# Perceived Benefits of Online Shopping : Scale Modification and Validation

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## Abstract

**Use of the Internet has opened countless business opportunities, and online shopping is one of the most popular among all. Benefit perception towards online shopping is one of the major influencing factors towards consumer's online purchase decisions. Therefore, the current study aimed at exploration of the construct : perceived benefits of online shopping (PBOS). The study rigorously explored the past research studies though secondary literature review to develop the primary understanding of the construct, which was followed by modification of existing scales to propose a new scale to measure PBOS. Understanding of the construct PBOS through literature review was followed up through refinement, modification, and validation of a more relevant and contemporary scale to measure PBOS. The past and existing scales generally measured benefit and risk perception concurrently to capture the overall perception towards online shopping, while this study focused on measurement of PBOS independently to get a focused insight. A list of 39 items on PBOS from one of the past studies was further refined to get a modified scale with 21 items. These 21 items were further used in two distinctive studies with different samples of sizes 350 and 650 collected during separate time periods through independent studies. EFA followed by CFA in two independent studies resulted in the development of a comprehensive 21 item scale measuring seven dimensions of PBOS.**

***Keywords:*** **e-tailing, online retailing, online shopping, perceived benefits, scale construction, scale modification, scale validation**

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Although the advent of e-commerce dates back to 1979, when British entrepreneur Michael Aldrich invented online shopping by using the modified television technology called Videotext, but its full potential couldn't be realized till the creation of the Internet technology by Tim Berners Lee in 1990 (Thomas, 2015). Commercialization of the Internet brought emergence of a new medium of commerce known as electronic commerce (Joshi, 2013). After Internet, there has been no stopping in online shopping worldwide. As per Cisco VNI forecast (2017), "Global IP traffic will increase nearly threefold over the next 5 years, and will have increased 127 fold from 2005 to 2021" (p. 2). The worldwide online shopping is not only growing in terms of shoppers and retail transactions, but is also growing in terms of its reach and coverage. It is stretching its reach beyond the developed countries and taking developing countries into its ambit. Within developing countries, its extent has traversed the urban - rural divide and slowly but steadily, with availability of easy and economical Internet, particularly through Wi-Fi and 3G/4G mobile networks, its becoming a necessity of life for many

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shoppers (AT Kearney, 2015). The e-commerce share of total global retail, which was a mere 3.5% a decade ago, has currently reached to 11.9% and is projected to reach 17.5% by 2021 (Lui, 2018). Though the largest markets for online sales are China and USA, but with the highest projected growth rate, India is the fastest growing market for online shopping (Nair, 2017). In India, not only metros and large cities, even tier II and III cities and towns are registering considerable sales of products and services using the online channel (Joshi & Achuthan, 2016).

The prospects of online shopping offered worldwide makes it crucial to study the behavioral aspects of online shopping, particularly the drivers or enablers behind online shopping intentions and actions. Benefit perception is the key driver in influencing attitude towards online shopping (Al - Debei, Akroush, & Ashouri, 2015 ; Hsu & Bayarsaikhan, 2012), which may indicate a favorable or unfavorable behavior. Therefore, in order to understand the behavioral intention towards online shopping, it is imperative to measure both risk as well as benefit perception. Perceived benefits of online shopping (PBOS) is based on a belief of shoppers that they feel shopping online is much better than any other channel of shopping (Koo, Kim, & Lee, 2008). As per Forsythe, Liu, Shannon, and Gardner (2006), the conceptual definition of perceived benefit is, "Perceived benefits of shopping online are the consumer's subjective perception of gain from shopping online" (p. 59). Though scales for the measurement of benefit perception and risk perception towards online shopping have been constructed and validated in the past (Forsythe et al., 2006; Santana & Loureiro, 2010; Tomar, Saha, De, & Prashant, 2017), but with change in technology and online shoppers' behavior over a period of time, a need was felt to revise and revalidate those scales. Therefore, the current study attempts to reconstruct and revalidate the PBOS scale. Though risk perception is also an important factor to understand the overall perception towards online shopping, but purposely, it is not covered in the present study and is left open for future research.

## Review of Literature

Consumers are well informed, knowledgeable, and demanding in the context of today's online market. They not only know what to buy, but they also know from where and how to buy. Thus, it is imperative for marketers to have better understanding of what drives their behavior (Junga & Seock, 2017 ; KPMG, 2017 ; Shareef, Kumar, Kumar, & Dwivedi, 2015). The behavioral and technical complexities behind shopping and shopping influences are increasing day by day, and the use of technology in shopping has added another dimension to the existing complexity. In the context of ever-growing competition, many companies are using multichannel strategy to reach their customers, while some companies are relying only on the e-tailing mode through shopping sites to the customers (Rajan, Swaminathan, & Pavithr, 2017).

