphones and internet connection, what else they need. It's just a matter of one click and the payment is done. It is less time consuming and convenient method, so most people prefer UPI in even daily life. However, it cannot be denied that digital payment system consists some drawbacks because of which full digitalization has been only a dream to achieve. There are number of risks involved in it like cyber threats or fraud risks. But they all can be tackled with the digital literacy and awareness and it will help in growth and development of Indian economy.

REFERENCES

- Akhila Pai H. (2018), "Study on Consumer Perception Towards Digital Wallets", *IJRAR*, 3, 385-391.
- Impact of COVID-19 outbreak on Digital Payments (May,2020) accessed from <https://www.pwc.in/consulting/financial-services/fintech/dp/impact-of-the-covid-19-outbreak-on-digitalpayments.html>
- Kabir, M. A., Saidin, S. Z., & Ahmi, A. (2017), "Analysis of Factors that Influence Electronic Payment Adoption", *Journal of Engineering and Applied Sciences*, 12(Specialissue3), 6560– 6568. <https://doi.org/10.3923/jeasci.2017.6560.6568>.
- Mamta, Hariom Tyagi and Dr. Abhishek Shukla (July 2016), "The Study of Electronic Payment Systems", *International Journal of Advanced Research in Computer Science and Software Engineering*, Vol. 6, Issue 7, 297-300.
- Priyanka Philip (2020), "Consumer Perception towards Internet banking in State Bank of India", *International Research journal of Management Sociology & Humanities*, 11(4), 84- 96.
- Rajat Deb (2020), "Influence of Mobile Apps on Household Saving-Spending Behaviour", *NMIMS Management Review*, Vol. XXXVIII (2), pp. 68-81.
- Ravikumar, T., Suresha, B., Sriram, M., and Rajesh, R., (2019), "Impact of Digital Payments on Economic Growth: Evidence from India", *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, Vol. 8(12), pp. 553-557.
- Richard Reisman (2019), "FairPay Relationship Pricing: An Adaptive, Value-Based Strategy for Consumer Markets", *NMIMS Management Review*, Vol. XXXVII (2), pp. 09-24.
- S. MD. Shakir Ali, MD Wasim Akhtar and S. K. Safiuddin (June 2017), "Digital Payments for Rural India - Challenges and Opportunities", *International Journal of Management and Applied Science. (IJMAS)*, Vol. 3, Issue 6, 35-40.
- Salloum, S. A., Al-Emran, M., Khalaf, R., Habes, M., & Shaalan, K. (2019), "An innovative study of e-payment systems adoption in higher education: Theoretical constructs and empirical analysis", *International Journal of Interactive Mobile Technologies*, 13(6), 68–83. <https://doi.org/10.3991/ijim.v13i06.9875>.

11. Sujith T S, Julie C D (2017), "Opportunities and Challenges of E-Payment System in India", *International Journal of Scientific Research and Management (IJSRM)*, Vol. 5 No. 7, 6935-6943.

WEBSITES

12. Digital Payment Methods, retrieved from http://cashlessindia.gov.in/digital_payment_methods.html on 27 Nov, 2021
13. Digital Payment, retrieved from <https://www.bankbazaar.com/ifsc/digital-payment.html>, on 3 Dec, 2021
14. E-commerce payment system, retrieved from https://en.wikipedia.org/wiki/E-commerce_payment_system on 5 Dec, 2021
15. RBI Annual Reports, retrieved from <https://rbi.org.in/scripts/AnnualReportPublications.aspx> on 11 Dec, 2021
16. Statistics of National Payments Corporation of India (NPCI), retrieved from <https://www.npci.org.in/statistics> on 11 Dec, 2021

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