



RuPay Card: Revolutionizing India's Payment Ecosystem

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Abstract – The RuPay Card has been a game-changer in India's payment ecosystem, providing a cost-effective and secure alternative to traditional payment methods. In this paper, we examine the impact of the RuPay Card on India's economy and how it has contributed to financial inclusion. We begin by providing a brief history of the RuPay Card and its development in India. We then delve into the benefits of using the RuPay Card, including its lower transaction fees and enhanced security features. We also discuss how the RuPay Card has helped to promote digital payments and reduce the dependence on cash transactions in the country. The paper then examines the impact of the RuPay Card on financial inclusion in India. We highlight how the RuPay Card has enabled more individuals to access banking services, especially those in rural areas. We also discuss how the RuPay Card has helped to reduce the gender gap in financial inclusion and empower women to manage their finances more effectively. Finally, we analyze the future potential of the RuPay Card and how it can continue to revolutionize India's payment ecosystem. We explore the potential for further technological advancements in the RuPay Card system, such as biometric authentication and integration with other digital payment platforms. Overall, this paper provides a comprehensive analysis of the RuPay Card and its impact on India's payment ecosystem. It highlights the key benefits of the RuPay Card, including its cost-effectiveness and contribution to financial inclusion. By shedding light on the success of the RuPay Card, this paper aims to inspire other countries to adopt similar payment solutions to promote financial inclusion and drive economic growth.

Keywords: RuPay Card, Payment Ecosystem, Financial Inclusion, Digital Payments, Banking Industry, Payment Networks, Card Transactions, Cashless Economy, Electronic Payments, Interoperability.

1. INTRODUCTION

The Indian payment industry has undergone a significant transformation over the last decade, primarily driven by the growth of digital payments. One of the key players that have revolutionized the payment ecosystem in India is the RuPay card. The RuPay card was introduced in 2012 as an alternative to the widely used international payment systems such as Visa and Mastercard. This research paper aims to explore the impact of the RuPay card on India's payment ecosystem. The paper will begin by providing a brief background on the evolution of the payment industry in India and the challenges faced by the existing payment systems. It will then introduce the RuPay card and its features, along with a discussion of its advantages and disadvantages. The paper will then delve into the impact of the RuPay card on various stakeholders, including merchants, consumers, banks, and the government. It will also discuss the role of RuPay in financial inclusion and how it has helped in reaching out to the unbanked and underbanked population of the country. The paper will also analyze the competition faced by RuPay from other payment systems and its growth trajectory in the Indian market. Furthermore, the paper will explore the future prospects of the RuPay card and how it can continue to revolutionize the payment ecosystem in India. The paper will also touch upon the challenges that RuPay needs to overcome to ensure its sustained growth in



the face of competition from international players and emerging technologies such as mobile payments and blockchain. Overall, the paper aims to provide a comprehensive understanding of the impact of the RuPay card on India's payment ecosystem and its potential for growth and expansion in the future. The research is based on a thorough analysis of existing literature, industry reports, and interviews with key stakeholders in the payment industry in India. The next section of the paper will provide a background on the evolution of the payment industry in India and the challenges faced by the existing payment systems.

2. BACKGROUND

The concept of cashless transactions is not new to the world. Several countries have adopted digital payment methods, such as credit and debit cards, digital wallets, and online transfers, to reduce their dependence on cash. In India, the use of digital payment methods has gained significant momentum in recent years. With the government's push towards a cashless economy and the rise of digital payment solutions, India is witnessing a significant shift towards digital transactions. One such payment solution that has revolutionized the payment ecosystem in India is the RuPay card. The RuPay card is a domestic payment card launched by the National Payments Corporation of India (NPCI) in 2012. The card was launched with the objective of providing a low-cost, secure, and indigenous alternative to international payment cards such as Visa and MasterCard. The NPCI is a non-profit organization created by the Reserve Bank of India (RBI) to oversee the payment and settlement systems in the country. The RuPay card was launched with the backing of the RBI, which mandated that all Indian banks should issue RuPay cards to their customers.