Perception has a dramatic effect on the choice of the product or service as well as the choice of retail mode. Trust or lack of trust in online shopping is purely an outcome of perception (Thakur, Shabnam, & Kaur, 2017). Businesses spend a huge amount of money both to understand and also to influence the perception of the consumers. With meticulous planning and execution, businesses can influence consumer perception, and eventually generate desired consumer behaviors to boost profitability (Mack, 2018).

There are many existing models, which may partially explain the benefit perceptions which influence online shopping on online marketplaces, web stores, or online specialty stores. One of the most referred models is the technology acceptance model (TAM) which explains how users accept a new technology. It also explains the relevance of perceived usefulness and ease of use as two major driving factors, which positively influence attitude towards technology as well as stimulates behavioral intention to use the technology, eventually leading to the actual usage. Online shopping and its acceptance are very relevant and to a large extent, fit the description within TAM. Online shopping acceptance is driven mainly by ease of use and perceived usefulness over a period of time since its existence, and it is accentuated by the diffusion of a series of technological innovations. In the past, many studies have been conducted worldwide, mostly in developed countries and few in developing countries. It is clearly evident from the past studies that due to apparent socio-economic and cultural differences, developed and

developing countries still cannot be accessed on same parameters in terms of online shopping acceptance and proliferation (Ahuja, Gupta, & Raman, 2003). Another theory by Azjen (1991), the theory of planned behavior (TPB), was further explored by George (2004) in the context of online shopping. It was found that the TPB could explain significantly the online shopping behavior. Those who believed in the trustworthiness of the Internet and in their own abilities to buy online were more likely to make Internet purchases than were those without such beliefs.

In one of the early studies, Childers, Carr, Peck, and Carson (2001) stated that consumers make online purchases for convenience and enjoyment. The above study hinted towards utilitarian and hedonic classification of perceived benefits of online shopping in some early studies to build the foundation for the current study (Sarkar, 2011).

Perceived benefits are the major driver towards online shopping (Tandon, Kiran, & Sah, 2017) and , therefore, few attempts were made in the past to understand the factors determining perceived benefits, leading towards scale construction for PBOS. One of the earliest known attempts to develop a scale to measure PBOS was made by Forsythe et al. (2006), where a 16 item four-factor scale of perceived benefits and a three-factor scale of perceived risks of online shopping was proposed with shopping convenience (four items), product selection (four items), ease/comfort of shopping (four items), and hedonic/enjoyment (four items) as the four major dimensions of perceived benefits ; whereas, Santana and Loureiro (2010) proposed a 19 item scale for PBOS under three subscales, that is, easiness and comfort of shopping (nine items), convenience of shopping (six items), and enjoyment and adventure of shopping (four items). Rishi (2010) identified reliability, accessibility, and convenience as three major factors, which motivate and drive shopper's behavior towards online shopping. Later, Tomar et al. (2017) re-conceptualized the construct PBOS and generated 39 items and made an attempt to check the dimensionality and identify the sub-dimensions of PBOS. A total seven dimensions of PBOS were identified as a result of the study, that is, convenience (7 items), empowerment (7 items), discreetness (3 items), individualism (4 items), reach (7 items), price advantage (3 items), and autonomy (4 items), thus resulting in a refined scale with a total of 35 items.

Based on the items suggested in previous studies for PBOS, several studies were conducted later using PBOS as a construct. As an illustration, few of them are mentioned in this section, like a comparative study was conducted between consumers in India and UK, which found significant differences between Indian and UK based online shoppers in terms of the impact of their PBOS on their attitude towards online shopping (Wani & Malik, 2013). A study in Malaysia used the four dimensions of PBOS given by Forsythe et al. (2006) to study the impact of those four dimensions of PBOS on online shopping intention among Generation Y in Malaysia, and the impact was found to be significant (Tanadi, Samadi, & Gharleghi, 2015). A study conducted on Indian women shoppers used three PBOS like price benefit, convenience benefit, and product variety benefit and found significant positive impact of PBOS on online shopping attitude and also found a positive relationship between online shopping attitude and online shopping intention. Particularly for women in India, product variety was found to be the most important PBOS (Arora & Aggarwal, 2017).

