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## 9-ending prices in retail advertisements: Indian consumers' price perception and proneness to buy

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**Abstract:** This study examines the effect of the ubiquitous use of 9-ending prices in newspaper retail advertisements by mall retail stores on Indian consumers' price perception and proneness to buy. In order to collect data, a mall-intercept technique was used. The data were analysed using multivariate statistical techniques. Findings reveal that the use of 9-ending prices in advertisements, convenience benefit, enhanced value, discount price, and misleading action positively impact Indian consumers' price perception. However, entertainment benefit, value expression benefit, savings benefit, and low-quality do not significantly impact the Indian consumers' price perception. The Indian consumers' price perception towards the advertisements of 9-ending prices in newspapers and free home-drop advertising materials has a positive impact on their proneness to buy.

**Keywords:** 9-ending prices; retailing; consumers' price perception; CPP; consumers' proneness to buy; CPTB; advertising.

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## 1 Introduction

The Indian retailing industry is one of the most dynamic and fast emerging industries in the world. It backs approximately 10% to the GDP of India and creates about 8% of employment.<sup>1</sup> It is the second-largest prevalent employment division after agriculture (Zameer and Mukherjee, 2011). In the retail space, India is expected to be the world's fifth-biggest worldwide destination. India is the second-largest populous country in the world<sup>2</sup> and has immense potential for the retailing industry due to prosperous middle class, the increment in nuclear families, augmentation in disposable incomes, adaptations in consumer lifestyle, fast urbanisation, multiple income households, the increment in expenditure on luxury items, and rapid advancement in internet usage. Federation of Indian Chambers of Commerce and Industry (FICCI) and Indian Institute of Foreign Trade (IIFT) have predicted that India's total potential of Business to Consumer (B2C) would be US\$26 billion out of which US\$3 billion would be achieved in the coming three years.<sup>3</sup> Indian retailing has been predicted to be a US\$1.3 trillion opportunity by 2020 and expected to lead about 25% average yearly growth in organised division (*The Times of India*, 2012 as cited in Khare et al., 2014). Further, it is expected that India would become the world's third-leading consumer economy by attaining US\$400 billion in consumption by 2025.<sup>4</sup>

The Indian retail trade is primarily classified as organised retailing and unorganised retailing/traditional retailing (ICRIER, 2005). "A retail outlet chain (and not a one shop outlet) managed in a professional way and possessing accounting transparency (with proper usage of MIS and accounting standards), organized supply chain management with centralized quality control and sourcing (even if it is family-run) is termed as the organized retailing in India" (ICRIER, 2005). On the other hand, "an unorganized retailing is a retail outlet run locally by the owner or the caretaker. Such retailing lacks technical and accounting standardization. In addition, the supply chain and the sourcing are done locally to meet the local needs" (ICRIER, 2005), as cited in Zameer and Mukherjee (2011).

Organised retailing in India has prompted the development of malls in various regions (Khare et al., 2014). The advancement of malls is obvious in real metropolitan focuses as well as in non-metropolitan urban communities (Kuruville and Joshi, 2010).

Literature advocates price as one of the most important factors for Indian buyers (Khare et al., 2014). In order to entice buyers to malls, retail outlets functioning in the malls advertise their products' odd-even psychological prices (including discounts and price-offs) in daily newspapers and in free home-drop advertising materials such as leaflets, and weekly magazines (Holdershaw et al., 1997). In order to target different segments of consumers, mall retail outlets use various price promotional strategies. Advertising retail products' prices, particularly with 9-ending, is a widespread weapon for marketing the products (Holdershaw et al., 1997; Ngobo et al., 2010). In other words, to encourage traffic in the malls, promotional offers pertaining to price (e.g., price discounts, price-offs) are advertised broadly in newspapers and in free home-drop advertising materials (e.g., leaflets and weekly magazines). In addition, to increase sales and consumer satisfaction, mall retailers use price promotion as an important marketing strategy (Nusair et al., 2010; Fam et al., 2011). As a result, sales get augmented in the mall retail stores, especially during the festive seasons (Damle, 2011).