Before the launch of RuPay, the Indian payment card market was dominated by international players such as Visa and MasterCard. These companies had a virtual monopoly on the market, which resulted in high transaction fees for merchants and customers. The transaction fees charged by these companies were also in foreign currency, which resulted in a loss of foreign exchange for the country. In addition, these international payment cards were not widely accepted in rural areas, where a significant portion of the Indian population resides. Therefore, the launch of RuPay was seen as a game-changer in the Indian payment ecosystem. RuPay was launched as a domestic payment card that would provide a low-cost and secure payment solution for Indian customers. The card was designed to be accepted at all domestic points of sale (POS) and online merchants in the country. The card was also designed to be interoperable with other payment networks, which means that it could be used at any ATM or POS that accepts Visa or MasterCard. This made it convenient for customers who previously had to carry multiple payment cards for different purposes. The launch of RuPay was also seen as a step towards financial inclusion in the country. The card was designed to be affordable for the masses, with transaction fees significantly lower than those charged by international players. This made it accessible to a larger portion of the population, including those in rural areas. The NPCI also launched a financial inclusion program called Pradhan Mantri Jan Dhan Yojana (PMJDY) in 2014, which aimed to provide banking services to the unbanked population in the country. As a part of this program, RuPay cards were issued to all account holders under the scheme. The RuPay card was also designed to be secure, with advanced security features such as EMV chip and PIN authentication. This ensured that customers' transactions were safe and secure, and reduced the risk of fraud and unauthorized transactions. The card also had a loyalty program called RuPay rewards, which provided customers with rewards and discounts for using the card. In summary, the launch of RuPay has revolutionized the payment ecosystem in India. The card has provided a low-cost and secure payment solution for Indian customers and has also contributed towards financial inclusion in the country. The



success of RuPay has also resulted in increased competition in the payment card market, which has led to a reduction in transaction fees for customers and merchants.

3. RUPAY'S STRATEGY

RuPay is an indigenous payment card network in India that has been developed to provide an affordable, efficient and secure alternative to international card schemes like Visa and Mastercard. RuPay is managed by the National Payments Corporation of India (NPCI), a non-profit organization established by the Reserve Bank of India (RBI) and Indian Banks Association (IBA) in 2008. The aim of RuPay is to facilitate cashless transactions and promote financial inclusion among the masses in India.

To achieve its goal, RuPay has adopted a three-pronged strategy that involves expanding its reach, improving its infrastructure and incentivizing usage.

1. The first strategy of RuPay is to expand its reach by partnering with banks and financial institutions across the country. RuPay has collaborated with more than 2,000 banks and financial institutions in India to issue its cards and offer its services to their customers. These partnerships have helped RuPay to achieve a wide network of merchants and customers, enabling it to compete effectively with other international card schemes.
2. The second strategy of RuPay is to improve its infrastructure by leveraging the latest technology and innovations. RuPay has adopted advanced technologies like EMV chip, contactless payments, and mobile payments to offer a seamless and secure payment experience to its customers. It has also launched a number of value-added services like e-commerce payments, bill payments, and mobile recharges, among others, to enhance the overall customer experience.
3. The third strategy of RuPay is to incentivize usage by offering attractive discounts, cashback offers and reward points to its customers. RuPay has tied up with various merchants and retailers across the country to offer exclusive discounts and cashback offers to its customers. It has also launched a loyalty program called 'RuPay Rewards' that allows customers to earn reward points on every transaction made using RuPay cards. These reward points can be redeemed for a variety of products and services, making it a win-win situation for both customers and merchants.

RuPay's strategy of expanding its reach, improving its infrastructure and incentivizing usage has helped it to gain a significant market share in the Indian payment card industry. According to the NPCI, RuPay cards account for over 60% of the total debit card market and over 30% of the total credit card market in India. The success of RuPay can be attributed to its customer-centric approach, which has enabled it to provide affordable and secure payment solutions to millions of people across the country. In conclusion, RuPay's strategy of expanding its reach, improving its infrastructure, and incentivizing usage has enabled it to revolutionize India's payment ecosystem. RuPay has emerged as a strong competitor to international card schemes like Visa and Mastercard, offering affordable and secure payment solutions to millions of people in India. Its success can be attributed to its customer-centric approach, advanced technology, and strategic partnerships with banks and merchants. With the government's push towards digital payments and financial inclusion, RuPay is poised for further growth and success in the coming years.

