

Customer experiences of technology-enabled business applications in smartphone-based mobile shopping: Browsing satisfaction, purchasing intention, and buying behavior

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Abstract.

Research background: Despite the relevance of customer experiences of technology-enabled business applications in smartphone-based mobile shopping globally in terms of browsing satisfaction, purchasing intention, and buying behavior, only limited research has been conducted on this topic.

Purpose of the article: Using and replicating data from Statista, I performed analyses and made estimates regarding mobile shopping app user acquisition rate worldwide, EU consumers who use their mobile phone for shopping-related activities, preferred payment methods of online shoppers worldwide, and digital payment methods that U.S. retailers accept or plan to accept.

Methods: The results of a study based on data collected from 5,200 respondents provide support for my research model. Using the structural equation modeling, I gathered and analyzed data through a self-administrated questionnaire.

Findings & Value added: Mobile retailers have engineered their technological proficiencies to encompass digitally savvy purchasers. Smartphone applications created to help users in their ethical consumer performances allow and influence responsible consumption. Smartphones and the repositioning to mobile-device-supported purchase enable users to incorporate shopping into their ordinarily hectic and mobile activities. Mobile applications vary in respect of whether data exchange is essentially brought into and thus regulated by the recipient or the supplier. Particularly for financial grounds, applications which are extremely time critical are not as much adjustable to revision attributable to user misinterpretations or system failure.

Keywords: *smartphone; mobile; shopping; customer; application*

JEL Classification: *E24; J21; J54; J64*

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1 Introduction

Smartphone applications created to help users in their ethical consumer performances [1] allow and influence responsible consumption. Consumers come into contact with applications in their substantiated configuration as a component of a smartphone whose software is designed in/via socio-material fabrics. Through the adoption of smartphone applications and the accomplishment of ethical consumer operations [2], users have become a fashionable kind of economic participant having the agential potentialities needed to perform in the ethicalized environment of ordinary consumption [3].

2 Conceptual Framework and Literature Review

Mobile retailers have engineered their technological proficiencies to encompass digitally savvy purchasers. The more buyers adopt a smartphone as a mobile shopping aid in the store, the less they become involved with the shop assistant. A sales assistant or mobile device data provide or may interpersonally activate the user [4] with delivery of suitable information. As smartphones intensify emotional states of command [5], retailers should facilitate users to remain connected to their mobile phone in order that they can pursue their search in the shop. Shop assistants can influence customers' propensity to sales assistant's input. Mobile device technology has altered the retail purchase experience. Users are mobile reliant [6], choosing to seek information from their smartphone, as opposed to approaching the shop assistant, while trying to buy at the retail shop. Adaptive selling may influence shopping purpose and customers' propensity to act in accordance with sales assistant's input. Perceived control, mobile reliance, and customers' propensity to act in accordance with smartphone input may shape shopping purpose [7].

Smartphones and the repositioning to mobile-device-supported purchase enable users to incorporate shopping into their ordinarily hectic and mobile activities [8], enabling them to be more thoroughly knowledgeable and considerably maximizing available sales assistants for consumers. The contiguity, interconnectivity, and mobility of smartphones function towards activating and strengthening the impulse-driven character of mobile shopping. The multifunctional attributes of smartphones both influence and set in motion mobile shopping that necessitates and brings about a new range of competencies. Users should know how to employ technology [9] and journey across the wide-ranging online retailscape to which smartphones supply access. The effectiveness of mobile shopping demands technical and shopping competences [10]: the former is associated with how smartphones and their accompanying IT infrastructure operate, and with the capabilities that such devices and technologies provide users with, whereas the latter is related to grasping the sphere of retailing and purchasing [11].

3 Methodology and Empirical Analysis

Despite the relevance of customer experiences of technology-enabled business applications in smartphone-based mobile shopping globally in terms of browsing satisfaction, purchasing intention, and buying behavior, only limited research has been conducted on this topic. Using and replicating data from Statista, I performed analyses and made estimates regarding mobile shopping app user acquisition rate worldwide, EU consumers who use their mobile phone for shopping-related activities, preferred payment methods of online shoppers worldwide, and digital payment methods that U.S. retailers accept or plan to accept. The results of a study based on data collected from 5,200 respondents provide support for my research model. Using the structural equation modeling, I gathered and

analyzed data through a self-administrated questionnaire. Survey method: The interviews were conducted online and data were weighted by five variables (age, race/ethnicity, gender, education, and geographic region) so that each country's sample composition reliably and accurately reflects the demographic profile of the adult population according to the country's most recent census data. Sampling errors and test of statistical significance take into account the effect of weighting. Stratified sampling methods were used and weights were trimmed not to exceed 3. Average margins of error, at the 95% confidence level, are +/-2%. For tabulation purposes, percentage points are rounded to the nearest whole number. The precision of the online polls was measured using a Bayesian credibility interval. An Internet-based survey software program was utilized for the delivery and collection of responses.

