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Protective Security by Online Promotions paired with Mobile Payments: Evidence from Covid-19 Crisis Relief Fund Collection in India

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Abstract. When developing nations suffer from crises and disasters, it becomes urgent and critical to raise relief funds rapidly with the engagement of a greater number of donors. In this regard, digital technology has repeatedly aided during crises. Two such technologies include online promotions influencing citizens for donations, and mobile payments providing a mechanism for quick transfer of funds. In this paper, we study how online promotions that are notified through mobile payment apps, can be a pair of technology enabling successful and rapid fund transfer, thereby offering protective security during a crisis, along with transparency in transactions (Sen, 2001). We examine the role of the two technologies in combination through field interviews amidst the Covid-19 crisis in India and draw implications for relief fund collection mechanisms. Initial results show that the role of online promotions and mobile payments have questionable implications in terms of transparency. The study contributes to both mobile payments and online promotions in crisis literature.

Keywords: IT in Crisis, Mobile Payments, IT in Disaster Relief, Online Promotions for Donations

1 Introduction

In recent times, developing nations were hit by several crises and disasters including civil conflicts, economic crises, natural disasters, and the global Covid-19 pandemic (Saxena, 2020; Welborn, 2020). This necessitates a quick response from various actors including the state and citizens, in tandem with technology, to facilitate large scale and rapid collection of relief funds (Bennett & Kottasz, 2000). This has led researchers to study the positive role of technology concerning the conflicts and disasters that took place in various countries (Harwell, 2000; Scott & Batchelor, 2013; Troy, Carson, Vanderbeek, & Hutton, 2008). The studies bring out the role of technology as a social safety net during crisis providing ‘protective security’— one of the freedoms by Sen for empowering individuals, and impacting socioeconomic development (Frediani, 2007; Sen, 2001). Further, technology has an added advantage of ensuring ‘transparency guarantee’ as envisaged by Sen. Transparency guarantee is also a freedom that is instrumental in bringing in trust in people, systems, and institutions.

In this context, we examine the role of two important technological interventions that have been contributory in aiding relief fund collection during crises. First, online promotions for sensitizing and mobilizing the citizens about the urgency of contributing to relief funds (Das, 2020; Sharma, 2020). Second, convenient online transfer of funds through digital payment mechanisms, like mobile payments (Pollach, Treiblmaier, & Floh, 2005). Mobile payment mode is highly inclusive because mobile payment has been established as an effective tool for financial inclusion, including the unbanked and marginalized sectors (Donovan, 2012). While existing literature engages with these two strands of technology's role in crisis individually, there is a limitation of studies on how the combination of these two can offer a fundraising platform with greater acceptability. Rapid fundraising is particularly crucial for helping the marginalized who are the most critical victims of crises, and fund promotion through payment apps' notification could offer an innovative solution. In this context, this paper makes a normative contribution by analyzing *the combined effect when online promotions are paired with mobile payments*.

This phenomenon is observed in various mobile payment apps in India, as they promote relief fund donations through on-app advertisements and pop-up notifications, that allow users to directly donate by one-click on the promotion text (Dataquest, 2020). (See Figure-1 for the various advertisements by mobile wallets in India). To examine the role of this technological combination, we draw our analysis from the data collected through in-depth field interviews during the Covid-19 crisis in India. The results reveal that although mobile payments are gaining popularity through online promotions, the pre-existent digital divide continues to exclude some sections of the society like the elderly and women. Fund donations are highly sensitive and often online payments carry the fear of fraud transactions (Kundu, 2020). Therefore, while the combination of online promotions and payment may appear beneficial, critical investigation of the user perspectives through field data is essential to conclude. The findings contribute not only to the field studying technology in crisis and disaster relief but also to the field of mobile payment as ICT4D.