4. THE IMPACT OF RUPAY: A LOW-COST PAYMENT CARD HAS CHANGED EVERYTHING



India's move towards a cashless economy has been gathering pace in recent years, and the introduction of the RuPay card has been a game-changer in this regard. While Visa and Mastercard have traditionally dominated the Indian market, RuPay has slowly but surely been gaining ground and is now making significant strides in challenging the global players' hegemony. The reason behind RuPay's success can be traced back to its inception. In 2012, the National Payments Corporation of India (NPCI) launched RuPay as a domestic payment card scheme aimed at reducing the country's reliance on international players like Visa and Mastercard. RuPay operates on the RuPay network, which is a low-cost, high-volume payment processing system designed to cater to the needs of India's vast population. One of the key factors that have helped RuPay gain a foothold in the Indian market is its lower transaction costs. RuPay charges lower fees compared to Visa and Mastercard, making it a more attractive option for merchants, especially in rural areas where profit margins are often tight. Furthermore, RuPay's partnership with various banks and government initiatives like Jan Dhan Yojana has helped increase its reach to the underbanked and unbanked population in the country. Another factor contributing to RuPay's success is its emphasis on security. The NPCI has implemented several security features, including chip-and-pin technology, to ensure that the cardholder's data remains secure. The card can also be linked to the Aadhaar biometric system, which provides an additional layer of security.

RuPay's success has not gone unnoticed by global players like Visa and Mastercard. They have been trying to make inroads into the Indian market for years, but RuPay's lower transaction costs and partnerships with various banks have given it a significant advantage. However, the global players are not giving up without a fight. They have been aggressively marketing their products in India, offering discounts and rewards to lure customers away from RuPay. Despite the competition, RuPay's market share continues to grow. According to the NPCI, RuPay has a 60% market share in the debit card segment and a 50% market share in the prepaid card segment. The NPCI has also launched several new initiatives, including the Bharat QR code, which allows users to make payments using their mobile phones, further strengthening RuPay's position in the market. In conclusion, RuPay's success can be attributed to its lower transaction costs, partnerships with banks and government initiatives, emphasis on security, and innovative initiatives. While global players like Visa and Mastercard continue to dominate the Indian market, RuPay's steady growth and increasing market share suggest that the Indian payment ecosystem is undergoing a seismic shift, and RuPay is at the forefront of this revolution.

5. THE IMPACT OF THE RUPAY CARD ON FINANCIAL INCLUSION IN INDIA

The RuPay Card has had a significant impact on financial inclusion in India since its launch in 2012. Financial inclusion refers to the process of providing access to financial services and products to individuals who are excluded from the formal financial system. This includes people who live in rural or remote areas, those who are low-income or economically disadvantaged, and those who lack access to traditional banking services. One of the ways in which the RuPay Card has impacted financial inclusion in India is by providing a low-cost payment solution that is accessible to a wider range of people. The card has significantly lower transaction fees compared to other international cards like Visa and Mastercard, making it a more affordable option for many Indians. This has allowed more people to participate in the formal financial system and conduct electronic transactions, including those who previously relied solely on cash. Another way in which RuPay has impacted financial inclusion is through its focus on serving rural and remote areas of India. The card has partnered with several regional rural banks and cooperative banks, which have a strong presence in rural areas. This has enabled people in these areas to access banking and financial



services for the first time. RuPay has also launched initiatives such as the RuPay Kisan Card, which is specifically designed to provide financial assistance to farmers.

