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Creation of a conceptual model for Adoption of Mobile Apps for shopping from E-Commerce sites-An Indian context

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Abstract

The changing marketing landscape has seen the advent and adoption of new tools like shopping apps for consumers. The conventional models which have studied Information Technology (IT) acceptance and adoption by consumers have found that adoption is a function of *perceived usefulness* and *ease of usage*. Other models have emphasised *Quality*, *Enjoyment* and *Trust* as significant determinants of the adoption of IT by consumers. Evolution in IT, changing consumer habits, changing demographics and consumer traits make it imperative to rethink pre-existing theories of acceptance and adoption of IT in the context of e-marketing. This paper focuses on the growth of the usage of Apps by consumers in India, explores their functionalities and proposes a new conceptual model for the adoption of Mobile Apps by consumers shopping on e-commerce sites in India. *Convenience*, *Collaboration*, *Hedonic Motivation*, and *Habit* are the significant constructs outlined in the proposed model, which focuses on the usage of apps in the wake of *task directed* and *experiential consumer behaviour*. We propose that *Degree of Internet Savviness* and *Individual Internet Worth* are additional moderating variables which impact the effect of convenience and collaboration on App Usage. Implications of the proposed model for research and practice are discussed.

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1. Introduction

The Marketing landscape is changing in India. Consumers are evolving and organisational mind-sets are shifting. Organisations have moved from product based marketing campaigns to a customer based relationship approach. Even Indian companies are looking at a global marketplace, reaching out to customers located afar because e-commerce and online buying facilitate consumer purchase, diminishing geographical restrictions. Increasing competition between organizations is leading to the implementation of relationship strategies and multi-channel relationship programmes. Consumer retention is becoming vital for organizational sustenance in Indian companies as well.

As organizations realise the increasing importance of communicating with their consumers, new opportunities like the use of mobile apps to facilitate consumer buying are providing excellent low-cost solutions for better relationship management. The smartphone has become a ubiquitous tool that has

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empowered the customer and who can with a few simple clicks become a quick source of revenue for an organisation. Mobile Apps allow consumers to search for products, categories and brands, make comparisons and place orders using their smartphones. This trend has grown fast and consumer usage of apps has grown by over 100% in the last few years. It now makes sense for organisations to ensure that their offerings are synchronised with the mobile habits of consumers.

Furthermore, rising consumer ownership of computers, cell phones and high-tech equipment is leading to the creation of a vast population of Internet savvy consumers with significantly high levels of Internet literacy and enthusiasm, aiming at creating significant *Individual Internet worth*[1]. Individual Internet worth is a function of consumer demographics such as age, education, location, daily Internet usage pattern, time spent online, and purpose of Internet usage. Individual online reach, amplification and network impact coupled with individual content based rankings help create peer indexes and makes it possible to measure and track reactions to individual posts and comments. This is valuable for marketing when the individual is a consumer. Individuals with higher individual Internet worth can be successfully used as opinion leaders and consumer evangelists for effective e-marketing.

Web 2.0 or the read-write web provides adequate opportunities for companies to practice e-marketing by content creation in the virtual world. This enables better campaign management, consumer engagement and consumer interaction. This has seen the proliferation of consumer reviews which has evolved the domain of peer to peer (consumer to consumer) communication and has become invaluable for marketing. The era of e-commerce, has created a flurry of online transactions because individuals are constrained for time, but willing to spend, for convenience and ease of shopping. Ebay, Flipkart, Jabong and Myntra are some of the e-commerce companies operating in India and offering Indians the opportunity to shop online. Influencer marketing is being practiced by top brands who are reaching out to influencers for marketing purposes. In the online domain, these are bloggers or social media users with a more-than-average reach among consumers and they are prized by marketers for their ability to spread the word about products or services they believe in.

Our research indicates that today's Indian consumer shops on a mobile, using an app for two main reasons- *Convenience* and *Collaboration*. These outweigh previous considerations for adopting technologies- *Perceived Usefulness, Ease of Usage, Quality, Enjoyment and Trust* [2]. In this paper we propose a new theoretical model for adoption of mobile apps by consumers shopping from e-commerce sites in an Indian Context. E-Commerce companies in India have revolutionised the way by which online platforms are enticing potential customers. Most E-Commerce organisations have seen a sudden inflow of funds from investors and are offering products to customers at huge discounts. While they are capitalising on India's demographic dividend, additional offers clubbed with festivals and seasonal sales have broken all boundaries.