## Methodology

The present study is not the first study to identify and capture the scale items to measure perceived benefits of online shopping (PBOS). One early attempt was made by Forsythe et al. (2006) to construct and validate a combined scale to measure both perceived benefits as well as risks of online shopping. The study proposed a four factor scale for perceived benefits and a three factor scale for perceived risks of online shopping. The above study, though a quite influential study of its time, unfortunately did not account for many new influential factors which have emerged over a period of time both due to change in technology in online shopping as well as change in consumer attitude. There was one more study by Tomar et al. (2017) which prompted the present study. Tomar et al. (2017) generated 39 items through past studies, and focus group studies to study PBOS. Further, exploratory factor analysis on 39 items generated seven factors, leading to a refined list of 35 items.

**Table 1. Demographic Profile of the Samples**

| | Sample 1 (*N* = 350) | | Sample 2 (*N* = 650) | |
|---|---|---|---|---|
| | **Frequency** | **%** | **Frequency** | **%** |
| **Gender** | | | | |
| Male | 160 | 53.3 | 325 | 50 |
| Female | 140 | 46.7 | 325 | 50 |
| **Age Group (in Years)** | | | | |
| 18-25 Years | 173 | 57.7 | 237 | 36.5 |
| 25-35 Years | 61 | 20.3 | 145 | 22.3 |
| 35-45 Years | 25 | 8.3 | 74 | 11.4 |
| Above 45 Years | 41 | 13.7 | 194 | 29.8 |
| **Education** | | | | |
| Upto Intermediate | 47 | 15.7 | 68 | 10.5 |
| Graduate | 103 | 34.3 | 272 | 41.8 |
| Post-Graduation & Above | 150 | 50 | 310 | 47.7 |
| **Occupation** | | | | |
| Self Employed | 23 | 7.7 | 93 | 14.3 |
| Salaried (Private) | 77 | 25.7 | 169 | 26 |
| Salaried (Government) | 22 | 7.3 | 65 | 10 |
| Student | 147 | 49 | 186 | 28.6 |
| Housewife | 31 | 10.3 | 137 | 21.1 |
| **Annual Income** | | | | |
| Below INR 0.5 million | 87 | 29 | 196 | 30.2 |
| INR 0.5 - 1 million | 65 | 21.7 | 150 | 23.1 |
| INR 1 - 1.5 million | 62 | 20.7 | 118 | 18.2 |
| Above INR 1.5 million | 86 | 28.7 | 186 | 28.6 |
| **Marital Status** | | | | |
| Single | 187 | 62.3 | 284 | 43.7 |
| Married (Without Kids) | 27 | 9 | 63 | 9.7 |
| Married (With Kids) | 86 | 28.7 | 303 | 46.6 |

The present study used the same 35 items and further refined the proposed scale by eliminating items with less than 0.6 factor loading on their respective subscale constructs. Also, the items with cross loading > 0.4 and items with item to total correlation score of less than 0.6 and communalities of less than 0.4 were removed. The current study finally used 21 refined and purified items for exploratory factor analysis followed by confirmatory factor analysis.

The study was conducted in two phases and two distinct set of samples ($N1 = 300$, $N2 = 650$) were used for both the phases. The demographic profiles of both the study samples are presented in the Table 1.

In Phase 1, a sample of 300 respondents from the previous study by Tomar et al. (2017) was reused for the exploratory factor analysis ; 21 refined items out of 39 (see the Appendix) were finally adopted for exploratory factor analysis (EFA) using SPSS 23.0 (George & Mallery, 2003; Hair, Black, Babin, & Anderson, 2009).

In Phase 2, a structured questionnaire using the refined scale with 21 items for PBOS (refer Table 2) was administered on 650 respondents in the National Capital Region of Delhi. The respondents were asked to record their responses on a 5- point scale, where 1 = *strongly disagree* to 5 = *strongly agree* on the 21 PBOS items. AMOS

**Table 2. Description of Scale Items**

| Item Code | Questionnaire Statements | Short Label |
|---|---|---|
| B1 | I can buy from any place with Internet access. | Anyplace Access |
| B2 | I can buy anytime as per my convenience. | Anytime Access |
| B3 | I don't have to wait in queues for shopping. | No waiting in Queues - Shopping |
| B4 | I don't have to wait in queues for billing/checkout. | No waiting in Queues -Billing |
| B5 | I don't have to waste time in travelling to buy. | No time wasted in travelling |
| B6 | I can save myself from struggling through the crowd. | No Crowd |
| B7 | I get better price through online shopping. | Better Price |
| B8 | I get better discounts and rebates through online shopping. | Better Discount |
| B9 | I get better price as no middleman commission is involved. | No Middleman Commission |
| B10 | I get best global brands without International travel. | Global Brands |
| B11 | I can buy products of other parts of the country easily. | Products from whole country |
| B12 | I can easily research on my product before purchase. | Easy Product Research |
| B13 | I can read other consumer reviews to reach my decision. | Other Consumer's Reviews |
| B14 | I can write reviews and share my feedback with other buyers. | Write Reviews and Feedback |
| B15 | I can have personalized interaction with online sellers. | Personalized Interaction with Seller |
| B16 | I can easily raise queries and clarify my doubts. | Raise Queries and Clarify Doubts |
| B17 | I can custom design my product online. | Custom Design Product |
| B18 | I don't buy the products which I don't need. | No Unwanted Shopping |
| B19 | I can ensure the privacy of my purchases. | Purchase Privacy |
| B20 | I don't have to worry about other people watching what I buy. | No Worries of Others |
| B21 | I can comfortably buy without embarrassment. | No Embarrassment |