RuPay has also played a significant role in promoting financial literacy and awareness in India. The company has conducted several campaigns to educate people on the benefits of using electronic payment systems and the importance of saving and managing money effectively. This has helped to build confidence and trust in the formal financial system, especially among those who were previously skeptical or wary of using banking services. In addition to these initiatives, RuPay has also collaborated with the government to promote financial inclusion in India. The government has launched several schemes such as Pradhan Mantri Jan Dhan Yojana (PMJDY) and Pradhan Mantri Mudra Yojana (PMMY) that aim to provide financial access and credit to the underserved and unbanked population in India. RuPay has played a crucial role in enabling the implementation of these schemes by providing a low-cost payment solution that is accessible to all. Overall, the impact of the RuPay Card on financial inclusion in India has been significant. The card has provided a low-cost, accessible payment solution to a wider range of people, especially those living in rural or remote areas. It has also played a key role in promoting financial literacy and awareness, building trust in the formal financial system, and collaborating with the government to promote financial inclusion.

6. THE RUPAY CARD REDUCES THE GENDER GAP IN FINANCIAL INCLUSION AND EMPOWERS WOMEN

The RuPay card has played a significant role in promoting financial inclusion in India, especially for women. Prior to the introduction of the RuPay card, financial exclusion was rampant among women, and they had limited access to formal banking services. However, RuPay has helped to address these issues by offering an affordable and accessible payment system. One of the primary ways in which RuPay has helped to reduce the gender gap in financial inclusion is by enabling women to access banking services at a lower cost. Compared to other payment systems such as Visa and Mastercard, RuPay charges lower transaction fees, making it a more affordable option for women who have limited financial resources. This has encouraged more women to use formal banking services, thereby reducing their reliance on cash-based transactions, which are often riskier and less secure.

Another way in which the RuPay card has helped to empower women is by providing them with greater control over their finances. With RuPay, women can now manage their finances more effectively, without having to rely on male family members or intermediaries. This has given women greater financial autonomy, enabling them to make important financial decisions for themselves and their families. Additionally, RuPay has also introduced various features such as cashback offers and discounts, which incentivize women to use the card for their transactions and encourage them to become more financially savvy. RuPay has also helped to increase financial literacy among women in India. The company has launched various initiatives to educate women about the benefits of formal banking and the importance of saving. For instance, RuPay has collaborated with NGOs and government bodies to conduct financial literacy camps and workshops, where women are taught about financial planning, budgeting, and investment. This has helped to build the confidence of women in managing their finances and has enabled them to take advantage of the various financial services offered by RuPay. Furthermore, RuPay has also helped to promote entrepreneurship among women in India. With RuPay, women entrepreneurs can now accept payments from their customers through a secure and reliable payment system. This has enabled them to expand their business and reach a wider customer base, thereby contributing to their economic empowerment. Finally, the RuPay card has played a vital role in reducing the gender gap in financial



inclusion in India. By providing affordable and accessible banking services, empowering women with greater financial autonomy, promoting financial literacy, and encouraging entrepreneurship among women, RuPay has contributed significantly to the economic empowerment of women in India.

7. A FUTURE POTENTIAL FOR THE RUPAY CARD

The RuPay card has already achieved a significant level of success in India, but there is still a lot of potential for future growth and development. In this section, we will discuss some potential avenues for the future of the RuPay card.

Firstly, RuPay can explore the potential of expanding beyond India's borders. Currently, RuPay is primarily used domestically, but there is potential for the card to be accepted in other countries. This could be achieved through partnerships with international banks or through alliances with other payment providers. If RuPay can establish itself as a reliable and trustworthy payment option for international transactions, it could greatly increase the card's popularity and usage. Recently it was introduced in Singapore, Bhutan, Maldives, Saudi Arabia, Qatar, UAE, Bahrain, Oman, Myanmar, South Korea, Mauritius, Nepal, Malaysia, UK, France, European Union, and Russia International by card reciprocal agreements.

Another potential area of growth for RuPay is in the area of contactless payments. With the COVID-19 pandemic, contactless payments have become increasingly popular as people seek to avoid touching surfaces and reduce the spread of germs. RuPay can capitalize on this trend by investing in contactless payment technology and promoting its use. This could include implementing contactless payment terminals in more locations and partnering with merchants to incentivize the use of contactless payments.

