

Cybercrime through Money Transfer Applications (After Demonetisation)**Moksha Garg, Udit Singh, Shilpa Pal****Abstract**

Globalisation has brought a remarkable change in society and the economy, which has further led it towards a “Cashless world” turning a cash-based economy into a cashless one. Today’s technology in the form of money transfer applications has made the money transferring process suitable and digitalised. This digital shift has not only modernized the community but has also latched it towards the attack of cybercrime. Demonetisation has brought upon two concepts- a cashless economy and cybercrime. These money transferring applications (Paytm, MobiKwik, PhonePe, Pay Pal and Google Pay) use various advertising strategies like- cashbacks, discount coupons offer etc. To attract people towards the benefits of a cashless society, ignoring the negative effects they have on its user's security. For a secure cashless society, the government should impose strict laws and policies to control the overpowering increase in cybercrime through money transfer applications. This research will not only help in spreading awareness about the cybercrime but will also tell us about the impact of this money transferring applications on our society.

Keywords: Globalisation, Cybercrime, Cashless, Money transfer applications.**Introduction**

Globalisation has brought a significant change in society and the economy, the internet is a notable part of it. The remarkable change in technology and the internet has led the world towards a “Cashless world” turning a cash-based society into a cashless one.

Technology and internet made money transferring process a convenient, reliable and faster one, in the form of Money Transfer Applications or E-wallets. These Applications connects our bank accounts and mobile phone enabling us to transfer money to anyone anywhere. Some of the widely used and popular mobile transfer apps in India are- Paytm, MobiKwik, PhonePe, Pay Pal and Google Pay.

Paytm founded in 2010 by Vijay Shekhar Sharma, is based in Noida, Uttar Pradesh, India. It has a revenue of 3,314 crores INR and over 7 million merchants across India. Currently, the CEO of the company is Renu Satti. MobiKwik founded in April 2009 by CEO Bipin Preet

Singh and Upasana Taku, is based in Gurgaon, India. It is available for use at more than 2,50,000 online and offline avenues. PhonePe founded in 2015 by CEO Sameer Nigam, Rahul Chari and Burzin Engineer, is headquartered in Bangalore, India. The app crossed 100 million user mark in June 2018 and 2 billion transactions in April 2019. PayPal founded in 1998 by Ken Howery, Luke Nosek, Max Levchin, Peter Thiel, Yu Pan, Russel Simmons and Elon Musk. Dan Schulman is the CEO of the company. PayPal has about 277 million active account holders. Google Pay initially known as Android Pay was released on 11th September 2015 by Google.

It's known that a student, Bernard Gesora Satia from Moi University in Kenya came up with mobile software that could allow people to send money through their mobile phones. Hence came M- Pesa, the world's first money transfer app in 2007 by Vodafone. Whereas, Wallet365.com was India's first e-wallet, launched in 2006 by media firm Times Group in association with YES Bank.

Internet and Money transfer applications have made our work convenient and quick yet these are not completely reliable and safe. The evolution of internet and E-commerce with the emergence of demonetisation, converting the Indian society into "Digital India" has opened the society at the vulnerability of cybercrime. Cybercriminals not being restrained to any geographical limitations has evoked a much greater problem than anticipated. We might not be able to prevent cybercrime but can take some necessary precautions towards our security. Using strong passwords, regularly updating the applications, being social – media savvy, protecting E-identity from unknown sources, using encryption for sensitive data, securing a wireless network, downloading applications from trusted sources, can help save us from the cybercriminals.

Our purpose is not only to make people aware of the cybercrime through money transferring apps but to also inform the people living in rural areas about the technology and the information they are missing on. Rural population still very much depend on cash instead of plastic money or digital payment channels. They are yet to completely acknowledge this new digital change.

Objectives of the Study:

1. To study the role of money transfer applications on Indian society.
2. To verify the impact of money transfer applications on cybercrime.
3. To check the use of mobile applications on daily lives.