An extensive exploration of literature pertaining to the odd-even psychological pricing reveals the following things. First, there is scant research on why is there a

ubiquitous use of 9-ending prices in newspaper retail advertisements and in free home-drop advertising materials by mall retail stores. Second, consumers' price perception (CPP) towards the products' 9-ending prices has been expansively studied in western economies (Schindler and Kibarian, 2001; Guéguen and Legohérel, 2004; Nguyen et al., 2007). Around 65% or more prices have 9-ending in the retail markets of the USA (Schindler and Kirby, 1997; Stiving and Winer, 1997; Schindler, 2009), the UK (Harris and Bray, 2007), Germany (Hogl, 1988), the New Zealand (Gendall et al., 1997), the European retail stores such as Poland (Suri et al., 2004) or Finland (Aalto-Setälä, 2005). The use of 9-ending prices is overrepresented in many western countries (such as the USA, Germany, Canada, Australia, and Belgium) but the use of 0-ending prices is overrepresented in countries like Hungary, Italy, Poland, and Spain (Levy et al., 2011). Bergen et al. (2004) have reported a ubiquitous use of 9-ending prices even in online retailing. Third, there is a dearth of research to understand the impact of prevalent advertisement of products' 9-ending prices in daily newspapers and in free home-drop advertising materials offered by the mall retail outlets on Indian CPP and proneness to buy.

### 1.1 Background of the study

Deliberate observation of retail advertisement of products' prices having all possible ending digits (e.g., ₹999, ₹99.99, ₹495, ₹199.95, ₹923, ₹100, ₹51, ₹422, ₹124, ₹126, ₹117, and ₹328) displayed in three national daily newspapers (e.g., *The Times of India*, *Hindustan Times*, and *Dainik Jagran*) and in free home-drop advertising materials (e.g., leaflets, and weekly magazines) was carried out for a period of six months (i.e., from September 2018 to February 2019). When observing the ending digit of the prices, two important things were noticed. First, the advertised products' prices ended either with paise (e.g., ₹199.99, ₹99.95, and ₹49.99) or with whole rupee amount (e.g., ₹599, ₹102, ₹69, ₹54, ₹568, and ₹495). Second, the one-digit numerals (e.g., 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9) were not equally distributed as price-ending digits. Therefore, each price was observed by looking at its rightmost digit. In other words, if prices had paise-ending (e.g., ₹199.99 and ₹49.95), the observation was based on the rightmost ending digit of the paise, i.e., digits '9' and '5'. Again, if the prices had whole rupee amount ending (e.g., ₹499, ₹68, ₹356, and ₹444), the observation was based on the rightmost ending digit of the whole rupee amount, i.e., digits '9', '8', '6' and '1'. The aforesaid observations are illustrated in Tables 1 and 2.

**Table 1** No. of observed retail advertisement of products' prices having paise-ending and whole rupee amount ending

Variables	Prices having paise-ending	Prices having whole rupee amount ending	Total
No. of observed prices	121	1,879	2,000
Percentage (%)	6.05	93.95	100

*Source:* Author observation of advertised retail products' prices (September 2018 to February 2019)

Table 1 explains that out of 2,000 retail advertisement of products' prices displayed in three national dailies (e.g., *The Times of India*, *Hindustan Times*, and *Dainik Jagran*) and in free home-drop advertising materials (e.g., leaflets and weekly magazines) 121

(6.05%) prices have a paise-ending and 1,879 (93.95%) prices have a whole rupee amount ending.

**Table 2** Distribution of prices' end-digit numeral in the observed advertisements of products' prices

<i>End-digit numerals</i>	0	1	2	3	4	5	6	7	8	9	Total
Frequency	321	26	48	39	8	138	11	37	65	1,307	2,000
Percentage (%)	16.05	1.3	2.4	1.95	0.4	6.9	0.55	1.85	3.25	65.35	100

*Source:* Author observation of the advertised retail products' prices (September 2018 to February 2019)

