Exploring the Intention to Use M-payment in India: Role of Extrinsic Motivation, Intrinsic Motivation and Perceived Demonetization Regulation

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Purpose
The purpose of this research is to develop a model that explains a user’s attitude towards M-payments in India, based on the motivational model and awareness about demonetization policy. The study also investigates the validity and differential predictive power of four different M-payment usage models, by considering the effect of improved awareness regarding demonetization policy on the core construct of motivational model.

Design/methodology/approach
The model was tested with survey data from 362 M-payment users using partial least squares. Respondents were M-payment users with significant usage experience.

Findings
This research study empirically determined that the Motivation Model and awareness about demonetization policy in M-payment usage after demonetization are connected. As hypothesized, the study found 1) positive relationship between extrinsic motivation and intention to use M-payment, 2) a positive relationship between awareness about demonetization policy and behavioral intention to use M-payment, 3) positive relationship between intrinsic motivation and extrinsic motivation, 4) positive relationship between awareness about demonetization policy and extrinsic motivation, and 5) positive moderation effect of awareness about demonetization policy on the extrinsic motivation-behavioral intention relationships. The hypothesis that awareness about demonetization policy would have a moderating effect on intrinsic motivation-behavioral intention relationship was not supported.

Practical implications
From a practitioner’s perspective, this research study underscores the importance of raising sufficient awareness about the demonetization policy as a determinant of users’ willingness to use M-payment services. Mandatory regulations by the government and motivation towards M-payment use can be a good starting point for a cashless economy.

Originality/value
This work makes a needed contribution to literature by validating the integrated motivation model, emphasizing the importance of raising awareness about the demonetization policy among M-payment users. The model may provide a useful foundation for future research in this area.
Exploring the Intention to Use M-payment in India: Role of Extrinsic Motivation, Intrinsic Motivation and Perceived Demonetization Regulation

1. Introduction

In India, demonetization (stripping a currency unit of its status as legal tender) of INR (Indian Rupee) 500 and INR 1000 currency notes was declared on 8th November 2016 (Mohd, 2016). On 8th November 2016, demonetization nullified around 86% of Indian currency and created inadequacy of cash in the economy (Balaji and Balaji, 2017). Despite several challenges, the demonetization of currencies in 2016 in India was deemed successful (Kulkarni and Tapas, 2017; Midthanapally, 2017). One of the important reasons for this was the rise in cashless payment, using instruments such as M-payment, which emerged as an alternative to cash for safe and fast transactions (Pachare, 2016; Midthanapally, 2017). Cash crunch encouraged people to use M-payment after demonetization. This provided an opportunity for M-payment service providers to appeal more customers and increase the usage of cashless transactions (Goriparthi and Tiwari, 2017; Johnson et al., 2018).

The advancement of M-payment differs from one country to another in terms of penetration and maturity. In developed countries, adoption rates are marginal (Guo and Bouwman, 2015). Even in some Eastern economies (South Korea and Japan) and developing countries (India, Kenya and Philippines) few M-payment applications (remittance and ticketing) are being utilized (Guo and Bouwman, 2015). Even though the present condition in developing countries are promising for the growth of M-payment, a number of hurdles still remain; the most significant one is related to the M-payment platform’s multi-sided market characteristic (Campbell-Kelly et al., 2014). The low rate of adoption and behavioral intention to use can be attributed to many factors, like the supremacy of old-fashioned banks, bank license regulations, dearth of innovation and strategic capabilities and availability of other payment alternatives (De Reuver et al. 2015). Also, as the M-payment platforms are not interoperable, it escalates the efforts and costs of adoption for both consumers and merchants (De Reuver et al. 2015). In previous studies on information technology (IT) innovation, Shih et al. (2008) considered government policy as one of the leading challenges for consumer’s behavioral intention to adopt and use Information System (IS). Hence, such concerns about the dynamic Indian M-payment market led us to identify the factors that play a vital role in crafting an M-payment platform.

Though there is ample literature on IS implementation and adoption, investigation behavioral intention to use and assimilation is scarce (Markus and Tanis, 2000). In the IS literature, studies on M-payment usage focus mainly on behavioral beliefs (e.g. perceived ease of use and perceived usefulness), social influence and personal traits (e.g. personal innovativeness, social image, subjective norms etc.) (Venkatesh et al., 2003; Johnson et al., 2018). The existence and success of M-payment in emerging markets depends on whether there is a significant number of users. Also, it is important to understand what motivates consumers to adopt and use M-payment. Extrinsic motivation lay emphasis on behavioral outcomes, however intrinsic motivation stresses on the process itself (Leone et al., 2017; Li, 2017). Therefore, it is necessary to combine both the perspectives of intrinsic and extrinsic motivations to examine M-payment user behavior (Verhagen et al., 2012; Leone et al., 2017; Li, 2017). When users conduct M-payment, they may not only...
expect to make transactions but also look forward to a good experience (Vahidalizadehdizaj and Leider, 2018). Moreover, none of the preceding investigations utilized a theory-centered lens to appreciate the significance of important determinants in impacting post-demonetization consumer’s behavioral intention to use M-payment solutions. Surprisingly, very few studies were found on the effect of awareness regarding mandatory government policies like demonetization policies on behavioral intention to use M-payment, though it is considered as an important driver of M-payment (Upadhyay and Jahanyan, 2016). Also, limited research is available on behavioral intention to use M-payment solutions in a developing economy like India. (Madan and Yadav, 2016).

The current study focused towards understanding customer’s behavioral intention to use rather adoption, the former is more fundamental and significant in terms of determining users’ overall assessments of the use of a particular IT or IS system (Hong et. al., 2008). The assessment includes the rational evaluation of the utility and emotional/affective reaction to the IS use (Ortiz de Guinea et.al. 2009). Drawing from the preceding studies on institutional theory (Zucker 1977, Zucker 1987; Powell and DiMaggio 1991), we introduced a theoretical construct to extend the existing body of knowledge on how M-payment usage is influenced by the external institutional force. So, this research article has a three-fold objective: 1) to examine the application and efficacy of Motivation Model in relation to the users’ intention to use M-payment; 2) to improve the explanatory power of Motivation Model by adding a new construct: awareness about demonetization policy; 3) to understand the direct, exogenous and moderating effect of awareness about demonetization policy on intention to use M-payment.

The rest of this investigation is structured as follows. An outline of M-payment, motivation model and institutional theory has been presented in Section 2. The conceptual model and the research hypotheses are proposed in Section 3. In Section 4, the research methodology is described. The analysis of empirical findings has been presented in Section 5. Then, a discussion of the results and implication is presented in Section 6 and Section 7. Finally, conclusion and limitations are presented in Sections 8 and 9, respectively.