20.0 was used on the data set to conduct confirmatory factor analysis (CFA) and model fit summary was analyzed to establish the PBOS scale model fit, which was followed by construct validity testing: both convergent and discriminant.

The survey data for Phase 2 were collected through a structured questionnaire which was circulated online to the respondents through emails with the embedded online questionnaire link. The questionnaire was created using Google forms and only the questionnaires with complete responses were considered for further coding, analysis, and interpretation. A purposive and judgement approach was employed to maintain representativeness of the population during data collection and representation of a proportionate demography of the respondents was ensured. The data was collected during December 2017 to April 2018 in Delhi NCR in India.

## Analysis and Results

**(1) Exploratory Factor Analysis :** Before conducting EFA, the normality assumption was tested on all items of the refined scale and was found satisfactory. EFA involved use of principal component analysis technique for extracting orthogonal (uncorrelated) factors by using varimax rotation to get rotation component matrix for easy grouping and interpretation (Bryant, 1995). To check the suitability of EFA, Kaiser - Meyer - Olkin (KMO) and Bartlett's test of sphericity were used (Cerny & Kaiser, 1977). KMO is a measure of sampling adequacy which indicates adequacy of sample appropriate for EFA, and Bartlett's test of sphericity is a test used to check the hypothesis that items used in EFA are uncorrelated, that is, the inter - item correlation matrix is an identity matrix.

As per the Table 3, the KMO values ($0.865 > 0.5$) indicate that the sample used is appropriate for factor analysis.

**Table 3. KMO and Bartlett's Test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .865 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2578.512 |
| | *df* | 210 |
| | Sig. | 0.000 |

Similarly, for the given data (Table 3), Bartlett's test of sphericity (approx. chi-square = 2578.512, *df* = 210, $p < 0.05$) is found to be significant, which implies that the items used for EFA are correlated. Factors with Eigen values greater than one were chosen as a criterion for factor extraction, resulting in extraction of seven factors, which explained 71.1% of the variance in the scale. No cross loading was observed in the refined scale and factor

**Table 4. Exploratory Factor Analysis Results**

| PBOS | Factor Loading | Eigen Value | % Variance | Cumulative % | Alpha (0.928) |
|---|---|---|---|---|---|
| **Convenience** | | 6.824 | 32.5 | 32.5 | 0.871 |
| B4 (Con1) | 0.776 | | | | |
| B3 (Con2) | 0.755 | | | | |
| B5 (Con3) | 0.696 | | | | |
| B6 (Con4) | 0.696 | | | | |
| **Empowerment** | | 1.931 | 9.2 | 41.7 | 0.862 |
| B14 (Emp1) | 0.717 | | | | |
| B13 (Emp2) | 0.712 | | | | |
| B12 (Emp3) | 0.676 | | | | |
| **Personalization** | | 1.575 | 7.5 | 49.2 | 0.812 |
| B15 (Per1) | 0.759 | | | | |
| B17 (Per2) | 0.743 | | | | |
| B16 (Per3) | 0.649 | | | | |
| **Discreetness** | | 1.366 | 6.5 | 55.7 | 0.836 |
| B18 (Dis1) | 0.744 | | | | |
| B20 (Dis2) | 0.742 | | | | |
| B21 (Dis3) | 0.679 | | | | |
| B19 (Dis4) | 0.6 | | | | |
| **Better Deal** | | 1.21 | 5.8 | 61.5 | 0.838 |
| B8 (BD1) | 0.8 | | | | |
| B7 (BD2) | 0.737 | | | | |
| B9 (BD3) | 0.659 | | | | |
| **Discretion** | | 1.027 | 4.9 | 66.3 | 0.73 |
| B1 (Dcr1) | 0.719 | | | | |
| B2 (Dcr2) | 0.622 | | | | |
| **Assortment** | | 1.006 | 4.8 | 71.1 | 0.745 |
| B11 (Ast1) | 0.739 | | | | |
| B10 (Ast2) | 0.715 | | | | |

loading above 0.6 was observed in all items with their respective constructs. The resulting scale with coefficient alphas ranging between 0.73 to 0.871 demonstrates good reliability (refer Table 4). Also, the scale is found to be second order multidimensional construct with seven sub - scale items, and uni-dimensionality of each sub-scale construct is also established. Based on the analysis of sub - scales of PBOS, each extracted dimension is named as Convenience, Empowerment, Personalization, Discreetness, Better Deal, Discretion, and Assortment, respectively.