Table 2 illustrates the distribution of the end-digit numeral (e.g., 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9) in the observed 2,000 retail advertisement of the products' prices. In addition, it explains that out of 2,000 prices, 1,307 (approx. 65.35%) prices ended at digit '9', 321 (approx. 16.05%) prices ended at digit '0', 138 (approx. 6.90%) prices ended at digit '5', 48 (about 2.40%) prices ended at digit '2', 65 (approx. 3.25%) prices ended at digit '8', 37 (approx. 1.85%) prices ended at digit '7', 8 (approx. 0.40%) prices ended at digit '4', 39 (approx. 1.95%) prices ended at digit '3', 11 (approx. 0.55%) prices ended at digit '6', and 26 (approx. 1.30%) prices ended at digit '1'. Hence, approx. 88.30% of the observed advertised retail products' prices ended either at the digit 9, 0, or 5 and only approx. 11.70% of the prices ended collectively at the other digits (e.g., 1, 2, 3, 4, 6, 7, and 8). Thus, it can be concluded that the products' 9-ending prices are advertised the most, then the products' 0-ending prices and finally the products' 5-ending prices. Thus, finding of the deliberate observation of the retail advertisement of products' prices having distinct ending digits (e.g., 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9) is consistent with Holdershaw et al. (1997), i.e., there are ten one-digit figures, e.g., 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9 from which each would occur at a time at the rightmost end of prices (e.g., ₹99, ₹95, ₹90, ₹49.99, ₹1,000, ₹97, etc.) if each one-digit figure had an equal chance of occurrence. However, in reality, this is not so.

The Indian currency system does not have any coins in the denomination of paise.<sup>5</sup> The coins of paise (e.g., 5, 10, 20, 25, and 50 paise) were demonetised because of consumers' decreasing purchasing power (Shetty and Bharuchal, 2014). However, the coins of ₹1, ₹2, ₹5, and ₹10 are still continued into the Indian currency system because of the increasing demand for change. The deliberate observation of the retail advertisement of products' prices showing decimals, e.g., ₹99.99 and ₹49.95 (see Table 1) is because of the retailers' expectations that the shoppers would pay the value as displayed in the nearest round figure. For example, ₹199.99 would become ₹200 whereas ₹149.95 would be rounded to ₹150 and so on.

## 1.2 Definition of 9-ending price for this study

9-ending pricing also just-below pricing or odd-ending pricing is a pricing technique that retailers use to augment their sales (Berman and Evans, 1986; Schindler and Kibarian, 1996; Stiving and Winer, 1997; Kalyanam and Shively, 1998; Ngobo et al., 2010). In other words, 9-ending pricing is a retail price setters' marked propensity to set prices 'just-below' the nearest round figures such as \$99, \$999, or \$49.99 instead of \$100,

\$1,000, or \$50 (Twedt, 1965; Friedman, 1967; Kreul, 1982; Holdershaw et al., 1997). This technique of pricing is very often termed as psychological pricing (Schindler and Kibarian, 1993).

Based on the deliberate observation of the retail advertisement of products' prices such as ₹999, ₹99.99, ₹995, ₹1,000, ₹341, and ₹49.95 (see Table 2), the categorisation of 9-ending and even-ending prices were made for this study. A 9-ending price was defined based on the prevalent use of the digit 9 as price-ending that fell just-below and within the following categories.

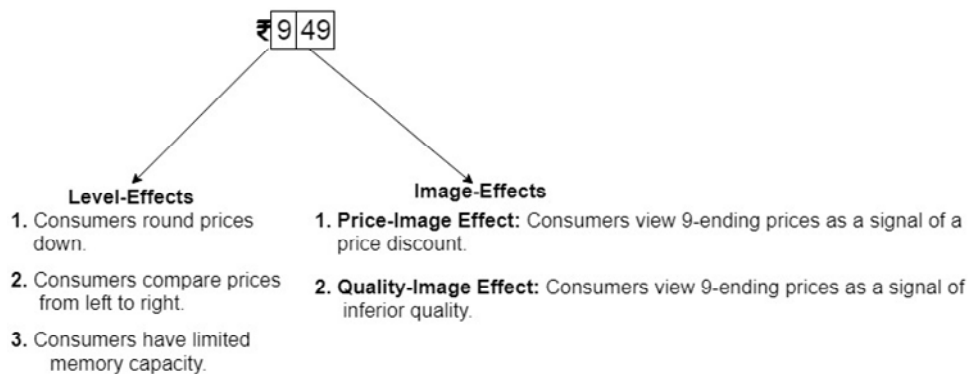
- 1 paisa of the nearest 10 paise such as 19, 29, 39, 49, ... (e.g., ₹45.19, ₹49.29 and so on).
- ₹1 of the nearest round rupee amount such as 9, 19, 29, 39, ... (e.g., ₹9, ₹499, ₹999 and so on).