2. Conceptual background

2.1. M-payment

M-payment refers to the business or individual activities that utilize digital devices with mobile internet, in order to perform economic transactions (Liébana-Cabanillas et al., 2018; Johnson, 2018). M-payment eliminates or reduces the need of cash (Pham and Ho, 2015; Iman, 2018), offers convenience and speed (Teo et al., 2015) and provides secure transfer of information (Schierz et al., 2010). Unlike the spatial and temporal constraints in both offline and online payments (Zhou, 2013), M-payment enables users to complete their payments in a faster, safer and more convenient manner, anywhere and anytime (Zhou, 2013; Liébana-Cabanillas et al., 2018; Johnson et al. 2018). As the usage of smartphone and mobile internet increased, M-payment grew rapidly. The benefits of M-payment include convenience (Johnson et.al. 2018), location-independence and quickness of transaction (Constantiou et al., 2006; Mallat et al., 2009; Johnson et.al. 2018), person-to-person money transfer, and ticketing and loyalty programs (Mallat et al., 2009). All these benefits of M-
payment make it the next step of electronic payment services evolution, ensuring tremendous potential to grow (Ahuja, 2017).

The M-payment market in developing economies is an outcome of rapid changes in technology, regulation and conditions (eMarketer, 2018). Swift penetration of smartphones can be considered as an indicator of consumer’s behavioral intention to use M-payment service (Johnson et al., 2018). However, many smartphone consumers opt not to exploit most of the devices’ capabilities (application). For example, not more than 25% of adult smartphone users, do not download any mobile applications (Schierz et al. 2010; Slade et al., 2013). Hence, the predicted fast progression in M-payment services is yet to be realized. So, usage intentions might not be a determining factor for M-payment service adoption (Kristoffersen, 2008).

2.2. Motivational Model

Preceding research attempts in the field of consumer’s behavioral intention to use M-payment, were grounded on established adoption models such as the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1973), the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003) and Technology Acceptance Model (TAM) (Davis, 1989). Many previous investigations had inspected an array of M-payment service behavioral factors such as perceived usefulness (Chen, 2008), perceived ease of use (Chen, 2008), social influence (Hung et al., 2012), compatibility (Lu et al., 2011; Schierz et al., 2010), trust (Lu et al., 2011), use context (Mallat et al., 2009), risk (Chen, 2008), and cost (Lu et al., 2011). Combining the model of UTAUT and Diffusion of Innovation theory had confirmed that the magnitude to which M-payments gives an edge in carrying out payment-related tasks is significant in performance expectancy but the same is not significant in illuminating the behavioral intention for using of M-payment technologies (Oliveira et al., 2016). Nevertheless, the constructs that assured the advancement of M-payment use somehow ended up unsuccessful in materializing the same (Dahlberg et al., 2008). This indicates that our theoretical understanding of determinants that rule consumer’s behavioral intention to use M-payment service under such conditions is inadequate, as any such platform can be deliberated to be hedonic and more complex systems (Ayeh et al., 2013), and both intrinsic and extrinsic motivation might be significant bases of use (Park and Nicolau, 2015).

Several researchers have used the motivational model to predict behavior and to investigate new technology usage and acceptance in different contexts (Davis et al., 1992; Venkatesh et al., 2003). Motivations is considered as a key determinants of IS usage behavior because they endure predispositions that direct and incite behavior toward certain goals (Engel et al., 1995). According to Verhagen et al. (2012), the behavior is motivated both intrinsically and extrinsically. Therefore, both intrinsic motivation and extrinsic motivation have been included as a core construct in the motivational model. In IS research, intrinsic and extrinsic motivation are seen as strong predictors of system usage (Venkatesh, 1999; Wakefield and Whitten, 2006). Intrinsic motivation is the perception of performing an activity by users for pleasure and satisfaction (Vallerand and Blssonette, 1992; Chiu and Li, 2015; Van Yperen et al., 2016; Ifinedo, 2017). According to Deci and Ryan (1985), intrinsically motivated behavior is volitional and self-determined and involves individuals engaging in certain activities that they find new, interesting and optimally challenging (Deci and Ryan, 1985). Intrinsic motivation stems its worth from the appreciation of the activity.
It is contrary to extrinsic motivation that derives its value from instrumental outcome (Deci and Ryan, 2000; Chiu and Li, 2015; Van Yperen et al., 2016; Ifinedo, 2017).

Extrinsic motivation, on the other hand, is the perception of performing an activity by users with the purpose of realizing specific goals or rewards (Deci and Ryan, 1985; Koo et al., 2015). Extrinsic motivation affects a broad range of behaviors of users where the objectives of action are to obtain a separable outcome (Deci and Ryan, 2000). Also, extrinsic motivation is derived from the outcome of the activity rather than from the activity itself (Davis et al., 1992). According to Grouzet et al. (2004), extrinsic motivation can either be autonomous or controlled in nature. Autonomous extrinsic motivation denotes an external regulation or, which a user determines to be personally valuable or endorsing (Grouzet et al., 2004; Verhagen et al., 2012). In contrast, controlled extrinsically motivated behavior is related to activities that are mainly conducted due to internal pressure (e.g., guilt, pride, ego) or external obligation (e.g., reward, punishment) (Vallerand and Bissonnette, 1992; Deci et al., 1999).

2.3. Institutional Theory: the demonetization policy

Institutional theory is extensively utilized in the management and social science literature (Mizruchi and Fein, 1999). Also, researchers have lately begun to be deployed in information system research (Liang et al., 2007). The three isomorphic pressures (normative, mimetic and coercive) analytically illustrate three distinct processes of institutionalization (DiMaggio and Powell, 1983). Arguments on institutional coercive pressures stem essentially from the resource dependence perspective (DiMaggio 1988), and is backed by significant empirical support in the institutional literature (Palmer et al. 1993). Coercive isomorphism is distinct from Mimetic isomorphism, where organizations imitate other organizations with positive expectations; in the case of normative isomorphism, networks influence or professional standards change (DiMaggio and Powell, 1983). Coercive pressure can be defined as informal or formal pressure used on one dependent Institution by another Institution (DiMaggio and Powell, 1983). Institutional coercive pressures can also be from government policies and regulations, industry associations and networks, or can emerge from competitive necessity within a market segment or industry (Gular et al., 2002). Mandatory government policies like demonetization can either encourage or discourage the consumer’s behavioral intention to adopt innovation (like M-payment service) (Sivathanu, 2019). Thus, establishments, as regarded by an institutionalized dependency pattern, can unveil related structural characteristics such as organizational models, program and formal policies (Teo et al., 2003).