2 Background and Motivation

Covid-19 is the global pandemic that spread globally across international borders due to its highly contagious nature (Marques, McKeever, & Nowakoski, 2020). Due to its contagious nature, many nations declared lockdown, shutting down local businesses and travel, to minimize social interactions and curtail the spread of the virus (BBC News, 2020). And for India, the lockdown resulted in job losses in tremendous magnitude for the laborers working in the unorganized sectors (Vij, 2020). Therefore, as the pandemic rises in the developing nation, the government is in dire need of relief funds to provide both for healthcare facilities in increasing numbers of the growing Covid-19

patients, quarantine facilities for the infected, along with providing food and shelter to the daily wage labors who lost their jobs and were at the verge of starvation. This crisis has been noted as one of the harshest in the history of India (Agrawal, 2020). Such a situation calls for the dire need to arrange for funds and donations both quickly and effectively by reaching out to all the citizens and enabling them with the opportunity of easy transfer of money in the lockdown with restricted movement. Online promotions provide awareness to the citizens about the national fund, whereas mobile payments offer a quick transfer from home. This intrigued us to examine the effectiveness of this combination of the two technologies, online promotions on mobile payment apps, in terms of protection and transparency, the two essential freedoms to tackle a crisis in developing nations as prescribed by Sen (2001).

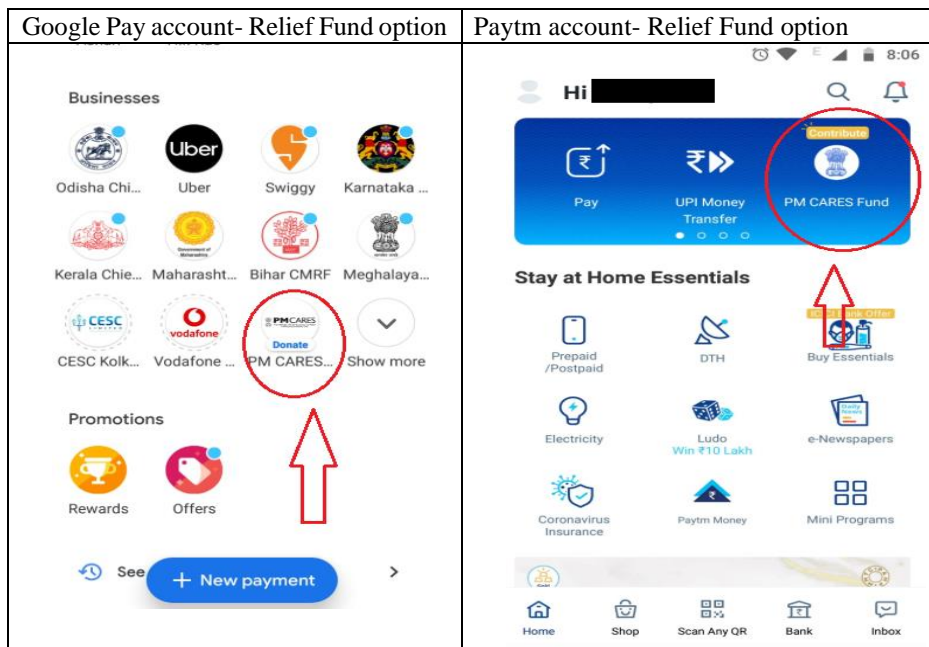


Figure 1: Screenshots of two leading mobile payment apps in India, Google Pay and Paytm, with Prime Minister's Relief Fund Promotions

3 Literature

This study draws and contributes to two streams of literature on the two technologies in crisis- online promotions and mobile payments.

3.1 Online Promotions and Relief Fund Donation

Online advertisements on mobile phones are often considered highly effective and can be influential in relief fund collection with adequate aesthetics and features (Park, Shenoy, & Salvendy, 2008; Zhou & Xue, 2019). Donation-based promotions are an efficient fund collection mechanism that motivates donors through the act of charity (Winterich & Barone, 2011). Ellen, Mohr, & Webb (2000) study the structure of marketing promotions in the donation situation, and Müller, Fries, & Gedenk (2014) tactical marketing to influence the donation size. While researchers have focused on strategy, message-content, and techniques, to influence donors and donations (e.g., Galán-Ladero & Galera-Casquet, 2013; Grau & Folse, 2007), we examine how combining promotions with the payment technology would effectively provide citizens both the motivation and the platform to transfer the donation.