Based on the Table 4, each sub - scale dimension is found to be reliable and overall scale reliability for PBOS scale is found to be excellent at Cronbach's alpha value of 0.928 (Gliem & Gliem, 2003). Exploratory factor analysis (Table 4) identifies seven specific dimensions of PBOS, each of which can be measured through the multi-item sub-scales. The dimensions and the sub-scales are listed and explained below :

**(i) Convenience :** One of the major perceived benefits of online shopping, as identified in previous studies as well. It has been observed through the four items which converge into convenience due to high inter item correlation, which indicates the significance of time and crowd aversion among shoppers. Online shopping gives freedom from waiting in queues during shopping or billing, saves travelling time, and also saves the shoppers from huddling through the crowd to shop.

**(ii) Empowerment :** Online shopping offers the benefit of empowerment to the shoppers by giving them the option to research and compare the product before placing an order. Shoppers can also read reviews of other past shoppers of the same product from the same website, and based on the rating and review of previous shoppers, the current shoppers may make a better and more informed decision. Price comparison and transparency in pricing empowers the shopper further, and the easy connect with the retailer adds more to it. Shoppers after their purchase can also write their own feedback and ratings on products and websites and can also share the product usage reviews with other potential shoppers for the same product from the same website.

**(iii) Personalization :** It refers to the group of benefits that the shopper of online shopping sites receives in terms of flexibility of customization in terms of product attributes and services. That includes online product customization and design modifications, personalized interaction with the seller, and direct response on queries and doubts through online chats or follow-up call through toll free number. It also includes the personalized information and benefits as part of tailor made loyalty program. Facility of finance for high denomination purchases with customized plans to pay in equated monthly installments and availability of desired stock of items of choice.

**(iv) Discreetness :** There are shopping occasions or instances where the shoppers need privacy and do not want any social pressure to affect their purchases, which may be influenced/disturbed by the presence of others. The group of variables under the group factor discreetness includes online shopping benefits like nullifying possibilities of impulse or unwanted purchases, worries of others while shopping, and providing privacy of purchase without any embarrassment while purchasing some very personal products/services. There are shopping instances when the shoppers' purchase decisions are affected by sales tactics of salesman or social influences/pressure. Since online shopping is usually done in isolation; hence, discreetness of purchase is one major dimension of PBOS.

**(v) Better Deal :** Online shopping sites offer a virtual marketplace where various sellers can offer their products virtually at a price which is visible to everyone. Hence, it brings fairness and transparency in prices. Shoppers not only get better price due to this transparency, they also get better discounts/ deals because of fair competition among various sellers offering similar products online. Since online shopping sites bring sellers directly to buyers, it eliminates a long chain of intermediaries and their commissions/margins, which indirectly transfer the price advantage to online shoppers.

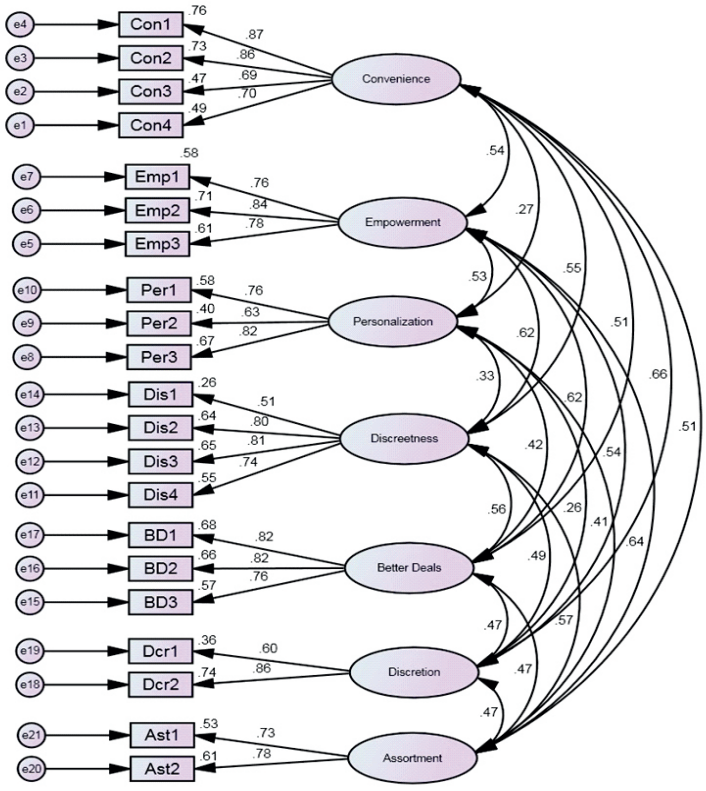
**(vi) Discretion :** Online shopping sites offer benefit of any time, any place availability of shopping services at the discretion of a shopper. Online shoppers enjoy the time utility as well as place utility, as they can shop at the time as well as place of their choice. Shopping sites usually provide detailed product information, which eliminates the requirement of sales assistance and also makes the shopping experience effortless for shoppers.