There are rare evidences on short-term impact of transition into cashless economies (Zhu et al., 2018). Most of the empirical investigation is targeted at understanding high-scaled impact of macroeconomic shocks on livelihoods (Krishnan and Siegel, 2017). However, some researchers argued that government mandate policy can speed up the rate of RFID adoption (Liu et al., 2015; Fakhr, 2016). Government is treated as an important environmental actor for consumer’s behavioral intention to adopt and use technology (Lin and Ho, 2009). Government policies like demonetization can play an important role through information provision, facilitating research and development, building and enhancing the infrastructure (Dasgupta, 2016; Balaji et al., 2017), providing incentives (Dasgupta, 2016), tax breaks, and providing counselling services etc. Supports may also come from technology providers (Bhuvana and Vasantha, 2017). Government policies like demonetization have given a boost to innovations like digital payments and
encouraged people to use M-payment services to overcome the cash crisis (Bhuvana and Vasantha, 2017). This provides an opportunity for M-payment service providers to push customers toward cashless transactions (Madan and Yadav, 2016; Bhuvana and Vasantha, 2017). An important issue about public awareness regarding demonetization policy in M-payment usage intention is, thus, whether it directly affects intrinsic/extrinsic motivation or usage intention (as an antecedent) or whether it moderates the effects of intrinsic/extrinsic motivation or usage intention (as a moderator).

3. Research model and hypothesis

According to Davis et al. (1992), intrinsic motivation would have a significant direct effect on intentions to use an innovation. Individuals who are intrinsically motivated towards the use of technology, will continuously indulge self in using the technology for explicit results connected with its use (Venkatesh et al., 2003). For such users, the difficulties associated with the usage of the new technology may tend to be low as they enjoy the process and using the new technology is more effortless for them, in comparison with users with less intrinsic motivation (Fagan et al., 2008). More specifically, users with higher levels of intrinsic motivation have more willingness to continue the usage of technology. Thus, the following hypothesis is proposed:

**Hypothesis H1a: Intrinsic motivation will positively affect behavioral intention to use M-payment.**

Intrinsic motivation leads a causal path to extrinsic motivation. Intrinsically motivated behaviors are the prototype of self-determination (Deci et al., 1999). As per previous research studies, intrinsic motivation can have several beneficial effects on users’ behavioral intention (Molina-Castillo et al., 2016). For instance, if an individual enjoys his/her work, she is capable of achieving industrious and creative results (Starbuck and Webster, 1991; Amabile and Kramer, 2007; Wang et al., 2013). Intrinsic motivation is associated with the deliberation and thoroughness of cognitive processing (Penz and Sinkovics, 2013). It increases self-reflection and thoughtfulness (Caniëls et al., 2015). Therefore, it leads to enhanced perceptions of extrinsic motivation. Furthermore, Venkatesh et al. (2002) and Fagan et al. (2008) found a positive impact of intrinsic motivation on extrinsic motivation. More time spent on using M-payment after demonetization is, therefore, likely to be related to high extrinsic motivation. Given this conceptual linkage between intrinsic and extrinsic motivation, it is postulated that:

**Hypothesis H1b: Intrinsic motivation will positively affect extrinsic motivation.**

Recent research suggests that extrinsic motivation is also as important as intrinsic motivation to influence behavior (Deci et al., 1999). External motivation like communication of interpersonal influence and rewards is an important factor that determines a user's behaviors (Deci and Ryan, 1985). Extrinsic motivation affects a broad range of behaviors where the action's objectives broaden beyond those inherent in the activity itself (Vallerand and Blissonnette 1992). According to Davis et al. (1992), extrinsic motivation provided by stimulus-response cues should have a heavier weightage in predicting intention to use than intrinsic motivators. In a technology-mediated environment, the presence of extrinsic motivators might prevent users from participating
in computer-based tasks that are intrinsically challenging and enjoyable (Newby and Alter, 1989). Thus, the following hypothesis is proposed:

**Hypothesis H1c: Extrinsic motivation will positively affect behavioral intention to use M-payment.**

Several social science-based studies have discussed the importance of raising public and individual awareness (Snell et al., 1991; Tillman, 2002). Awareness is one of the central constructs of consciousness raising (Bickford and Reynolds, 2002; Tillman, 2002; Green and Kamimura, 2003). Social awareness is positively associated to an individual's cognitive attitude and development (Tsui, 2000). Following Dinev and Hart (2006), this study defined awareness about demonetization policy as a one's raised consciousness on demonetization policies proposed by the government and strategies to deal with them. Therefore, before forming a negative or positive beliefs about demonetization policies, one must first be aware of the consequences of the policies. Preceding investigations in IS research were carried out in contexts such as EDI adoption (Teo et al. 2003), website adoption (Flanagin 2000), IT budget related assessments (Hu and Quan 2006) and IT product choice (Tingling and Parent 2002). Coercive isomorphic institutional pressure was investigated with respect to information security policies and practices (Hu et al. 2006).

While demonetization did not attain its indicated goal (Ghosh et al., 2017; Reddy, 2017), the government claimed that the move would lessen the need of cash-based transactions in favor of digital transactions (Chandrasekhar and Ghosh, 2017). Mehta et al. (2016) stated that heightened awareness with respect to the demonetization policy in India will drive the increased usage of cashless transactions. Several empirical studies show that government demonetization policy may influence the usage of cashless transactions like online banking, e-commerce, mobile banking etc. Kumar and Pasha (2017) concluded that success of demonetization will help shape a corruption-free society and aid economic development. Demonetization of currency has the ability to create a cashless economy by the stimulating online transactions. M-payment is a key player in the world of cashless transactions and has the advantages of a high degree of mobility, transparency and flexibility (Zhou, 2013), which allows users to meet their transactional needs (Yang et al., 2015). M-payment has an important role in the success of demonetization in an emerging economy like India. Kumar and Pasha (2017) showcase that the Government of India is proactive in supporting cashless transactions by promoting innovations and technologies like mobile payment services.

The institutional measures of demonetization stretch from pure coercive (imposing cash withdrawal limits from ATMs and cash counters, intentionally not inducing enough legal tender into the system) and threatening (announcing the audit by tax authorities for cash transactions beyond a certain limit) to comforting (reducing/eliminating digital transactions charges for any commerce with public organizations) and incentivizing (proposing discounts and tax benefits for specific transactions, sporadic ‘lucky draw’ prizes for individuals making cashless transactions) (Chandrasekhar and Ghosh, 2017). All such initiatives led to a substantial volume terms card usage surge between November 2016 to January 2017(Chandrasekhar and Ghosh, 2017). Specific to intrinsic and extrinsic motivation, enhanced awareness about demonetization can build an enriched state of usefulness among users (Madan and Yadav, 2016). This indicates that awareness about demonetization policy motivates users extrinsically and intrinsically. Thus, the following hypotheses are proposed:
Hypothesis H2a: Awareness about demonetization policy will positively affect behavioral intention to use M-payment.

Hypothesis H2b: Awareness about demonetization policy will positively affect intrinsic motivation.

Hypothesis H2c: Awareness about demonetization policy will positively affect extrinsic motivation.