2. Why extant adoption models do not work for App use and adoption today

Traditional models for Technology Adoption do not appear to hold true in the contemporary Indian context that include changes in the consumer mind-set, increased shopping power and increased willingness to take risk. The marketing activity undertaken in India by Ecommerce companies in 2014-15-16 has further revolutionised contemporary consumer buying practices as each Ecommerce platform, enriched by funding from external sources, has slashed prices and made *lower than retail outlet pricing* their key competitive positioning strategy. The adoption and acceptance of technology has been widely studied over the years. Several researchers have focussed on factors that drive consumers towards adoption of technology in the presence of external influences. Other researchers have further tried to link the stream of Technology Adoption with other established streams of work. However, the authors of this paper believe that there is a need to revisit existing theories on Technology Adoption in the light of shifting consumer outlook and the fast changing marketing landscape. The Technology Adoption Model[3] explored the use of technology from the perspective of perceived *ease of use* (the degree to which a person believes that using a particular system would be free from effort) and *perceived usefulness* (the degree to which a person believes that using a particular system would enhance his or her job performance). TAM theorized that the effects of external

variables (e.g., system characteristics, development process, training) on intention to use are mediated by perceived usefulness and perceived ease of use. According to TAM, perceived usefulness was also influenced by perceived ease of use because, other things being equal, the easier the system is to use, more useful it can be. TAM was expanded by Venkatesh [4] and it was suggested that subjective norm exerted a significant direct effect on usage intentions over and above perceived usefulness and perceived ease of use for mandatory (but not voluntary) systems. The model further stated that as individuals gained direct experience with a system over time, they relied less on social information in forming perceived usefulness and intention but continued to judge a system's usefulness on the basis of potential status benefits resulting from use. This was later further refined and expanded in the form of the Unified Theory of Acceptance and Use of Technology which suggested that Performance Expectancy, Effort Expectancy, Social Influence, Hedonic Motivation, Facilitating Conditions and Price were the key determinants in the Intention to use a particular technology [5].

Mobile Commerce refers to any transactions, either direct or indirect, with a monetary value implemented via a wireless telecommunication network [6]. Mobile commerce, typically the buying and selling of goods and services includes activities like mobile banking, brokerage services, shopping, money transfer, mobile ATM, mobile ticketing, mobile vouchers, coupons and loyalty cards, mobile auctions etc. Researchers have presented an extended Technology Acceptance Model (TAM) that integrated Innovation Diffusion Theory, perceived risk and cost into the TAM to investigate what determined user mobile commerce acceptance [7]. Other studies have indicated that customer loyalty in the m-commerce domain was affected by perceived value, trust, habit, and customer satisfaction, with customer satisfaction playing a crucial intervening role in the relationship of perceived value and trust to loyalty [8]. Further studies [9] state that in the context of UTAUT, cost, effort expectancy, and performance expectancy all considerably affect the intention to use. Recently, various empirical studies have provided support for the belief that perceived usefulness is a key predictor of m-commerce adoption, capturing the considered advantages linked with m-commerce adoption [10]. Other researchers have highlighted the importance of compatibility, individual mobility, and subjective norm in acceptance. It is interesting to note that m-commerce now constitutes the core of digitisation and will remain a challenge to researchers to bring novel theoretical frames to the research landscape and to help define the most important transformative phenomenon of our age [11].