**(vii) Assortment :** The choice and varieties offered by online shopping sites are limitless. Online shopping provides easy and wide availability of global as well as local products/brands. Within a country, online shopping offers the benefit of providing availability of products from various regions. It also offers benefits of availability of size, style, and color to meet the individual shopper's requirement of variety.

**Table 5. Model Fit Summary**

| Model Fit Parameter | Fit Criterion | Estimated Value |
|---|---|---|
| Chi-square/*df* | Between 2.0 to 5.0 | 2.420 |
| Root mean square error of approximation (RMSEA) | ≤ 0.08 | 0.047 |
| Goodness-of-fit statistic (GFI) | ≥ 0.95 | 0.943 |
| Adjusted goodness-of-fit statistic (AGFI) | ≥ 0.90 | 0.921 |
| Root mean square residual (RMR) | ≤ 0.05 | 0.043 |
| Normed-fit index (NFI) | ≥ 0.90 | 0.937 |
| CFI (Comparative fit index) | ≥ 0.95 | 0.962 |

**Figure 1. Confirmatory Factor Analysis (CFA) Model**



**(2) Confirmatory Factor Analysis :** The purpose of Phase 2 of the study was to conduct CFA test to confirm the relationships between observed variables under each latent variable or theorized construct as an outcome of EFA. CFA as a technique to study the sub dimensionality of a scale is comparatively considered more flexible and powerful than EFA. The stability and generalizability of the 21 item scale's factor structure was evaluated by administering CFA to a sample of online shoppers across NCR of Delhi in India ($n$ = 650). A 21 item, seven dimension confirmatory factor model was estimated using AMOS 20. The analysis indicates that the PBOS scale has a mean of 81.8 and a standard deviation of 12.698. The results of CFA displayed in the model fit (Table 5) suggest excellent model fit as suggested by Hooper, Coughlan, and Mullen (2008).

The Figure 1 displays the CFA model for PBOS construct with seven latent variables with their loadings on their respective measured variables. All factor loadings range between 0.51 to 0.87, which is acceptable and very good. Also, the $R$ squared values are found to be between 0.26 to 0.76, which is again satisfactory, as except for Dis1 and Dcr2, all the latent variables explain more than 40% of the variance in the measured variables. Thus, the validity of the PBOS scale is fairly ascertained, which is further explained in the next section.

**(3) Scale Reliability and Validity :** It is essential to reconfirm the reliability and validity of the newly introduced or modified scale before it is finally recommended to measure the given construct. The Cronbach's alpha values for PBOS scale, as well as the seven sub - scales of PBOS, are found to be > 0.7, which is reconfirmed by CR values of above 0.7 (Table 7) for PBOS and its sub - scales, which establish the scale reliability and consistency of the scale. Validity represents the magnitude up to which the scores from a scale characterize the variables they are intended to represent. Face and content validity of the modified scale was ascertained before Phase 1, as the items picked for the scale modification were already refined items based on previous studies and were generated on the basis of past qualitative studies. Criterion validity is established by correlating PBOS scores with all the sub - scale items, and all correlations are found to be positive and significant as given in the Table 6. Since the criterion was measured at the same time as the construct, therefore, the concurrent validity of the scale is also confirmed.

**Table 6. Correlation Between PBOS with Sub-Scales**

| | PBOS | |
|---|---|---|
| | **Pearson Correlation** | **Sig. (2-tailed)** |
| Discretion | .618** | .000 |
| Convenience | .759** | .000 |
| Better Deal | .727** | .000 |
| Empowerment | .785** | .000 |
| Personalization | .586** | .000 |
| Assortment | .650** | .000 |
| Discreetness | .731** | .000 |

*Note.* ** Correlation is significant at the 0.01 level (2-tailed).