Bhuvana and Vasantha (2017) discussed the relevance of demonetization on the cashless payment system. Raised awareness regarding demonetization policy is an individual's favorable or unfavorable evaluation on the facilitation, adequacy and clarity of demonetization policy measures. These evaluations may act more than just a conjecturer of an individual's behavior. Awareness about demonetization policy may also moderate the influence of other factors on behavior. However, despite an increase in M-payment service usage, there is no surety that the positive trend will continue and will represent a major shift in consumer attitude toward such technologies (Anderson, 2014). Though there may possibly be long-run benefits, the short-run impression of demonetization are unfavorable for the income-constrained section of society (Zhu et. al., 2018).

Policy measure serves as a motivational device (Wan and Shen, 2013). Strong perceived motivation leads to enhanced intention to perform certain behavior. Understanding whether public awareness regarding demonetization policy is a moderating variable or an antecedent is obviously important. Demonetization policy was mostly considered as a direct antecedent of attitude or behavioral intention (Dinev and Hu, 2007). However, when public awareness about demonetization policy is modeled as an antecedent of motivations, it is assumed that motivational factors and awareness about demonetization policy are related, whereas they are independent of one another. Therefore, this study expected that public awareness about demonetization policy would modify the effects of intrinsic motivation and extrinsic motivation on usage intention. The relationship between intrinsic motivation and extrinsic motivation on usage intention would be attenuated as users' have a higher awareness regarding demonetization policy. Thus, the following hypotheses are proposed:

Hypothesis H3a: Awareness about demonetization policy will have a positive moderating effect on the relationship between intrinsic motivation and M-payment usage intention.

Hypothesis H3b: Awareness about demonetization policy will have a positive moderating effect on the relationship between extrinsic motivation and M-payment usage intention.

4. Methodology

4.1. Questionnaire development

The items in the questionnaire were grounded on the review of past and existing literature pertinent to the research model. The items of awareness about demonetization policy were developed for the first time. The wordings of other items were adapted from literature and reworded and modified to appropriate the context of M-payment services. The investigation was anchored on a five-point Likert scale, measurement ranging from "5 (strongly agree)" to "1 (strongly disagree)". To avoid
semantic problems, a pre-test study was also implemented with five M-payment experts. Clarity of few statements, completeness of content and structure, and length of the questionnaire were modified based on the received input. The questionnaire was then pilot-tested from 52 M-payment frequent users. Questions were re-worded again based on the pre-test. The results were found to have acceptable reliability indices and item analysis, in the pilot test as well as the subsequent main study. Therefore, the face and internal validity of the survey instrument was established. The final items used in the survey instrument and their sources are mentioned in Table 1. The multiple stages of questionnaire development assisted in the establishment of an apt level of content and internal validity. Finally, the questionnaire was consisted of two sub-sections. Respondents’ demographic characteristics in the first sub-section and the main constructs of the research model (with 16 questions), in the second sub-section.

Items for measuring intrinsic motivation and extrinsic motivation were modified using scales derived from the original motivational model study by Venkatesh et al. (2002), Caniëls et al. (2015), Molina-Castillo et al. (2016) and Fagan et al. (2008) because of suitability in the context of this study. The new constructs’ indicator for awareness about demonetization policy was based on the current demonetization policy measures in India (Bhuvana and Vasantha, 2017) (Table 1). Finally, measurements for behavioral intention to use M-payment were taken from Fagan et al. (2008) and Venkatesh et al. (2002).

4.2. Data collection and sample size

We collected the data for this study via a survey administered in India. Current smartphone penetration in India is around 26% of the population, but around 5000 million customers are expected to be empowered with smartphone by 2022 (eMarketer, 2018). As the economy grows and becomes more connected, app usage with payment capabilities will continue to rise (eMarketer, 2018). Therefore, this research study employed a survey of Indian frequent M-payment users to gather data for hypotheses testing and also to address the research objectives. Before conducting the survey, the sample size was considered. The sample size for social science research should be more than 15 times the number of predictors (Stevens, 2012). With four predictors in the proposed research model, a sample size larger than 60 was targeted. Another consideration was the usage of Partial Least Squares Structure Equation Modeling to test the hypotheses, for which a sample size of at least 200 is mandatory (Hoetler, 1983). Thus, the minimum sample size was set at 200. Consumer responses were collected over the Internet (Web-based survey) through Google Docs. Google Docs has been used by several other researchers for online surveys for investigating user behavior (Verma, 2017).

This exploratory research study surveyed the users of mobile payment services in Mumbai. Mumbai is the capital city of the Indian state of Maharashtra, also considered as the commercial, financial and entertainment capital of India. The respondents were experienced and regular users of M-payment services. Moreover, because our research targets are individual’s usage intentions of M-payment services, we specifically asked our respondents to reply based on their experience of using the specific M-payment service that they used the most frequently, rather than based on their overall perception regarding the M-payment service providers which may offer multiple services in the market (Wang et. al., 2019). In the beginning of the survey, responders were given a list of M-payment vendors and were asked to check all the services that they were using.
Individuals who did not select any vendor were eliminated from this survey. Before data collection, we ensured the familiarity of respondents’ with the context (demonetization) of our study. Due to demonetization, every individual was affected to some extent (Chandrasekhar and Ghosh, 2017). As all the respondents intercepted also answered “yes” (on their familiarity with demonetization), they were considered qualified for the data collection process.

As the population size was unknown, convenience sampling method was used for this investigation (San Martín and Herrero, 2012). Moreover, to match the target population structure in both gender and age, the study was supplemented with quota sampling method (San Martin and Herrero, 2012).

A total of 3500 e-mails were sent to the respondents, out of which 441 reactions were received, which yielded a response rate of 12.6%. All responses were scrutinized and responses with too many missing values were eliminated. Finally, 362 usable responses were obtained, which fulfilled the requirement of sample size for this study. Amongst them, 44.9% were female and 55.1% were male. As shown in Table 2, the majority of respondents were between 20 and 39 years old (75%). More than two third (80.0%) held at least a bachelor’s degree, and their mean annual income was above INR 700000.

4.3. Statistical analysis

The Partial Least Squares Structural Equation Modeling (PLS-SEM) method was used in this study to test the research model through Smart-PLS version 2.0 software (Ringle et al., 2005). The resampling method with 362 responses and individual sign changes was engaged to obtain inferential statistics (Hair et al., 2011). The PLS-SEM method places minimal demands on the sample size and the distributions of the residuals (Gefen et al., 2000; Ooi and Tan, 2016; Verma, 2017). PLS-SEM can overcome the limitation of covariance-based SEM for analyzing the measurement model by improving the goodness of model fit for small sample size (Ringle et al., 2005). Thus, PLS is one of the best statistical tools for analyzing small sample sizes. Also, PLS is superior to other techniques because it does not require multivariate normal distribution (Ooi and Tan, 2016). This was supported by Wan et al. (2014) and Verma (2017). First, the measurement model was tested in PLS, followed by the testing of the structural model (Venkatesh et al., 2012).