Furthermore, RuPay can also explore the potential of offering additional financial services beyond basic payment processing. For example, the card could be used to offer loans, insurance, or savings accounts. This would allow RuPay to become a more comprehensive financial services provider, helping to further increase financial inclusion in India.

Finally, RuPay can also explore the potential of blockchain technology. Blockchain has the potential to greatly improve the security and efficiency of payment processing, and RuPay can leverage this technology to further enhance its capabilities. For example, blockchain could be used to create a more secure and transparent system for processing transactions, or to facilitate cross-border payments more efficiently. In conclusion, the RuPay card has already achieved significant success in India, but there is still a lot of potential for future growth and development. By expanding internationally, investing in contactless payment technology, offering additional financial services, and exploring the potential of blockchain technology, RuPay can continue to revolutionize India's payment ecosystem and help to further increase financial inclusion in the country.

8. THE CHALLENGES OF THE RUPAY CARD

The RuPay card has revolutionized the payment ecosystem in India by providing a cost-effective and secure alternative to the dominant players like Visa and Mastercard. However, the card still faces some challenges in achieving its full potential. One of the biggest challenges faced by RuPay is the dominance of Visa and Mastercard in the global payment industry. These companies have a significant market share in India and are widely accepted by merchants and retailers, making it difficult for RuPay to compete.



Additionally, they have a vast network of international partnerships, which allows them to offer global services and benefits that RuPay cannot match.

Another challenge is the lack of awareness and understanding of RuPay among the Indian population. Many people still prefer to use cash or traditional banking methods and are unaware of the benefits and features of RuPay. This lack of knowledge and trust in the new system can limit the adoption of RuPay and its potential impact on financial inclusion in the country. Furthermore, RuPay also faces technical challenges related to its integration with different payment systems and point-of-sale devices. As a relatively new player, RuPay has to work hard to establish its compatibility with a diverse range of devices and platforms. Lastly, RuPay also faces security challenges, such as the risk of cyberattacks and fraud. As the system grows and becomes more widely adopted, it will become a more attractive target for hackers and cybercriminals. Therefore, RuPay needs to continue to invest in robust security measures and stay ahead of potential threats to maintain trust and confidence in the system. In summary, the RuPay card has the potential to bring about significant change in the Indian payment ecosystem and promote financial inclusion in the country. However, it still faces challenges in terms of competition, awareness, technical integration, and security. By addressing these challenges and continuing to innovate and adapt to the needs of its users, RuPay can become a dominant player in the Indian payment market and drive economic growth and development in the country.

9. RESULTS

The RuPay card has had a significant impact on India's payment ecosystem since its introduction in 2012. Over the years, the RuPay card has gained widespread acceptance across the country, competing with global giants such as Visa and Mastercard. In this section, we will discuss the results of the RuPay card's impact on India's payment ecosystem and financial inclusion. One of the significant results of the RuPay card's introduction is the reduction in the cost of transactions for banks and merchants. The RuPay card operates on a domestic payment network, which reduces the cost of transactions compared to international payment networks such as Visa and Mastercard. As a result, banks and merchants can save on transaction fees, which can be passed on to customers in the form of lower prices. This has helped to promote a cashless economy in India, which was one of the government's primary objectives. Another significant impact of the RuPay card is its contribution to financial inclusion. The RuPay card has helped to extend banking services to remote and rural areas of the country where access to banking services was limited. The RuPay card has played a critical role in the Jan Dhan Yojana scheme, which was launched in 2014 to provide every household in India with a bank account. The RuPay card was provided to every beneficiary of the scheme, which helped to promote financial inclusion in the country.

Moreover, the RuPay card has contributed to reducing the gender gap in financial inclusion. Women, especially in rural areas, have limited access to banking services and were excluded from the formal financial system. The RuPay card has played a vital role in empowering women by giving them access to financial services. The government's initiative to link RuPay cards with women's Jan Dhan accounts has been a game-changer in this regard. The RuPay card has also contributed to reducing the incidence of fraud in India's payment ecosystem. As the RuPay card operates on a domestic payment network, it is less vulnerable to cyber-attacks and other forms of fraud compared to international payment networks. This has helped to increase consumer confidence in electronic payments, which was a significant challenge in the past. In conclusion, the RuPay card has had a positive impact on India's payment ecosystem and financial inclusion. Its introduction has reduced the cost of transactions, extended banking services to remote areas, promoted a cashless economy, and empowered women to manage their finances



effectively. However, the RuPay card still faces significant challenges, such as increasing its acceptance in international markets and enhancing its technology to support more advanced payment methods. Nonetheless, the RuPay card's success in India has positioned it as a potential contender in the global payment industry.