Despite all the success of the TAM related models, authors [12] have claimed that, together, TAM and TAM2 account for only 40% of a technological system's use. In fact, other researchers [13] argue that perceived ease of use is less likely to be a determinant of attitude and usage intention in mobile commerce. The model and its extensions was critiqued [14] where UTAUT was termed as a well-meaning and thoughtful presentation which however resulted in the study of technology adoption *reaching a stage of chaos*. While the authors of this paper do not agree with TAM and TAM2 completely, they however feel that some of the constructs like *Performance Expectancy* (the degree to which an individual believes that using a particular system would improve his or her job performance), need to be redefined. For instance, in the case of Apps, performance expectancy can be explained by the following definition – It is the degree to which people maintain that m-commerce utilisation will enhance their daily activities [15] or a specific activity they set out to perform. Similarly, *effort expectancy* (the degree of simplicity associated with the use of a particular system), in an era of extremely internet savvy customers, may not hold true as the degree of simplicity associated with the use of the system may actually be a function of an individual's comfort level with using the internet or a smartphone. The traditional concepts of *Performance Expectancy* and *Effort expectancy* can hence be revisited. Both of them somewhere contribute to what we define as the Customer's need for Convenience. Convenience has been discussed as a new construct in our research study. *Social Influence*, the degree to which an individual perceives that others believe he or she should use a particular system, may be a valid construct, but can be redefined in an era where consumers are using their social influence to drive other consumers to make a purchase and do not actually worry about the methodology of the purchase, with too many people using the online domain for shopping. Convenience, Collaboration, Hedonic Motivation and Habit, now appear to be significant constructs and have been incorporated in the model we propose in the

wake of the new offerings of technology.

2.1. Proposed Conceptual Model for App Adoption

As per data released by the Internet and Mobile Association of India, in mid-2015, India had 352 million Internet users, of which over 60 percent were accessing the Internet by using their mobiles. eCommerce is increasingly attracting customers from Tier 2 and 3 cities, where people have limited access to brands but have high aspirations. Considering the huge potential of the medium in countries with a demographic dividend, we propose the following model (Fig. 1) as an alternative way to understanding mobile app adoption for consumers interested in online buying.

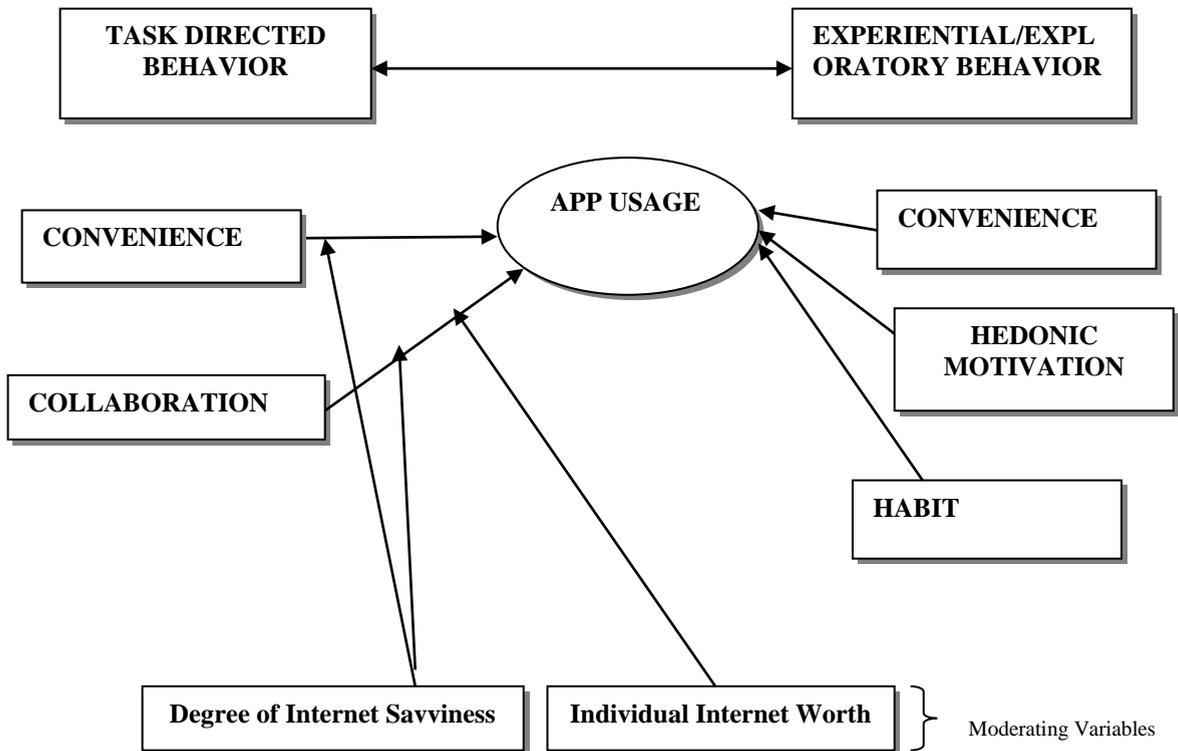


Fig.1. Model for Adoption of Mobile Apps for shopping from E-Commerce sites

The constructs proposed in the model are elucidated in the sections below.