4.3.1. Testing for the multi-collinearity and common method bias

The multi-collinearity issue will arise if the coefficients between the independent variables are too high (Hew et al., 2015). Also, all VIF values should be less than 10 and tolerance values should be greater than 0.10 (Kline, 2005), as depicted in Table 3. The correlation coefficients between variables should be less than 0.90 (Field, 2009). It is apparent from Table 4 that all correlation coefficients between variables of this study are less than 0.9. Based on these two assumptions (i.e. VIF and tolerance value and correlation coefficients), one can conclude that in this study, multi-collinearity problem does not exist. Furthermore, Harman’s single factor test was conducted to measure the common method bias problem. The result of Harman’s single factor reported that the single factor is 38.65%, which is less than 50%. Hence, it may also be concluded that the common method bias issue does not exist in this study. Also, as the ratio of the average substantive variance
(0.743) to the average method variance (0.005) is relatively small at 148:1 (Annexure 1), both the tests suggest that common method bias problem does not exist in this study.

4.3.2. Non-response bias

Armstrong and Overton (1977) and Teo et al. (2015) recommended the chi-square test of dependence on the demographic variables, in order to ascertain the difference between the early and late respondents. The result of chi-square test revealed that no significant difference exist between early and late respondents. The t-test was also carried out to test the differences across all the research constructs (Ranganathan et al., 2011; Teo et al., 2015). The results of T-test confirmed that there was no significant difference. Hence, non-response bias was found not to impact the accuracy of the present study.

4.4. Results

4.4.1. Testing of measurement model

Convergent analysis and discriminant analysis tests were conducted to examine the measurement model. Convergent validity measures the extent to which two or more items measuring the same variables agree (Thong, 2001). Based on the following criteria, convergent validity was assessed for the measurement model:

- Factor loading for all items should be above 0.60 (Fornell and Larcker, 1981).
- Composite Reliability (CR)/ Dijkstra-Henseler’s rho Composite Reliability (rhoA) for all constructs should be more than 0.80 (Bagozzi and Yi, 1988) and
- The Average Variance Extracted (AVE) values should be more than 0.50 (Kline, 1998).

As listed in Table 5, composite reliability for BI = 0.8221, IM= 0.8724, EM= 0.8779, and ADP= 0.9219, which were well above 0.80, as recommended by Bagozzi and Yi (1988). The factor loadings for all items were well above 0.60 (Fornell and Larcker, 1981) and the Cronbach’s alpha values for all constructs were reported to be greater than 0.60 (Nunnally and Bernstein, 1994) (Table 5). Lastly, the AVE values for all constructs (i.e. BI = 0. 742; IM= 0. 7551; EM= 0. 8307; and ADP= 0.8205) were greater than 0.50 (Kline, 1998). Thus, convergent validity was achieved.

Discriminant validity measures the extent to which items differentiate between variables (Thong, 2001, p. 152). According to Deng et al. (2014, p. 218), discriminant validity can be measured by comparing the level of correlation between the two constructs and the square root of AVEs. As
depicted in Table 4, discriminant validity has been established because the square root of AVEs exceeded their corresponding inter-correlations (Leong et al., 2011; Verma, 2017).

5. Findings
The structural model of this study was evaluated by examining the structural paths, t-statistics and variance explained (i.e. R2 value) (Hair et al., 2011). Path significances were identified by running the research model using a bootstrap resampling routine with 362 cases and 500 resamples. Bootstrap resampling is a non-parametric method to assess the significance level of partial least squares estimates (Caniels et al., 2015). In this method, sub-samples are generated by randomly choosing a case from the datasets (Kleijnena et al., 2007). Furthermore, hypothesis tests were also carried out to test the proposed research model. Hair et al. (2011) proposed that R2 values of 0.25, 0.50 and 0.75 in the structural model of PLS can be interpreted as weak, moderate and substantial, respectively. Table 6 summarizes the results of different models.

Model 1: Original motivational model (Figure 5)
The original MM model accounted for 36.8% of variance in intentions towards M-payment usage (Figure 5). Extrinsic motivation ($\beta=0.507$, p<0.01) had a positive relationship with behavioral intentions to use M-payment. This finding is in line with the study of Verhagen et al. (2012). In several previous studies regarding social behavior in which Motivation Model was used, intrinsic motivation was found to have a significant positive relation with extrinsic motivation. In line with these studies, the extrinsic motivation was affected by intrinsic motivations ($\beta=0.648$, p<0.01). Path from intrinsic motivation ($\beta=0.140$, p>0.1) to intention to use M-payment was found to have an insignificant effect. The explanation of Motivation Model came mostly from extrinsic motivation, with an effect size of 0.507 (p< 0.01). However, intrinsic motivation influences the intention to use M-payment indirectly through extrinsic motivation, which is consistent with the work of Venkatesh et al. (2002). While intrinsic motivation may initially impact usage intention (Yoo et al., 2012), this influence gradually tends to wear off as M-payment users become acquainted with the technology.

.........Insert Table 6 here...........

Model 2: ADP was modeled as an antecedent of BI (Figure 6)
Model 2 accounted for 43.3 % of variance in intentions towards M-payment usage (Figure 6). In the evaluation of model 2, extrinsic motivation ($\beta=0.297$, p<0.05) and awareness about demonetization policy ($\beta=0.371$, p<0.01) were identified as the predictors of intention to use M-payment (Figure 3). In Model 2, awareness about demonetization policy was identified as the most important determinant of the intention, followed by extrinsic motivation.

Model 3: ADP was modeled as an antecedent of IM and EM (Figure 7)
PLS analysis of Model 3 (Figure 7) explained 33.7% of the variance in intrinsic motivation, 58.1% in extrinsic motivation and 43.4% in intention. The ability of Model 3 to explain M-payment use intention was slightly higher than Model 2. When investigating the individual path in Model 3, it was found that extrinsic motivation had a significant effect on intention ($\beta=0.301$, p<0.05). In turn, awareness about demonetization policy successfully predicted extrinsic motivation ($\beta=0.497$, p<0.01), intrinsic motivation ($\beta=0.581$, p<0.01) and intention ($\beta=0.367$, p<0.01). Intrinsic
motivation had an insignificant effect on intention ($\beta = 0.060, p>0.1$), though its effect on extrinsic motivation was significant ($\beta = 0.358, p<0.01$).

**Model 4: ADP was modeled as a moderating variable. (Figure 8)**

Model 4 accounted for 54.9% of variance in behavioral intention to use M-payment after the moderator of the awareness about demonetization policy was included (Figure 8). The significant moderating path, EM $\times$ ADP to BI indicated strong beta values of 0.247. The results showed that H3b was supported (but not H3a). Awareness about demonetization policy had a positive moderating effect on the link between extrinsic motivation and intention to use M-payment, with a path coefficient of 0.247 and a t-value of 2.153. This implied that the effect of extrinsic motivation on intention to use M-payment would increase with any increase in awareness about demonetization policy. However, the moderation effect of awareness about demonetization policy on intrinsic motivation and intention was insignificant.