3.2 Mobile Payments during Crises

In crisis and disaster situations where mobility of civilians was restrained, various mobile payment service providers (e.g. Vodafone in Afghanistan, Smart Communication in the Philippines, Safaricom in Kenya, Orange in various countries in Africa) offered swift funds transfer of remittances from migrants to their homes, or relief cash from the government to victims (Aker, Boumnijel, McClelland, & Tierney, 2016; Pega, Liu, Walter, & Lhachimi, 2015; Wachanga, 2015). One example is the 2008 post-election civil conflict when many civilians used mPesa to receive money that they needed to escape the threat of ethnic violence (Morawczynski & Pickens, 2009). Another such example is the banknote crisis during demonetization in India when mobile payments were one of the key payment channels that enabled the continuity of small-scale businesses in the shortage of hard cash (Firstpost, 2016).

4 Theoretical Foundation

Protective security concerns how well the citizens are protected at times of crises (Sen, 2001). Ascending from the theoretical framework of protective security are State-specific protective security policies. The framework of these protective security policies articulates directives to government instrumentalities and private sector players to bolster the effective implementation of policy across the arenas of governance, social assurance, and information security et al. The primary objective of enabling protective security is to enable business and economic activity that supports the government's objective of achieving well-being for its citizens.

The basic rationale for adopting protective security policies is that if undertaken promptly, these initiatives increase the probability of protecting citizens from the ill effects of a crisis. In the age of technology, advancement in information technology can

be leveraged to this end. Technologies have often served as safety-nets or facilitated more efficient fund transfer during ethnic violence in Kenya or the banknote crisis triggered by demonetization in India, as seen above (Blumenstock, Eagle, & Fafchamps, 2016; Mirabaud, 2009). More importantly, the employment of technology leads to a *transparency guarantee* which is an important contributor towards enhancing capabilities.

Through the transparency guarantee lens provided by Sen, we analyze if the combination of online promotions and mobile payments can be an empowering technology offering protective security to the society in times of need. With the advent of information technology, online promotions, and growth of digital giving has outpaced all other forms of giving. The positive role of online promotions makes it easy for donors to locate the required page and donate. Online promotions leverage existing technological advancements like easy-to-click links, streamlined designs, and steps that allow a donor to make expedited decisions. As one-third of internet traffic is channeled through mobiles, online promotions are easier since a larger group becomes the recipient.

Mobile payments have several advantages over traditional ways of donating like cash and cheques. First, donors can use the same technology that they otherwise use for their routine transactions. Second, the demographics of the donors become relatively redundant as most people across age groups use mobile technologies. Third, by using technology that the donors are already using, we can leverage the trust and reliance that users have on a particular interface. Fourth, not only the collection becomes cost-effective. Sending an acknowledgment receipt is also hassle free and cost-effective. Fifth, mobile technology is invariably associated with quick and efficient transactions. Sixth, having a transparent system of donation collection increases perceived credibility. All of these factors cumulatively give a boost to the amount of donation collected.

5 Research Methodology

The data for relief fund promotions and collections through mobile payment is collected through field study by interviewing citizens. The interview questions are designed to capture if the pairing of promotions and mobile payments has helped the citizens to easily transfer funds. The study is still in progress, with 8 in-depth interviews collected now, which is preliminary analysis through basic interpretive research methods through the hermeneutic cycle (Klein & Myers, 1999). We have followed a semi-structured method for interviews, starting with a set of broad questions, but encouraged a free conversation with the participants. The interviews were transcribed and analyzed for new themes beyond our initial outline based on protective security and transparency guarantees. We transcribed the interviews and analyzed the data following the prescriptions by Klein and Myers (1999), including examining the social and historic background of the field, understanding the interaction between the subjects and researcher,

and carefully preserving the theme of the data, with conscious awareness regarding biases of the researcher.

5.1 Research Field and Subjects

The subjects were from the urban locations in the New Capital Region of India including New Delhi, Noida, and Gurgaon. These are infrastructurally advanced cities in the country and the citizens are assumed to be aware of mobile payment technology, as India reports significantly higher digital penetration for urban India (Indian Express, 2018). The subjects were both regular mobile payment users, and non-users but with awareness about mobile payments from urban locations with relatively advanced digital infrastructure. This allowed us to understand the concerns of technically aware users related to relief fund transfers through mobile payments. The interviews are held between March and May 2020, amidst the covid-19 global pandemic in India. The critical conditions in India, that needed immediate relief funding, provided a field to study the issues of technology in crisis.