However, a price having 9-ending but was not used for an individual product was not defined as a 9-ending price (e.g., products that were advertised as two or more for the price of one) for this study. Whereas, the retail advertisement of product labelling with a price having 0-ending such as ₹500, ₹60, and ₹490 was defined as an even-ending price.

## 2 Literature review and hypotheses development

In order to entice consumers to mall retail stores, advertising retail items bearing the prices that are slightly just-below a round figure (e.g., \$99, \$9.99, and ₹199) has been a ubiquitous marketing technique (Schindler and Kirby, 1997; Holdershaw et al., 1997; Estelami, 1999; Chandon et al., 2000; Suri et al., 2004; Fortin et al., 2000; Schindler, 2009; Gaston-Breton and Duque, 2015; Peev and Mayer, 2017). Setting the prices slightly just-below a round figure is very often referred to as odd pricing, magic pricing, 9-ending pricing, charm pricing, attractive pricing, irrational pricing, intuitive pricing, psychological pricing or rule-of-thumb pricing (Schindler and Wiman, 1989; Schindler and Kirbarian, 1996; Holdershaw et al., 1997; Schindler and Kirbarian, 2001; Naipaul and Parsa, 2001; Aalto-Setälä, 2005; Gaston-Breton, 2011).

**Figure 1** Impacting mechanism of 9-ending prices



Most of the research persons have studied the just-below pricing or 9-ending pricing technique against the backdrop of even-pricing, is a retailer's marked propensity to set prices at 0-ending, e.g., \$100 and \$20 (Naipaul and Parsa, 2001; Mulky et al., 2014; Jeong and Crompton, 2018). In this specific perspective, the 9-ending prices have been used for savings appeals (Gaston-Breton and Duque, 2015) and got these perceived as cheaper than they actually connote (Thomas and Morwitz, 2005; Mulky et al., 2014; Quigley and Notarantonio, 2015; Jeong and Crompton, 2018). In addition, the 9-ending prices have been used to connote a signal of good value (Schindler, 1991; Naipaul and Parsa, 2001; Mulky et al., 2014; Jeong and Crompton, 2018). The above findings are because of two distinct driving mechanisms of the 9-ending prices, known as '*level-effects*' and '*image-effects*' (Stiving and Winer, 1997; Gedenk and Sattler, 1999; Okuse, 2016). Figure 1 illustrates the impacting mechanisms of 9-ending prices.

- *Level-effects*: "Level-effects are the skewed perception of price levels due to price endings" (Mulky et al., 2014). Since the leftmost digits in prices such as \$7.99 and \$50.00 are the numerals, e.g., 7 and 5 that occur before 0.99 and 0.00. These leftmost digits of the prices determine CPP (Lamb et al., 2008). The CPP is affected the most when there is a change in the leftmost digit (i.e., \$7.99 to \$6.99) instead of a change in the right digits (\$7.99 to \$7.95). Therefore, the level-effects are also referred to as left-digit effects (Bennett et al., 2003; Thomas and Morwitz, 2005).

Generally, prices contain multiple digits (Brenner and Brenner, 1982; Schindler and Wiman, 1989; Simon, 1989; Nagle and Holden, 1995). The multi-digit numbers are processed from the leftmost digit to right in order to reduce data handling or information processing effort (Hinrichs et al., 1982; Poltrock and Schwartz, 1984; Stiving and Winer, 1997; Thomas and Morwitz, 2005). This phenomenon occurs because people have limited memory capacity (Schindler and Kibarian, 1996; Guéguen and Legohérel, 2004). Based on the above theory, consumers have a tendency to process prices from the leftmost digit to right and thus they tend to ignore or pay less attention to the right digits of the prices (Gabor and Granger, 1964; Bizer and Schindler, 2005). As a result, consumers round off a price say \$99 very near to its leftmost digit '9' and perceive the price as closer to \$90 instead of rounding it one dollar upward and perceiving the price as closer to \$100, i.e., the price having 9-ending is underestimated (Gedenk and Sattler, 1999; Asamoah and Chovancová, 2011; Mulky et al., 2014; Okuse, 2016).