**Overall model fit**

In this research study, Goodness-of-fit (GoF), Standardized Root Mean Square Residual (SRMSR), RMS Theta and Normed Fit Index (NFI) were measured in order to consider the overall fit of the research model (Table 7). According to Hu and Bentler, (1999); GoF $\leq 1$, SRMR $< 0.08$; NFI $> 0.90$ and RMS Theta $< 0.12$ indicate a well-fitted model. From Table 7, extended model with awareness of demonetization policy appeared to fit relatively better than the original maturity model, in terms of GoF, SRMSR, RMS Theta and NFI (Table 7).

$$GoF = \sqrt{AVE} \times R^2$$  \hspace{1cm} Equation 1

...........Insert Table 7 here...........

...........Insert Figure 5/6/7/8 here...........

6. Discussion

This study utilized a well-established (the Motivation Model) to investigate M-payment user behavioral intention concerning usage of M-payment services after the demonetization of currency by the Indian government. The PLS-SEM results demonstrated that intrinsic motivation and extrinsic motivation (in the original Motivation Model) (Model 1) could predict nearly 36.8% variance of the intention, while intrinsic motivation was not a significant predictor of intention. This finding is not consistent with the work of Caniêls et al. (2015) and demonstrates the possible deficiency of predictive power. The extended Motivation Model with awareness about demonetization policy as direct antecedent (Model 2) successfully explained, a total 43.3% of variation in the usage intention. Awareness about demonetization policy as an exogenous variable of the Motivation Model (Model 3) explains a total of 43.4% of variation only. Awareness about demonetization policy as a moderator of Motivation Model explains a total 54.9% of variation in the usage intention. The outcomes also suggested that, the extended Motivation Model is an effective model to address the research question and newly added constructs (demonetization) advances the explanatory power of the original Motivation Model. The addition of awareness about demonetization could produce a model of better fit than the original Motivation Model. More
specifically, the Motivation Model was organized in such a manner that a affirmative change in awareness regarding demonetization policy could positively propel consumers towards a specific behavior. Therefore, it is reasonable to integrate the variable of awareness into the Motivation Model to obtain a better prediction effect. Thus, a revised extended Motivation Model including awareness about demonetization policy construct was formed.

Awareness about demonetization policy exerted a significant effect on intention to use M-payment directly as well as indirectly through extrinsic motivation. An important contribution is the placement of awareness about demonetization policy in the nomological network of Motivation Model to predict the intention to use M-payment. The result also indicated that awareness about demonetization policy moderated the extrinsic motivation but failed to moderate the intrinsic motivation. The promising justification can be, if a regime implements the demonetization policy to encourage corruption-free economy by limiting the usage of traditional currency transactions and facilitating usage intention of online transactions like M-payment, the awareness and extrinsic motivation of the positive consequences of M-payment usage would become more apparent and significant. Moreover, from the government perspective too, such digital transactions were presented as a panacea to all problems, at once ending poverty, fighting corruption, ensuring sustainable development and modernizing the society (Chandrasekhar and Ghosh, 2017).

Even though intrinsic motivation had no direct impact, it can serve as an important catalyst for extrinsic motivation, which is a significant determinant of intention to use M-payment. Within the baseline integrated model of M-payment use in this study, it is stimulating to note that extrinsic motivation had a positive impact on intention to use M-payment whereas intrinsic motivation exercised a noteworthy indirect effect on behavioral intention. Knowing the indirect effects of intrinsic motivation, M-payment usage initiative must emphasis on mediations aimed to rise perceptions that M-payment is enjoyable and easy to use. Extrinsic motivation was found to have a significant influence on the intention to use M-payment services among users in India after demonetization. This study found that users’ extrinsic motivation had a significant impact on the usage of M-payment, a finding supported by prior literature (Madan and Yadav, 2016; Shiau and Chau, 2016). Intrinsic motivation is a stronger predictor of extrinsic motivation in the traditional Motivation Model because using mobile payment services for transactions is largely individual behavior (especially during the demonetization period). Supported by Venkatesh et al. (2002) and Hung et al. (2015) on intentions, and diverging from the conclusions of Caniëls et al. (2015), this study found that intrinsic motivation was not a significant predictor of intention to use M-payment.

To increase user’s intention to use M-payment, it is imperative to have an understanding of the user’s perception towards usefulness towards M-payment usage. Therefore, after demonetization, the motivation of Indians towards M-payment should be considered. Also, demonetization policy was fully mediated by intrinsic motivation and extrinsic motivation. This suggests that awareness about demonetization policy plays a crucial role in modeling user motivations, which in line, forms the basis for intention to use M-payment. Therefore, managerial interventions aimed at awareness about demonetization policy might be an impactful strategy for encouraging extensive usage of M-payment services after demonetization.

7. Implications

7.1 Theoretical Implication
Very few research studies have examined individuals’ motivations with regard to continuance usage of mobile payments (Oliveira et al., 2016). Moreover, as a new innovation, mobile payment has not received wide acceptance among users in emerging economies (Guo and Bouwman, 2015; Kumar and Pasha, 2017). This study offers a fairly unique viewpoint as it examined the users’ intention for continuance usage of mobile payment services in a developing country (India), closely following the demonetization regulation. An important issue about public awareness regarding demonetization policy in M-payment usage intention was whether public awareness about demonetization policy directly affects intrinsic/extrinsic motivation or usage intention (as an antecedent) or whether it moderates the effects of intrinsic/extrinsic motivation or usage intention (as a moderator). However, given the well-documented inadequacy of other models in illuminating the behavioral intention for using M-payment technologies (Oliveira et al., 2016), the proposed model combined both perspectives of extrinsic and intrinsic motivations to examine M-payment user behavior (Davis et al., 1992; Venkatesh et al., 2003; Verhagen et al., 2012; Leone et al., 2017; Li, 2017). Also, by using the lens of institutional theory (Zucker 1977; Zucker 1987; Powell and DiMaggio 1991), the study introduced a theoretical construct (demonetization policy) to extend the existing body of knowledge on how M-payment usage is influenced by the external institutional force. Awareness about demonetization policy as a moderator of Motivation Model explained a total 54.9% of variation in the usage intention. The outcomes also advocated that the extended Motivation Model is an effective model and newly added constructs (awareness about demonetization policy), improves the explanatory power of the original Motivation Model.