4 Results and Discussion

Particularly for financial grounds, applications which are extremely time critical are not as much adjustable to revision attributable to user misinterpretations or system failure. Users of mobile applications having inferior time criticality [12] may still rectify errors and order again a manufactured item or service, but this is not on every occasion feasible in the event of immediately urgent software. On-the-spot connectivity indicates a positive link with practicality for both inferior time and superior time critical applications, and more substantial consequences for inferior time critical applications. Performance risk indicates a relevant positive consequence on practicality perception [13] which is more stable for superior degree of control applications [14]. (Table 1)

Table 1. EU consumers who use their mobile phone for shopping-related activities (%)

| | |
|---|----|
| Bought something online or through a mobile app and picked it up in store | 49 |
| Bought something online or through a mobile app and picked it up curbside (did not enter the store) | 38 |
| Bought something online or through a mobile app and returned it to the store for refund or exchange | 35 |
| Bought something in store and cashier had access to my online account info | 43 |
| Used coupons or discounts from my mobile phone or app to make a purchase in store | 68 |
| Used my mobile phone while in store to compare prices of items | 66 |
| Used my mobile phone while in store to compare reviews of items | 65 |
| Used a mobile phone to check store inventory | 56 |

Sources: Statista; our survey among 5,200 individuals conducted February 2020.

Post-usage privacy protection, together with social impact convictions, stimulates user incessant purposes unswervingly towards mobile payment, and post-usage mobility conviction has an implied effect through consumer contentment. The determined cultural value uncertainty avoidance performs the function of an antecedent of perceived social impact and mobility [15], whereas the determined cultural value power distance performs the function of an antecedent of perceived privacy protection [16]. Mobile augmented reality purchase applications complement experiential value in retail ecosystems by supplying particular benefits. While strong points of extrinsic value (e.g. cost-effectiveness and superior shopping value) are noticeable in consumers' opinions, inherent advantages (e.g., pastime) are also existent and appreciated to a certain degree. As regards valuable buying outcomes typically unidentified in a purchase experience [17], mobile augmented reality purchase applications reinforce the consumer's confidence that what is acquired is what was sought after [18]. (Table 2)

Table 2. Digital payment methods that U.S. retailers accept or plan to accept (%)

| | Already accept | Accept within 2 years | Wait and see approach |
|---|----------------|-----------------------|-----------------------|
| Apple Pay | 56 | 34 | 10 |
| Masterpass by Mastercard | 51 | 24 | 25 |
| Visa Checkout | 49 | 23 | 28 |
| Mobile POS payments | 48 | 31 | 21 |
| PayPal | 43 | 31 | 26 |
| Google Pay | 40 | 36 | 24 |
| Chase Pay | 35 | 24 | 41 |
| Private (retailer branded) closed loop payments | 30 | 18 | 52 |
| Samsung Pay NFC | 27 | 24 | 49 |

Sources: Statista; our survey among 5,200 individuals conducted February 2020.

With the rise of electronic channels, users are in considerable disconnection from each other while purchasing online. Considering the pivotal function of shopping in individuals' ordinary activities [19], the selecting of retail channel may shape how consumers cooperate and harmonize with their particular communities. The mobile platform is an essential path for increasing user access to commodities [20] and for boosting product consumption chiefly for socially excluded persons who have greater purposes to buy via a smartphone, generating thus superior channel contribution to the quality of life. Online, information analytics and personal data gathered may assist in determining patterns that can be employed to customize the design of online shops and mobile applications [21]. (Table 3)

Table 3. Preferred payment methods of online shoppers worldwide (%)

| | |
|--|-----|
| Credit cards | 47 |
| Electronic payment (PayPal if available) | 43 |
| Debit cards | 33 |
| Cash on delivery | 27 |
| Bank transfers | 24 |
| Gift cards or vouchers | 19 |
| Mobile payment | 119 |
| Cryptocurrencies (Bitcoin) | 7 |
| Other | 3 |

Sources: Statista; our survey among 5,200 individuals conducted February 2020.

Aiming to bridge a gap in prior studies, our research explored how bringing into play diminished cognitively difficult tasks (e.g. mobile purchase), consumers' concerns may stimulate them to enhance their task performance [22] to prevent nonperformance and negative assessment, thus entailing a positive link between performance risk and practicality perceptions. The mobile shopping advantages are more prominent for users with a growing degree of control. Shopping enjoyment is to a smaller extent relevant for mobile purchase usage, but individuals have to intensify some habituation [14]. Processing fluency implies the effortlessness with which statistics are processed [23], being instrumental in the brief, interactive sessions that typify contacts with mobile devices. Perceived visual intricacy curtails fluency awareness, while perceived visual consonance between the mobile online shops and the traditional, computer-accessible online ones has the contrary outcome. Processing fluency favorably shapes both contentment with the mobile online shop and preference satisfaction [24]. (Table 4)

Table 4. Mobile shopping app user acquisition rate worldwide (by type, %)

| | Install-to-register | Install-to-purchase |
|---------------------|---------------------|---------------------|
| Shopping apps | 30.4 | 11.5 |
| Brand commerce apps | 33.1 | 5.1 |
| Marketplace apps | 28.2 | 12.5 |
| Value-add apps | 54.4 | 10.4 |

Sources: Statista; our 2020 data.

5 Conclusions and Implications

Mobile applications vary in respect of whether data exchange is essentially brought into and thus regulated by the recipient or the supplier. Favorable experience response implies the appraisal of mobile shopping in connection with a practical knowledge [25] with a particular purchase situation. Previous favorable routines for a certain product category may result in cross-category usage, which includes the purpose to adopt the technology for buying commodities in other product categories. Users having previous positive routines and purposes with a smartphone are more expected to employ their smartphone for mobile shopping activities as a whole and for other product categories. Contextual marketing may have an adverse effect on the perceived effortlessness in utilization of mobile shopping technologies [14].

Author contributions

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

Conflict of interest statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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