- *Image-effects*: "Image-effects assume that the rightmost digit/digits do have some meanings for the customers" (Baumgartner and Steiner, 2007). Also, "image-effects are consumers' perceptions of firm behaviour as a result of the price signal" (Mulky et al., 2014). In other words, the image effects of the prices are those effects that build the consumers' perception about products, the stores selling the products, and the competition prevalent in the marketplace based on the rightmost digit(s) displayed in the prices. The right digits of a price say \$39.99 are the digits, e.g., 00.99 that occur after the left digits, i.e., 39 (Lamb et al., 2008). These right digits impact consumers' perception of sale prices (Coulter, 2007). In other words, when the right digits are smaller rather than larger, then because of the right-digit effects, the consumers perceive a greater discount. For instance, a product on a special offer is bearing a price of \$311 from the actual price of \$322 is perceived as a better deal as compared to the product on the special offer, is bearing a price of \$288 from the

actual price of \$299, although in both the cases, the amount of discount is same, i.e., \$11 (Coulter, 2007). Some authors consider the right digit in the prices, which is the rightmost digit of the prices such as in \$78.99 and \$80.95, the rightmost digits are 9 and 5 (Paliwoda and Ryans, 2008). Typically, the use of the rightmost digit in the retail advertisement of prices (e.g., \$899, \$459.95, \$540, ₹199, and ₹99) is a very ubiquitous practice to highlight prices fall just-below the whole figure amounts (Clark et al., 1994). Retailers ubiquitously use digit 9, 5, and 0 as the rightmost digit in decreasing order when advertising their products' or services' prices, i.e., the frequency of the digit 9 is the highest as the rightmost digit in price-endings, 5 is the second-highest and the digit 0 has less frequency at price-endings in western economies (Schindler and Kirby, 1997; Nguyen et al., 2007). This contradicts the pattern of price-endings in India (see Table 2). The image effects are further classified as '*price-image effect*' and '*quality-image effect*'.

The exact genesis and rationales for the ubiquitous practice of 9-ending pricing are unclear (Dalrymple and Thompson, 1969). It is assumed that the practice of 9-ending pricing started in the late 19th century in the USA (Schindler and Wiman, 1989). The use of 9-ending pricing was initiated when the '*fixed pricing*' was made a norm in the USA, soon as the Civil War became over. Before the odd-pricing, the products' prices were decided by bargaining between customers and retailers (Georgoff, 1971). Few of the rationales discussed above pertaining to the genesis of the odd-pricing may have lost their significance (if necessary they were once genuine). Since changes have always been in retailing practices and pricing strategies and so whatever may have been the true genesis of the odd-pricing (especially 9-ending pricing) its practice is widespread in the contemporary retail pricing (Nguyen et al., 2007).

## 2.1 Hypotheses development

In order to ascertain the number of ways by which people may perceive retail advertisement of products' 9-ending prices, an extensive review of the literature was executed. Nine factors with measuring items used to measure consumers' perception towards the retail advertisement of products' 9-ending prices were ascertained (refer to Appendix, Table 7). Three items were adapted from Meng et al. (2008) to measure the factor '*CPP*'. In order to assess products and take decisions, an extensive variety of information processing strategies are utilised by consumers. Processing the price information is one of the psychological strategies that consumers use to make buying decisions (Gaston-Breton and Duque, 2015). That is why for measuring the factor '*consumers' proneness to buy*' (*CPTB*) the products bearing 9-ending prices, four items were adapted from Lichtenstein et al. (1993) and Gaston-Breton and Duque (2015). The adapted constructs items and their sources are illustrated in Table 7 of Appendix.