7.2 Managerial Implication

From a practical perspective, this research study provides justification for using awareness of mandatory demonetization policy by the government to encourage users’ to employ M-payment for transactions. In line with findings of other studies (Dinev and Hu, 2007; Madan and Yadav, 2016) in research fields like protective information technology and mobile payment, the awareness about demonetization policy and extrinsic motivation were determinants (main predictor) of their willingness to use M-payment services. Mandatory regulations by government and motivation towards M-payment use are good starting points for a cashless economy. The authors believed that in India, the success of demonetization policies and regulations will be limited unless the service providers and the government help individuals form a more positive attitude towards cashless transactions through M-payment.

From the business perspective of M-payments, NFC is the most common and widespread technology. The triumph of such technologies must be supported by substantial efforts from services and companies (like Android Pay, Apple Pay, Samsung Pay etc.), who are aggressive on such technologies. This investigation also suggests that corporations must emphasize upon developing M-payment services and tools exceeding the perceived usefulness of traditional payment systems (cash, credit cards, etc.) currently prevailing in the markets. The usage of M-payment systems is not just dependent on its extrinsic motivational factors; intrinsic factors are also important determinants as they trigger consumers to choose them over other conventional payment solutions. We recommend promotional campaigns to show the advantages resulting from M-payment use. Campaigns must convey the significance of using M-payment as a means to attaining better flexibility and ease of operations, especially for the young and innovative population of India. M-payments can be marketed as a part of a modern consumer’s lifestyle rather than an innovative product. Clearly, promotional campaigns must put emphasis on the usefulness.
Transformation Government: People, Process and Policy

and benefits of M-payments, such as more secure and easy transactions, improved performance and faster shopping. Such internal and external motivations may capture the consumers’ attention, enhancing the likelihood for M-payment adoption and its subsequent usage. Also, online and offline guides and brochures, with a comprehensive outline of monetary and non-monetary paybacks from adopting such payment systems must be made available. Promotional campaigns can also stress on the importance of mobility/ flexibility. Opinions shared by relatives and friends (over social media and other contemporary communication channels) can also form part of a powerful strategy to stimulate awareness and usage of M-payment services. This is so because our association with money is extremely personal. Also, mode of payment is a habitual issue, which can change only gradually (Oxford Economics et al., 2017).

8. Conclusions

The study investigated the validity and differential predictive power of four different M-payment usage models, by considering the effect of awareness about demonetization policy on the core construct of the motivational model. The aim of this study was threefold. Firstly it was to examine the use and efficacy of the Motivation Model in terms of the intention to use M-payment after demonetization in India. Secondly, the study aimed to improve the explanatory power of the Motivation Model by adding the factor of awareness about demonetization policy. Finally, this study attempted to explain the moderating effect of awareness about demonetization policy on intention to use M-payment in India. Thus, three major findings ensued from the study. Firstly, it was established that the Motivation Model is an effective framework for predicting intentions to use M-payment. Secondly, the usefulness of incorporating measures that capture the factor awareness about demonetization policy into the framework of the Motivation Model was emphasized. All three constructs seem to be useful in terms of understanding and predicting the users’ intentions to use M-payment after demonetization in India. Thirdly, the findings of this study revealed that after demonetization in India, the role of motivation and awareness acquire immense importance in terms of predicting intention to use M-payment among Indian users. While several previous researchers have extended the Motivation Model with additional constructs for usage behavior, this research contributes the existing literature by incorporating awareness about demonetization policy into the empirical research model. The enhanced model would help policymakers better understand the factors affecting intention to use M-payment post the demonetization event.

9. Limitations and future research

Since this study is carried out in India, the results might not be applicable to other countries. It is recommended that future studies should focus on understanding the impact of mandatory government policies on consumer’s behavioral intention in the context of other nations. Furthermore, a comparative study is required to compare the results yielded in different nations. Also, as this is a cross-sectional study, future research can aim at using a longitudinal method to observe the change of consumers’ behavior due to mandatory government policies over time. Since this research study only focused on a narrow group of respondents, a wider group of respondents is also encouraged in future. Finally, in this research study, the demonetization policy measures are considered as a single construct, i.e. awareness about demonetization policy. In future, further investigation is required to understand the impact of different aspects of demonetization on continuance usage intention of mobile payment services.
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13 No. 5, pp. 478-497.


Table 1: Measurement scales and items

Note: EM = Extrinsic Motivation; IM = Intrinsic Motivation; ADP = Awareness of Demonetization Policy; BI = Behavioural Intention to use M-payment after demonetization
<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Measures</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Motivation (IM)</td>
<td>IM1</td>
<td>It is easy to become skillful at using mobile payment services.</td>
<td>Venkatesh et al. (2002);</td>
</tr>
<tr>
<td></td>
<td>IM2</td>
<td>I could easily learn usage of mobile payment services.</td>
<td>Marjolein et al. (2015)</td>
</tr>
<tr>
<td></td>
<td>IM3</td>
<td>The mobile payment services apps are clear and understandable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IM4</td>
<td>I found it easy to perform the steps required to use mobile payment services.</td>
<td></td>
</tr>
<tr>
<td>Extrinsic Motivation (EM)</td>
<td>EM1</td>
<td>I found mobile payment services are useful mode of payment</td>
<td>Molina-Castillo et al. (2016);</td>
</tr>
<tr>
<td></td>
<td>EM2</td>
<td>I discovered that handling payments through mobile payment services is easy.</td>
<td>Fagan et al. (2008)</td>
</tr>
<tr>
<td></td>
<td>EM3</td>
<td>I believe mobile payment services allow faster payment transaction (e.g.,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EM4</td>
<td>debit, credit).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EM5</td>
<td>I believe that mobile payment services provides me flexibility to use it any time</td>
<td></td>
</tr>
<tr>
<td>Behavioural Intention to use M-payment after demonetization (BI)</td>
<td>BI1</td>
<td>I would continue to use mobile payment services for low value transactions frequently in future.</td>
<td>Fagan et al. (2008); Venkatesh et al. (2002)</td>
</tr>
<tr>
<td></td>
<td>BI2</td>
<td>For high value purposes I would use mobile payment services as per requirement in future.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BI3</td>
<td>I intend to use mobile payment services when the opportunity arises.</td>
<td></td>
</tr>
<tr>
<td>Awareness of demonetization policy (ADP)</td>
<td>ADP1</td>
<td>I experienced shortage of currency due to restricted use of 500 and 1000 INR</td>
<td>New measures notes by the Government of India from 9th November 2016.</td>
</tr>
<tr>
<td></td>
<td>ADP2</td>
<td>I assumed that there would be a shortage of new currency notes just after demonetization.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ADP3</td>
<td>I thought that getting new currency notes would be difficult just after demonetization.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ADP4</td>
<td>I was uncertain about the subsequent government regulatory steps on currency notes just after demonetization.</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Demographic characteristics of respondents (N= 362)