2.1.1. Convenience

Ease of usage of tool, which enhances the daily activities of individuals and allows them to easily complete

a shopping task, saving time and energy which is required for the shopping process. Interactive shopping can lower the costs of acquiring pre-purchase product information while at the same time increase search benefits by providing a broader array of product alternatives at a small incremental cost [16]. These benefits in the reduction of search costs accrue particularly when the consumer is under time pressure [17] making the accessibility benefit of interactive shopping especially advantageous to consumers. Several functionalities on apps offer positive experiences which are delightful and above all, offer time strapped consumers of today, the *Convenience* of completing the tasks of making the purchase, making the payments and getting the products delivered.

2.1.2. Collaboration

Opportunities to associate with peers in the fraternity, and gain from the cooperation. This includes opportunities to read testimonials uploaded by other customers, share links of products and services, upload pictures, offer suggestions, invite ideas and solicit feedback on personal choices. Several functionalities make the online shopping experience more social for the consumer, by allowing a dimension of interactivity viz. adding friends from the user's phone book, sending invites to friends through social apps, have one to one conversations, create groups and conversation threads, share product listings, wish lists and share pictures from the phone gallery. This social interactivity allows consumers to *Collaborate* with friends and family and make product buying decisions subsequently. This facilitates the consumer decision making process as peers help the consumers in finalising their choices.

2.1.3. Hedonic Motivation

Use of an app for the opportunities for adventure, joy and fun offered in traversing through the different links. These include usage of the tool for an exciting experience, to satisfy curiosity, for its novelty, for exploring new worlds, and as a novel experience [18]. It refers to the fun or pleasure derived from using a technology, and it has been shown to play an important role in determining technology acceptance and use [19]. Hence, when a consumer logs onto an app, as part of his habitual exploratory behaviour, he logs into the app, while playing around with his phone, which happens to be held in his hand. In such a scenario, he keeps browsing the information available in the app, moves into a state of *flow*, and starts enjoying the experience. He keeps searching for products and brands, irrespective of need and more so for an enjoyable experience, which caters to his *hedonic motivations*. Thus we add Hedonic Motivation as a predictor of the consumers' behavioural intention to use an app.

2.1.4. Habit

Habit reflects automatic behaviour tendencies developed during the past history of the individual [20]. When behaviour is repeated and becomes habitual, it is guided by automated cognitive processes, rather than by elaborate decision making [21]. This implies that users end up logging onto a specific app sometimes, merely because they have a mobile in their hand and want to do something with it.

Degree of Internet Savviness and *Individual Internet Worth* are moderating variables which impact the effect of convenience and collaboration on App Usage. If an individual is internet savvy, as in, comfortable with the internet environment, his experience of traversing the internet is much more pleasurable and his perception of how comfortable, easy and value adding the experience was, is greater than a person who is not at ease in using the internet environment. Hence, the need for convenience is fulfilled at different levels, with regard to both the individuals. Similarly, Individuals with high internet worth, have higher individual community values and are able to tap the collaboration benefits of the medium more than the others.

2.1.5. Degree of Internet Savviness

Technology elite individuals [22], are proficient in traversing the internet and using it as a tool to enhance their productivity and efficiency at a personal level. These people are conversant with the online domain and find it easy to use. Their knowledge of the domain helps them benefit through greater opportunities in terms of collaboration, locating information, communication, creative expression, and an increased, internet fluency and self-efficacy. The more internet savvy an individual, greater the perceived benefits through convenience and collaboration.