10. IMPACT

The impact of the RuPay card has been significant in revolutionizing India's payment ecosystem. Since its launch, the RuPay card has provided access to electronic payments to millions of Indians who previously did not have access to such facilities. The RuPay card has played a significant role in improving financial inclusion in the country, particularly for the unbanked and underserved population. One of the significant impacts of the RuPay card is the increase in the number of electronic transactions in the country. According to the National Payments Corporation of India (NPCI), the number of RuPay card transactions increased from 195 million in 2013–14 to 2.71 billion in 2019–20. This increase in electronic transactions has contributed to reducing the country's reliance on cash, leading to a more secure and efficient payment system. The RuPay card has also helped in reducing the cost of transactions, making electronic transactions more accessible and affordable for the masses. The RuPay card transaction fees are lower than those of international payment networks such as Visa and Mastercard, which has led to increased adoption of the RuPay card among merchants and consumers.

Another significant impact of the RuPay card is the promotion of financial inclusion among women in India. The RuPay card has played a crucial role in empowering women by providing them with access to financial services, allowing them to manage their finances more efficiently. The RuPay card has also helped reduce the gender gap in financial inclusion in India, which has historically been significant. The RuPay card has also contributed to the growth of digital payments in rural areas. The RuPay card has enabled people in remote areas to access digital payment services, making financial transactions more convenient and accessible. The RuPay card has also provided a platform for the government to implement various financial inclusion programs, such as the Direct Benefit Transfer (DBT) scheme, which aims to transfer subsidies and welfare payments directly to the beneficiaries' bank accounts. Lastly, the RuPay card has had a profound impact on India's payment ecosystem, promoting financial inclusion, reducing the gender gap in financial services, and increasing the adoption of digital payments. The RuPay card's success in India has paved the way for other countries to develop their domestic payment networks and promote financial inclusion.

11. CONCLUSIONS

The success of RuPay card is a remarkable achievement that has transformed the Indian payment industry. As highlighted in this paper, RuPay's strategy of offering low-cost solutions and leveraging government initiatives has enabled it to gain a significant market share in a relatively short time. RuPay's success has also shown that local solutions can compete with global players, and this has brought about a positive impact on Indian society. The key takeaway from this paper is that RuPay's success story offers valuable lessons for other emerging markets looking to develop their payment ecosystems. One of the most crucial factors that contributed to RuPay's success is its focus on affordability and accessibility. By offering low-cost solutions that cater to the needs of the unbanked and underbanked populations, RuPay has been able to increase financial inclusion in India significantly. Another significant factor that has contributed to RuPay's success is the support it received from the Indian government. The government's initiatives to promote digital payments and financial inclusion have been instrumental in RuPay's growth. The



government's focus on creating a cashless economy and its emphasis on digital financial services have provided a conducive environment for RuPay's success. Furthermore, RuPay's success has also helped to reduce India's reliance on foreign payment networks such as Visa and Mastercard. This has led to increased competition, which has ultimately resulted in more affordable and accessible payment solutions for consumers. By offering a more cost-effective payment solution, RuPay has been able to increase financial inclusion and empower millions of Indians to manage their finances more effectively. In conclusion, RuPay's success is a testament to the power of innovation and disruption in the fintech industry. The lessons learned from RuPay's success story can be applied in other emerging markets, providing affordable and accessible payment solutions to millions of unbanked and underbanked populations. RuPay's success has shown that local solutions can compete with global players, and this has brought about a positive impact on society. The future potential of RuPay is immense, and it has the potential to continue revolutionizing India's payment ecosystem and beyond.

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