Review of Literature

The study explained about the awareness and usage of cashless payment by the consumer after demonetization and the rising trend of digital transactions. It studies the introduction of cashless economy in India and how it has given directions to the growth and development of the economy after demonetization. This study mainly focuses on transparent economic development. The study said that cybercriminals are not constrained by geographical limitations as cyberspace is a free-flowing, borderless and a global problem. India needs a multilateral treaty which will harmonize its laws by a common criminal policy, and deal with international co-operation for combating cybercrimes at a global level. The study said that advance technology makes a person dependent on the interest of all their necessities. According to the National Crime Record Bureau, there was a 6% increase in cybercrime in 2016 as compared to 2015. Also, Uttar Pradesh as a state and Pune as a city has recorded a maximum number of cybercrimes. The move was an effort to handle the threat of illegal money, corruption, error funding and counterfeit currency.

In conclusion, demonetization would bring a positive impact on the Indian economy as it encourages the digital modes of payment like e-wallets and apps, online transactions using e-banking, usage of plastic money, etc. The study explained, demonetization in India created a lot of panic in the economy but also paved the way to digitalization. Digitalization will embrace higher transparency in monetary terms; low-cost maintenance; more convenience in use; and help in financial inclusion and weeding out black money and counterfeit money from the economy. The study explains, how the evolution of electronic banking brought an increase in e-commerce, online and financial transactions, etc. The revolutionary emergence of e-banking has changed the entire financial system and lead to more innovative development in e-payment, e-commerce and banking sector industry. But on the contrary, there is a significant rise in cybercrime and if the banks and customer adhere and strictly follow the precautionary steps and security measures then surely, major development and innovation will take place for advanced user-friendly digitized online or net banking.

]Social Relevance

Indian economy is developing and going cashless but the actual rise was felt after demonetisation. It gave rise to the usage of money transfer applications which is a faster and easier way of transferring money but the question here arises is are they safer way of transferring money as compared to offline transactions. Do people still fear to experience cyber

fraud? So that is why we are studying this topic to find out whether people are aware of the strict laws against cyber fraud, to know what people feel about the security provided by money transfer applications and are there any software to crab any such problem? With the help of this study, we want to know whether people are satisfied with the services provided by the money transfer applications and going cashless.

HYPOTHESIS-I

H1- There is a significant relationship between money transfer applications and age.

H0- There is no significant relationship between money transfer applications and age.

HYPOTHESIS-II

H1- There is a significant relationship between money transfer applications and cybercrime.

H0- There is no significant relationship between money transfer applications and cybercrime.

Analysis of Data

HYPOTHESIS-I:

Descriptive statistics (frequency) is applied to undertand the relationship between age and money transfer applications as:-

Perception of respondants with respect to their frequency of using money transfer applications.

Table 1.1

3.You use money transfer applications to transfer the money					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	always	27	18.0	18.0	18.0
	often	52	34.7	34.7	52.7
	sometimes	35	23.3	23.3	76.0
	rarely	18	12.0	12.0	88.0
	never	18	12.0	12.0	100.0
	Total	150	100.0	100.0	

Table 1.2

4.Time period of using money transfer applications					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than a year	32	21.3	21.3	21.3
	1 year	24	16.0	16.0	37.3
	more than 1 year	32	21.3	21.3	58.7
	more than 2 years	47	31.3	31.3	90.0
	none of the above	15	10.0	10.0	100.0
	Total	150	100.0	100.0	

Table 1.1 indicates that 27(18.0%) of the respondents always use money transfer applications to transfer the money, and 52(34.7%) of the respondents oftenly use these applications. While, 35(23.3%) of the respondents sometimes use money transfer applications. Whereas, 18(12.0%) of the respondents rarely/ never use money transfer applications to transfer the money.

Table 1.2 indicates that 32(21.3%) of the respondents are using money transfer applications for less than a year, while 24(16.0%) of the respondents are using money transfer applications from past 1 year. Also, 32(21.3%) of the respondents have been using these applications for more than a year and 47(31.3%) of the respondents have been using the applications for more than 2 years. Whereas, 15(10.0%) of the respondents have never used money transfer applications. So from the above table, it is concluded that the percentage of people using money transfer applications is more than the percentage of people not using them. So, H0 is rejected and H1 is accepted, hence it is clear that there is a significant relationship between age and money transfer applications.

Perception of respondents with respect to preference of using money transfer applications for online transactions.

Table 2

Table 2 indicates that 43(28.7%) of the respondents prefer using money transfer applications for online transaction very much, while 61(40.7%) of the respondents prefer these applications for transaction much. Whereas, 26(17.3%) of the respondents prefer using the applications less and 10(6.7%) of the respondents prefer using money transfer applications for online transaction very less/ never.