2.1.6. Internet Worth

is a function of consumer demographics involving age, education, location, daily Internet usage pattern, time spent online, purpose of Internet usage, etc. Individual online reach, amplification and network impact coupled with individual content based rankings help create peer indexes and makes it possible to measure and track reactions to individual posts and comments. This is valuable to marketing when this individual is a consumer. Individuals with higher individual Internet worth can be successfully used as opinion leaders and consumer evangelists for effective e-marketing.

2.1.7.Task Directed and Experiential Consumer Behaviour

Consumer Behaviour in the Internet as well as mobile age can be classified into two types-*Task Directed behaviour* and *Experiential* consumer behaviour [23].

Table 1.Consumer Behaviour using Mobile Apps

Task Directed Behavior	Experiential/Exploratory Behavior
Shopping	Search for Information
Download Music	Move from one link to another
Make a Payment	Explore the pictures uploaded on website
Order Food	Explore a gaming/music/movie site
Retrieve News	Browse across product offerings v no specific intent to buy
Download Books	Compare information across diffe sites
Watch TV Shows	Habitually hold a mobile in hand and s clicking on links
Access Analytics and Data	Connect to a social netw and subsequently upl reviews

In Task-Directed websites or app visits, the user logs onto a specific tool to accomplish a task. A user is actively engaged in completing the activity, judging the appropriateness and credibility of information, and processing any additional information on a mobile or webpage against better alternatives elsewhere. Experiential surfing stems out of the individual need to go through an enjoyable experience. This is primarily exploratory in nature and usually stems out of an individual’s need to pass time or spend time in surfing the

web or on a mobile app, moving from one link to the other, for enjoyment or general traversal across domains. This is where the concepts of Hedonic Motivation and Flow [24] can be further explored.

While Hedonic Motivation refers to the consumer desire to derive fun or enjoyment out of an experience, Hoffman and Novak defined flow as *a state characterised by a seamless sequence of responses, intrinsically enjoyable, accompanied by a loss of self-consciousness*. While the consumer level of interest and degree of seriousness regarding the information search are important determinants in the usage of an app, it is the analysis of the type of online consumer behaviour [25] i.e., *task-directed or experiential consumer behaviour* that will help an organization to build a mobile tool that engages the customer.

Goal-directed tasks possess an inherent structure that guides consumers when they are engaged in linear, search-directed activities and an experiential task is less structured and supports non-linear, non-search-directed activities [26]. According to our recent research on consumer behaviour on the Internet and Mobile users, consumers have the following intent while venturing online or onto a mobile shopping app: (i) Exploration, (ii) Shopping, (iii) Quest for information, and (iv) Task-directed behaviour other than shopping [27]. Consumer behaviour studies consumers as sources of influence on organizations. Today, the most successful organizations are described as customer - centric, which means that they attempt to focus everyone in the organization on satisfying customers [28]. Table 1, shown above, attempts to classify consumer behaviour using mobile apps in the respective categories.

As stated earlier, consumer motivations for using a mobile app can be either *task directed* or of an *experiential* nature. While several studies have addressed the two types of online consumer behaviour and several studies have separately studied the adoption of specific technologies by consumers, there has been no previous study which has studied the distinct consumer motivations and technology adoption in the case of Apps. The proposed model looks at the adoption and usage of a mobile app by a consumer in the light of the above two typologies of behaviour.

3. Conclusions and Business Implications

This paper attempts to define how the usage of mobile apps caters to specific consumer needs. Needless to say, these specific consumer needs have evolved over time. As new digital ways by which organisations can interact with consumers emerge, it is important for researchers to study each specific tool (in this case, an app) in detail to understand how the unique functionalities of the tool benefit the consumer. As E-Commerce and M-Commerce recreate new marketing paradigms for organisations, it will be vital to study the performance of these across different industry verticals. While mobile commerce may proliferate in the banking sector, the automobile sector may not benefit significantly by a consumer adoption of specific E-Commerce or M-Commerce tools. Hence customer preferences may further need to be studied across diverse industry verticals. The above conceptual model needs to be empirically validated across one specific industry vertical. Needless to say, it is the performance of the apps and their adoption by consumers in their respective business domains which will define the future course of action for Marketing.

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