Construct validity testifies the claim of the scale that it intends to measure, which include, convergent, discriminant, and nomological validity. To test the convergent validity, the average variance extracted (AVE) value was calculated for each sub - scale item, which was found to be above 0.5 for all sub - scales (refer Table 8). Discriminant validity was evaluated by comparing the shared variance between all possible pairs to latent variables with AVE. As evident in Table 8, the values of AVE are found to be higher than the square of correlation between pairs of all latent variables, which confirms the discriminant validity of the PBOS scale (Bagozzi & Yi, 1988 ; Fornell & Larcker, 1981). Thus, both convergent and discriminant validity tests empirically demonstrate that all the measures that should be related are found to be related and the measures that should not be related are

**Table 7. Correlations Between Latent Variables**

| Correlations | | | Estimate |
|---|---|---|---|
| Convenience | <--> | Empowerment | 0.537** |
| Convenience | <--> | Personalization | 0.274** |
| Convenience | <--> | Discreetness | 0.548** |
| Convenience | <--> | BetterDeals | 0.51** |
| Convenience | <--> | Discretion | 0.661** |
| Convenience | <--> | Assortment | 0.51** |
| Empowerment | <--> | Personalization | 0.527** |
| Empowerment | <--> | Discreetness | 0.619** |
| Empowerment | <--> | BetterDeals | 0.617** |
| Empowerment | <--> | Discretion | 0.537** |
| Empowerment | <--> | Assortment | 0.639** |
| Personalization | <--> | Discreetness | 0.329** |
| Personalization | <--> | BetterDeals | 0.417** |
| Personalization | <--> | Discretion | 0.262** |
| Personalization | <--> | Assortment | 0.412** |
| Discreetness | <--> | BetterDeals | 0.557** |
| Discreetness | <--> | Discretion | 0.489** |
| Discreetness | <--> | Assortment | 0.574** |
| BetterDeals | <--> | Discretion | 0.473** |
| BetterDeals | <--> | Assortment | 0.468** |
| Discretion | <--> | Assortment | 0.465** |

*Note.* ** Correlation is significant at the 0.01 level (2-tailed).

**Table 8. Construct Validity of the Seven Point PBOS Scale**

| Factors | CR | AVE | Square of Correlations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Convenience | Empowerment | Personalization | Discreetness | Better Deal | Discretion | Assortment |
| Convenience | 0.864 | 0.61 | 1 | | | | | | |
| Empowerment | 0.836 | 0.63 | 0.288 | 1 | | | | | |
| Personalization | 0.783 | 0.55 | 0.075 | 0.277 | 1 | | | | |
| Discreetness | 0.812 | 0.52 | 0.3 | 0.383 | 0.108 | 1 | | | |
| Better Deal | 0.842 | 0.64 | 0.26 | 0.38 | 0.173 | 0.31 | 1 | | |
| Discretion | 0.703 | 0.55 | 0.43 | 0.288 | 0.068 | 0.239 | 0.223 | 1 | |
| Assortment | 0.726 | 0.57 | 0.26 | 0.408 | 0.169 | 0.329 | 0.219 | 0.216 | 1 |

found to be unrelated. Nomological validity specifies the ability of a construct to predict measures of other constructs within a system of related constructs. Therefore, the inter item correlation analysis between a pair of latent variables (Table 7) confirms the nomological validity of the construct.

## Discussion and Conclusion

This study is one of the first empirical studies that develop and propose a reliable and valid measurement

instrument of PBOS with seven sub - dimensions. Also, this is the first study which modifies and presents the PBOS construct independently and proposes a scale for the same. The findings provide important theoretical and practical implications for online retailers and academic researchers, which make a significant contribution to the existing body of knowledge in the online retailing context. The seven identified dimensions of PBOS, that is, Convenience, Empowerment, Personalization, Discreetness, Better Deal, Discretion, and Assortment explain the underlying framework of PBOS along with establishing multidimensionality of the PBOS construct. The identified sub - scale elements of PBOS are found to be reliable and the construct validity of the PBOS scale is established.

## Managerial Implications

With the proposed modified and validated scale for PBOS, the present study provides a trustworthy and contemporary tool to managers in the e-tailing business domain. The proposed scale has helped in better understanding of the underlying framework of PBOS by providing reliable and valid sub components of the PBOS scale. The study also helps in understanding the relative significance of the seven dimensions of PBOS on the basis of the percentage variance explained by each factor for PBOS. Convenience is found to be most important factor followed by Empowerment, Personalization, Discreetness, Better Deal, Discretion, and Assortment in descending order of relative significance. The scale could be used to measure the score of distinct factors of PBOS among online shoppers and could help the marketers, particularly in e-tailing businesses, to segment their offerings on the basis of distinct segments based on differences of scores on various PBOS factors. The PBOS scale would not only help in understanding the benefit perception of online shopping ; the understanding based on the scale measurement would also help in formulation of better target marketing strategies among online shoppers.