So from the above table, it is inferred that the percentage of people preferring money transfer applications for online transaction is more than the percentage of people not preferring them. So, H0 is rejected and H1 is accepted, hence it is clear that there is a significant relationship between age and money transfer applications.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very much	43	28.7	28.7	28.7
	much	61	40.7	40.7	69.3
	less	26	17.3	17.3	86.7
	very less	10	6.7	6.7	93.3
	never	10	6.7	6.7	100.0
	Total	150	100.0	100.0	

Perception of respondents with respect to feeling safe with their money in e- wallets.

Table 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	14	9.3	9.3	9.3
	agree	66	44.0	44.0	53.3
	neutral	53	35.3	35.3	88.7
	disagree	13	8.7	8.7	97.3
	strongly disagree	4	2.7	2.7	100.0
Total		150	100.0	100.0	

Table 3 indicates that 14(9.3%) of the respondents strongly agree and 66(44.0%) of the respondents agree that their money is safe in e-wallets. While, 53(35.3%) of the respondents are neutral about the safety of their money in e-wallets. Whereas, 13(8.7%) of the respondents disagree and 4(2.7%) of the respondents strongly disagree that the money is safe in e-wallets.

HYPOTHESIS -2

So from the above table, it is inferred that the percentage of people agreeing that money is safe in e-wallets is more than the percentage of people disagreeing. So, H0 is rejected and H1 is accepted, hence it is clear that there is a significant relationship between age and money transfer applications.

Descriptive statistics (frequency) is applied to understand the relationship between cybercrime and money transfer applications as:-

Perception of respondents with respect to using offline transactions over online transactions.

Table 4

9.Offline transactions are safer than online transactions.					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	26	17.3	17.3	17.3
	agree	43	28.7	28.7	46.0
	neutral	57	38.0	38.0	84.0
	disagree	21	14.0	14.0	98.0
	strongly disagree	3	2.0	2.0	100.0
Total		150	100.0	100.0	

Table 4 indicates that 26(17.3%) of the respondents strongly agree and 43(28.7%) of the respondents agree that offline transactions are safer as compared to online transactions. While, 57(38.0%) of the respondents are neutral regarding offline transaction over online transaction.

Whereas, 21(14.0%) of the respondents disagree and 3(2.0%) of the respondents strongly disagree that offline transaction is safer than online transaction.

So from the above table, it is deduced that the percentage of people agreeing that offline transactions are safer than online transactions is more than the percentage of people disagreeing. So, H₀ is rejected and H₁ is accepted, hence it is clear that there is a significant relationship between cybercrime and money transfer applications.

Perception of respondents with respect to cybercrime and fraud cases increasing due to increase in usage of money transfer applications.

Table 5.1

7.You think that cybercrime is increasing with the use of money transfer applications					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	18	12.0	12.0	12.0
	agree	60	40.0	40.0	52.0
	neutral	52	34.7	34.7	86.7
	disagree	13	8.7	8.7	95.3
	strongly disagree	7	4.7	4.7	100.0
	Total	150	100.0	100.0	

Table 5.2

8.Fraud cases are increasing because of money transfer applications					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	9	6.0	6.0	6.0
	agree	57	38.0	38.0	44.0
	neutral	56	37.3	37.3	81.3
	disagree	21	14.0	14.0	95.3
	strongly disagree	7	4.7	4.7	100.0
	Total	150	100.0	100.0	

Table 5.1 indicates that 18(12.0%) of the respondents strongly agree and 60(40.0%) of the respondents agree that cybercrime is increasing with the use of money transfer applications. While, 52(34.7%) of the respondents are neutral in thinking that cybercrime is increasing due to money transfer applications. Whereas, 13(8.7%) of the respondents disagree and 7(4.7%) of the respondents strongly disagree that cybercrime is increasing with the use of money transfer applications.

Table 5.2 indicates that 9(6.0%) of the respondents strongly agree and 57(38.0%) of the respondents agree that fraud cases are increasing due to money transfer applications. While,

56(37.3%) of the respondents are neutral in thinking that fraud cases are increasing due to money transfer applications. Whereas, 21(14.0%) of the respondents disagree and 7(4.7%) of the respondents strongly disagree that fraud cases are increasing due to money transfer applications.