### 2.1.1 Use of 9-ending prices in advertisements

Ending digits (i.e., 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9) in retail prices (e.g., \$99, \$176, \$95, and so on) are not equally distributed (Holdershaw et al., 1997) because these are not completely based on the costs of production (Aalto-Setala, 2005). As an alternative, price setting is largely affected by so-called attractive or magic prices. The attractive prices are

the prices that retailers believe to be appealing to consumers. In most of the situations, the prices having 9-ending are referred to as charm/attractive prices (Aalto-Setälä, 2005; Baye and Morgan, 2009). A casual observation of the advertisement of grocery items' prices (e.g., \$99, \$99.99, \$100, and \$99.95) displayed in home-drop advertising materials, free weekly magazines, and local daily highlighted a widespread practice of the prices having 9-ending (Holdershaw et al., 1997; Heeler and Nguyen, 2001; Asamoah and Chovancová, 2011). In addition, a deliberate observation of the advertisement of products' prices displayed in Indian national newspapers (e.g., *The Times of India*, *Hindustan Times*, and *Dainik Jagran*) and in free home-drop advertising materials (e.g., leaflets and magazines) highlighted a bias in favour of the prices having 9-ending (see Table 2). The newspaper retail advertisement for products' 9-ending prices increased the customer traffic in the retail stores functioning in the malls (Asamoah and Chovancová, 2011; Khare et al., 2014).

H<sub>1</sub> Use of 9-ending prices in advertisements (UNEPIA) positively impacts CPP.

### 2.1.2 Entertainment benefit

“Sales promotions are often simply fun to see or use, known as entertainment benefit” (Chandon et al., 2000). The entertainment benefit includes both the dynamic play and responsive stylish estimations of Holbrook's (1994) typology. It is unique from the general satisfaction coming about because of purchasing an advertised item frequently used to measure bargain inclination, which is a piece of the full of feeling a reaction to advancement as opposed to one of its predecessors (Lichtenstein et al., 1990).

H<sub>2</sub> Entertainment benefit image associated with the retail advertisement of products' 9-ending prices positively impacts CPP.

### 2.1.3 Value expression benefit

“Sales promotions can enhance consumers' self-perception of being smart or good shoppers and provide an opportunity to reaffirm their personal values, known as value expression benefit” (Chandon et al., 2000). In order to meet personal or moral values (i.e., in order to be liable purchasers), consumers very often respond to the advertisement of products bearing 9-ending prices (Mittal, 1994). Therefore, value expression benefit may be associated with the morality value (Holbrook, 1994). Because such a kind of consumer value includes the enjoyment received from accomplishing a duty. Whereas, other consumers often respond to the advertisement of products bearing 9-ending prices in order to express and boost their sense of themselves as smart customers and receive social recognition or affiliation (Shimp and Kavas, 1984; Bagozzi et al., 1987; Bagozzi et al., 1992). Therefore, this aspect of the value expression benefit may be associated with Holbrook's (1984) utilitarian politics and esteem values, since it explains the way consumers respond to the retail advertisement of products' 9-ending prices in order to earn status and control over others.

H<sub>3</sub> Value expression benefit image associated with the retail advertisement of products bearing 9-ending prices positively impacts CPP.



#### 2.1.4 Savings benefit

“Advertising is any paid form of non-personal presentation and promotion of ideas, goods or services by an identified sponsor” Wright et al. (1977), as cited in Ho et al. (2015). Further, “promotion is a price cut or a bigger bundle measure at a similar price. In other words, a promotion resembles new cash in consumers’ pockets that you can use to purchase something else” (Chandon et al., 2000). Sales promotions can give perceptions of savings related to money by bringing down the unit price of the promoted item, offering more of the same item without charging any additional amount of money, or giving discounts or refunds on subsequent buys of the same or different items. Both the extent of the price lessening and the deviation from a reference price can create perceptions of savings related to the money and can diminish the pain of paying (Blattberg and Neslin, 1990; Chandon et al., 2000; Gaston-Breton and Duque, 2015). It is also noteworthy that the advertising and sales promotion may be used individually or in conjunction with each other [Jethwaney and Jain, (2009), p.4]. The retailers use advertising or sales promotion as a marketing strategy to promote their products or services and to impact consumers’ decision-making process. The retailers advertise 9-ending prices of their products to achieve market expansion, provide information about their products or services (e.g., price discounts and special offers), promote brands, and increase profitability by sales augmentation.