## Limitations of the Study and Scope for Further Research

Like any other research, the current study also has some shortcomings that need to be accounted for. First, this study employs a non - random sampling technique, so generalization of the results needs to be taken with some caution. The existing literature identifies some factors which influence perceived benefit of online shopping among online shoppers (e.g. gender, age, income, education, online shopping experience, Internet usage familiarity, Internet usage experience, etc.). New research could identify how each variable, individually and collectively, impacts consumer perception towards online shopping. The data was not collected from non - Internet shoppers because the focus of this study was online shoppers in the context of their last online purchase experience. It may be an interesting extension, however, to test this conceptual model for other populations like non-online consumers. The development of the PBOS scale took place in India.

Further research is also encouraged in countries other than India, since earlier research has shown that national culture has an impact on the perception of consumers. Just like PBOS, perceived risk of online shopping (PROS) is also a significant predictor of shopper's attitude and purchase intention through online shopping sites. Therefore, future research of similar order could be conducted to measure PROS. Lastly, future research is suggested to analyze differences in the effects of PBOS dimensions on the consumer behavior depending on the features of websites, demographic profile, online shopping or Internet usage experience, and characteristics of the products.

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## Appendix. Perceived Benefits of Online Shopping

| Variable Code | Variable Question | Variable Label |
|---|---|---|
| B1 | I can buy from any place with Internet access. | Anyplace Access |
| B2 | I can buy anytime as per my convenience. | Anytime Access |
| B3 | I can buy with least shopping efforts. | Least Shopping Efforts |
| B4 | I don't have to wait in queues for shopping. | No Waiting in Queues - Shopping |
| B5 | I don't have to wait in queues for billing/checkout. | No Waiting in Queues -Billing |
| B6 | I don't feel the need for any shopping assistance. | No Shopping Assistance |
| B7 | I can pay by any convenient mode of payment. | Any Payment Mode |
| B8 | I can easily get my big purchases financed into EMI. | Big Purchases Financed |
| B9 | I can take my time and don't need to hurry my shopping. | No Hurried Shopping |
| B10 | I don't have to waste time in travelling to buy. | No Time Wasted in Travelling |
| B11 | I can save myself from struggling through the crowd. | No Crowd |
| B12 | I get better price through online shopping. | Better Price |
| B13 | I get better discounts and rebates through online shopping. | Better Discount |
| B14 | I get better price as no middleman commission is involved. | No Middleman Commission |
| B15 | I get better loyalty points benefits. | Loyalty Benefit |
| B16 | I get better information on loyalty points earned. | Loyalty Information |
| B17 | I get several brands and products from different sellers. | Several Brands |
| B18 | I get best global brands without International travel. | Global Brands |
| B19 | I can buy products of other parts of the country easily. | Products from Whole Country |
| B20 | I get better selection of colors, style, and size. | Better Choices of Color, Style, and Size |
| B21 | I find no stock out problem. | No Stock Out |
| B22 | I can avoid additional cost like transportation, parking. | No Additional Cost |
| B23 | I can avoid additional money on eating out while shopping. | Avoid Eating Out |
| B24 | I can compare prices easily and can take more informed decisions. | Easy Price Comparison |
| B25 | I can easily research on my product before purchase. | Easy Product Research |
| B26 | I can read other consumer reviews to reach my decision. | Other Consumer's Reviews |
| B27 | I can write reviews and share my feedback with other buyers. | Write Reviews and Feedback |
| B28 | I can easily connect and write feedback to retailer. | Easy Connect with Retailer |
| B29 | I can have personalized interaction with online seller. | Personalize Interaction with Seller |
| B30 | I can easily raise queries and clarify my doubts. | Raise Queries and Clarify Doubts |
| B31 | I can custom design my product online. | Custom Design Product |
| B32 | I don't feel any social pressure while buying. | No Social Pressure |
| B33 | I don't have to buy on impulses because of attractive display. | No Impulse Purchases |
| B34 | I don't have to buy because of sales tactics of salesman. | No Salesman Tactics |
| B35 | I don't buy the product which I don't need. | No Unwanted Shopping |
| B36 | I can ensure the privacy of my purchases. | Purchase Privacy |
| B37 | I don't have to worry about other people watching what I buy. | No Worries of Others |
| B38 | I can comfortably buy without embarrassment. | No Embarrassment |
| B39 | I find online shopping fun. | Fun Shopping |

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