<table>
<thead>
<tr>
<th>Demographic Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>200</td>
<td>55.1</td>
</tr>
<tr>
<td>Female</td>
<td>162</td>
<td>44.9</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;20</td>
<td>41</td>
<td>11.3</td>
</tr>
<tr>
<td>20-29</td>
<td>145</td>
<td>40.1</td>
</tr>
<tr>
<td>30-39</td>
<td>124</td>
<td>34.2</td>
</tr>
<tr>
<td>40-49</td>
<td>18</td>
<td>5.4</td>
</tr>
<tr>
<td>&gt;50</td>
<td>34</td>
<td>9.6</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>39</td>
<td>10.8</td>
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<tr>
<td>Graduate</td>
<td>85</td>
<td>23.4</td>
</tr>
<tr>
<td>Post-graduate</td>
<td>210</td>
<td>58.2</td>
</tr>
<tr>
<td>Others</td>
<td>28</td>
<td>7.6</td>
</tr>
<tr>
<td>Annual Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;700000 INR</td>
<td>91</td>
<td>25.2</td>
</tr>
<tr>
<td>700000-1500000 INR</td>
<td>146</td>
<td>40.2</td>
</tr>
<tr>
<td>&gt;1500000 INR</td>
<td>125</td>
<td>74.8</td>
</tr>
</tbody>
</table>

Table 3: Testing for Multi-collinearity
Table 4: Discriminant Validity Test

<table>
<thead>
<tr>
<th></th>
<th>ADP</th>
<th>BI</th>
<th>EM</th>
<th>IM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADP</td>
<td>0.8205</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BI</td>
<td>0.5148</td>
<td>0.742</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM</td>
<td>0.3041</td>
<td>0.497</td>
<td>0.8307</td>
<td></td>
</tr>
<tr>
<td>IM</td>
<td>0.2807</td>
<td>0.3679</td>
<td>0.4478</td>
<td>0.7551</td>
</tr>
</tbody>
</table>

Note: EM = Extrinsic Motivation; IM = Intrinsic Motivation; ADP = Awareness of Demonetization Policy; BI = Behavioural Intention to use M-payment after demonetization.

Diagonal elements (bold) are the square root of the AVE for each construct. Off-diagonal factors demonstrate the inter-correlations.
### Table 5: Factor Loadings, Average Variance Extracted and Composite Reliability

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Loadings</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>AVE</th>
<th>Cronbach’s alpha</th>
<th>Composite reliability</th>
<th>rhoA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI</td>
<td>BI1</td>
<td>0.8669</td>
<td>3.892</td>
<td>0.897</td>
<td>0.742</td>
<td>0.8679</td>
<td>0.8221</td>
<td>0.902</td>
</tr>
<tr>
<td></td>
<td>BI2</td>
<td>0.8747</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BI3</td>
<td>0.8587</td>
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<td></td>
</tr>
<tr>
<td>IM</td>
<td>IM1</td>
<td>0.9344</td>
<td>3.583</td>
<td>0.991</td>
<td>0.7551</td>
<td>0.8050</td>
<td>0.8724</td>
<td>0.886</td>
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<td></td>
<td>IM2</td>
<td>0.8041</td>
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</tr>
<tr>
<td></td>
<td>IM3</td>
<td>0.8164</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>IM4</td>
<td>0.8215</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>EM</td>
<td>EM1</td>
<td>0.9308</td>
<td>3.662</td>
<td>0.859</td>
<td>0.8307</td>
<td>0.8266</td>
<td>0.8779</td>
<td>0.926</td>
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<tr>
<td></td>
<td>EM2</td>
<td>0.8052</td>
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<td></td>
<td>EM3</td>
<td>0.8946</td>
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<tr>
<td></td>
<td>EM4</td>
<td>0.7697</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>EM5</td>
<td>0.8377</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>ADP</td>
<td>ADP1</td>
<td>0.8669</td>
<td>3.921</td>
<td>0.826</td>
<td>0.8205</td>
<td>0.8865</td>
<td>0.9219</td>
<td>0.836</td>
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<td></td>
<td>ADP2</td>
<td>0.8747</td>
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<tr>
<td></td>
<td>ADP3</td>
<td>0.9141</td>
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</tr>
<tr>
<td></td>
<td>ADP4</td>
<td>0.7985</td>
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</tbody>
</table>

### Table 6: Testing results of Models.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Model 1 Original motivational model</th>
<th>Model 2 ADP as antecedent of BI</th>
<th>Model 3 ADP as antecedent of IM and EM</th>
<th>Model 4 ADP as moderating variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>IM -&gt; BI</td>
<td>β = 0.140 t-value = 1.315 Sig. = n.s.</td>
<td>β = 0.060 t-value = 0.518 Sig. = n.s.</td>
<td>β = 0.060 t-value = 1.109 Sig. = n.s.</td>
<td>β = 0.088 t-value = 0.770 Sig. = n.s.</td>
</tr>
<tr>
<td>IM -&gt; EM</td>
<td>β = 0.648 t-value = 10.734 Sig. = ***</td>
<td>β = 0.648 t-value = 10.776 Sig. = ***</td>
<td>β = 0.358 t-value = 3.764 Sig. = ***</td>
<td>β = 0.648 t-value = 10.928 Sig. = ***</td>
</tr>
<tr>
<td>EM -&gt; BI</td>
<td>β = 0.507 t-value = 3.405 Sig. = ***</td>
<td>β = 0.287 t-value = 2.230 Sig. = **</td>
<td>β = 0.301 t-value = 2.459 Sig. = **</td>
<td>β = 0.292 t-value = 2.301 Sig. = **</td>
</tr>
<tr>
<td>ADP -&gt; BI</td>
<td>β = 0.371 t-value = 2.991 Sig. = ***</td>
<td>β = 0.367 t-value = 2.228 Sig. = ***</td>
<td>β = 0.367 t-value = 2.228 Sig. = ***</td>
<td>β = 0.320 t-value = 2.729 Sig. = ***</td>
</tr>
<tr>
<td>ADP -&gt; IM</td>
<td>β = 0.351 t-value = 8.729 Sig. = ***</td>
<td>β = 0.351 t-value = 8.729 Sig. = ***</td>
<td>β = 0.351 t-value = 8.729 Sig. = ***</td>
<td>β = 0.320 t-value = 2.729 Sig. = ***</td>
</tr>
<tr>
<td>ADP -&gt; EM</td>
<td>β = 0.497 t-value = 5.664 Sig. = ***</td>
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</tr>
<tr>
<td>IM x ADP</td>
<td>β = 0.082 t-value = 0.643 Sig. = n.s.</td>
<td>β = 0.247 t-value = 2.153 Sig. = **</td>
<td>β = 0.247 t-value = 2.153 Sig. = **</td>
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</tr>
<tr>
<td>EM x ADP</td>
<td>β = 0.368 t-value = 4.333 Sig. = 0.434</td>
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</tr>
</tbody>
</table>

*p < 0.1  **p < 0.05  ***p < 0.01