6 Findings

The objective of the study is to analyze the combination of mobile payments with online promotions as a technology that offers protective security and transparency guarantees in times of crisis.

Four respondents mentioned that they have noticed the fund collection notifications, often repeatedly. One user mentioned that he received regular notifications and he has also used mobile payments to make Covid-19 fund donation. He said,

“I do get notifications and I would say I get them daily and I’ve used it couple of times to donate money.”

Similarly, two other respondents noted that they were willing to contribute to the Covid-19 relief fund directly through the mobile wallet promotional ads since it was easier.

A regular user mentioned that she was willing to make the donation through a mobile payment app but her workplace initiated a campaign that deducted amount directly from her salary without the need to transfer personally.

However, an elderly non-user stated her fear of fraudulent transactions through mobile payments, and said, she preferred traditional donation methods through banking channels. She also brought up the fact that she is generally hesitant about using any form of digital transactions since they carry the threat of theft and cybercrimes. This works in reverse of our assumption on transparency guarantees since this subject did that prior developed trust for the mobile payment wallets. She explains,

“I will not donate through Paytm [leading mobile wallet in India] because who knows where my money will go. I will rather go to my bank and make the donation if at all I want to donate.”

On a similar note, another user noted that her trust for her bank is much higher and therefore she would choose online banking rather than mobile payments since relief money safety is of utmost concern for her and the people in need.

It can be drawn from the data that pairing promotions with the mobile payments for collection of relief funds have effectively initiated donations. However, pre-existing traditional channels continue to offer a trustworthy donation platform, whereas, mobile payments are trusted by regular users but are questioned by non-users.

Overall, the findings suggest that ‘protective security’ is established as users note the convenience of transferring relief funds through mobile wallets, but ‘transparency guarantees’ is questionable with many subjects expressing their trust concerns for the third-party providers of mobile payments.

7 Discussion and Implications

Mobile payments, combined with online promotions for relief funds, provide a technology pair that can provide motivation and mechanisms to citizens for donations. As far as transparency guarantee is concerned, the technology caters to various strata of the society equitably. However, the same cannot be iterated about the protective security parameter. The digital divide, in terms of digital literacy and use of smartphones, can exclude a significant section from the system. Our critical investigation reveals that online promotions, as well as mobile payments, are not truly inclusive processes. Our results are coherent with the assertion made by Sen and Dreze, which states that issues of inequality and participation are particularly crucial in India. These issues tend to accentuate social divisions and are ‘pervasive and have tended to take a heavy toll on both economic development and social opportunities’ (Drèze & Sen, 2002, p. 10).

We also found that the inequality established by the digital divide across online promotions and mobile payments and in the process obstruct participation of the technically incompetent citizens from older generations. Whether this new technology combination provides adequate protective security and transparency guarantee for the people is still in question as non-users have raised questions and expressed their preferences for traditional ‘trusted’ alternative channels.

To ensure that we as a society can better leverage the advantages unleashed by technological advancement, the State needs to first play a proactive role in enabling equitable access to technology. Both in terms of network coverage as well as access to internet-enabled mobile handsets. Elimination of physical barriers to access is the primary responsibility of the State. Cybersecurity is a major concern that the State ought to keep in mind while initiating any step towards large scale inclusions or before involving

private parties in catering to the growing need. Since transparency guarantees leverage on the trust factor, a breach of trust in any manner can cause reputational damages.

8 Conclusion

This paper aimed to examine the role of a combination of two influential technologies – online promotions and mobile payments – during the crisis, particularly focusing on relief fund collection. We understand if this combined technology meets the two important freedoms by Sen, protective security, and transparency guarantees. The preliminary evidence shows us that while protective security is met for most of the subject, transparency guarantee is questioned by some non-users who do not find mobile wallets reliable in comparison to traditional banks of the nation. This needs further investigation.

The future plan for this study includes interviews with subjects infrastructurally diverse cities like tier-2 cities and rural locations, and from diverse backgrounds, with elaborate discussions on their opinions related to promotions and fund transfer through mobile payments. We expect to find more evidence towards the presence or absence of transparency guarantee for mobile payment fund transfer, for which we currently have mixed findings.

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