So from the above table, it is concluded that the percentage of people agreeing that cybercrime and fraud cases are increasing due to increase in usage of money transfer applications is more than the percentage of people disagreeing . So, H0 is rejected and H1 is accepted, hence it is clear that there is a significant relationship between cybercrime and money transfer applications.

Perception of respondents with respect to feeling safe while using money transfer applications.

Table 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	13	8.7	8.7	8.7
	agree	62	41.3	41.3	50.0
	neutral	63	42.0	42.0	92.0
	disagree	7	4.7	4.7	96.7
	strongly disagree	5	3.3	3.3	100.0
	Total	150	100.0	100.0	

Data Interpretation & Analysis

Table 6 indicates that 13(8.7%) of the respondents strongly agree and 62(41.3%) of the respondents agree that they feel safe while using money transfer applications. While, 63(42.0%) of the respondents are neutral in feeling safe while using money transfer applications. Whereas, 7(4.7%) of the respondents disagree and 5(3.3%) of the respondents strongly disagree that they feel safe while using money transfer applications.

So from the above table, it is inferred that the percentage of people feeling safer with money transfer applications is more than the percentage of people not feeling safe. So, H0 is rejected and H1 is accepted, hence it is clear that there is a significant relationship between cybercrime and money transfer applications.

Summary Globalisation has brought a remarkable change in society and the economy, which has further led it towards a “Cashless world” turning a cash-based economy into a cashless one. Today’s technology in the form of money transfer applications has made the money transferring process suitable and digitalised. This evolution of electronic banking has brought an increase in e- commerce, online and financial transactions, etc.

The emergence of e-banking has changed the entire financial system and led to more innovative development in e-payment, e-commerce and banking sector industry. But on the contrary, this digital shift has not only modernized the community but has also latched it towards the attack of cybercrime. Cybercriminals are not restrained to any geographical limitations as cyberspace is a free-flowing, borderless and a global problem. It has evoked a much greater problem than anticipated. But if the banks and customer adhere and strictly follow the precautionary steps and security measures then surely, even more, major development and innovation can take place for advanced user-friendly digitized online or net banking.

Conclusion

The demonetization and digital payment system has not only changed society but has also brought a significant impact on their lives. Money transfer applications have made life convenient, reliable and faster one for a lot of users, but has also increased the cybercrime and fraud activities around the world.

These applications provide discounts and cashback which are not only pocket-friendly but also satisfactory and profitable. Even though the users feel safe while using money transfer applications, they still prefer offline transaction over the online. It is significantly believed that money is safe in E-wallets and even though people prefer using these applications more and even suggest them to their family and friends, they are still concerned and cautious about the cyber threats that may follow them.

Financial institutes or intermediaries like banks and related service providers should constantly invest in technology to improve security. People as a customer will completely shift only when it's easier, certain and safe to make cashless transactions. Government and banks should adopt strategies, implementation and supervision of the cyber threat around these applications to make cashless India the greatest digitalized economy in future.

References

Ashish Das, and Rakhi Agarwal (2010), Cashless Payment System in India- A Roadmap Technical Report. <http://dspace.library.iitb.ac.in/jspui/handle/10054/1732>.

Bansi Patel, Urvi Amin Plastic Money, Roadmap Towards Cash Less Society Paripex, Indian Journal of research Volume 1, Issue 11, November 2012.

Deepika Kumari, Cashless Transaction: Methods, Applications and Challenges,

International Journal of Enhanced Research in Educational Development (IJERED) Vol. 4
Issue 6, Nov-Dec, 2016.

Saini, B.M., Demonetization– Metamorphosis for Cashless India, International Journal of
Science and Research (IJSR), Volume 5, Issue12, December 2016.

Subramanian.S., Paper- free payment systems in India - an analytical study., International
journal of Management (IJM), Volume 5, Issue 1, January 2014, IAEME.

<http://www.indianeconomy.net/splclassroom/309/what-are-the-impacts-of-demonetisation-on-indian-economy>

<http://cashlessindia.gov.in>

<http://www.npci.org.in/>

<http://www.civildaily.com/story/cashless-society>.