H<sub>4</sub> Savings benefit image associated with the retail advertisement of products’ 9-ending prices positively impacts CPP.

#### 2.1.5 Convenience benefit

Sales promotions can enhance shopping proficiency by lessening search costs and by helping customers discover the items they want or by helping them to remember the items they have to purchase. Such advertising effects were verified in field experiments (Bawa and Shoemaker, 1987; Inman et al., 1990) and in-store surveys (Dickson and Sawyer, 1990; Inman and Winer, 1998). In addition, sales promotions can enhance shopping effectiveness by decreasing choice expenses, by giving shoppers a simple choice heuristic for buy rate or buy amount (Wansink et al., 1998) and by indicating item price and prominence (Hoyer, 1984; Simonson et al., 1994).

H<sub>5</sub> Convenience benefit image associated with the retail advertisement of products’ 9-ending prices positively impacts CPP.

#### 2.1.6 Low quality

People associate the price of a product or service with its quality (Scitovszky, 1944; Rao and Monroe, 1989; Jeong and Crompton, 2018). The prices having 9-ending have meanings of low prices and the prices having 0-ending have the meanings of high prices (Naipaul and Parsa, 2001; Thomas and Morwitz, 2005; Schindler, 2006; Gaston-Breton, 2011). Therefore some people may likewise relate the 9-ending prices with low-quality products whereas the 0-ending prices with high-quality products. In addition, the stores selling the products bearing 9-ending prices are perceived as low-scale stores whereas the stores selling the products bearing 0-ending prices are perceived as high scale stores [Alpert, (1971), p.112; Kreul, 1982; Schindler, 1991; Stiving and Winer, 1997; Gedenk and Sattler, 1999; Stiving, 2000; Schindler and Kibarian, 2001].

Consumers incidentally have low-involvement learning while shopping, therefore, they may associate 9-ending prices with the products of low-quality and 0-ending prices with the products of high-quality in western countries, known as association mechanism or quality-image effect (Gabor and Granger, 1964; Zeithaml, 1988; Rao and Monroe, 1989; Hawkins and Hoch, 1992; Naipaul and Parsa, 2001; Thomas and Morwitz, 2005; Gaston-Breton, 2011; Mulky et al., 2014). Consumers purchase hedonic instead of utilitarian products when the products are priced at 9-ending prices (Choi et al., 2014). In addition, retailers use 9-ending prices in order to connote the products on a special offer or sale (Schindler, 1991; Stiving and Winer, 1997; Ahmetoglu et al., 2014; Quigley and Notarantonio, 2015). In India, consumers perceive the products bearing 9-ending prices as of high-value and do not perceive any quality distinction between the products bearing 9-ending prices such as ₹99, ₹499.99 and 0-ending prices such as ₹100 and ₹500 (Mulky et al., 2014). Thus, it may be noted that quality-image effect contradicts the level-effects and price-image effect and may advocate the retailers to advertise their products bearing 0-ending prices, however, it would depend on the category of the products (McCarthy and Perreault, 1993; Schindler and Kirby, 1997). Though the findings pertaining to the level-effects and image-effects of 9-ending pricing are contradictory in nature, however, Stiving and Winer (1997) have supported the presence of the level-effects and the image-effects in the contemporary retailing. In addition, extant empirical studies have highlighted large variability regarding the impact of 9-ending prices on CPP (Guéguen and Legohérel, 2004; Freling et al., 2010), price recall (Schindler and Wiman, 1989; Bizer and Schindler, 2005; Freling et al., 2010), consumers' choice (Baumgartner and Steiner, 2007; Manning and Sprott, 2009; Freling et al., 2010) or sales (Stiving and Winer, 1997; Freling et al., 2010). These effects are substantial, i.e., in some cases these are medium, weak, or even negative. Therefore, using 9-ending prices for luxury brands may be unfavourable, but sales of low-quality products bearing 9-ending prices may get an augmentation (Okuse, 2016).

H<sub>6</sub> Low-quality image associated with the retail advertisement of products bearing 9-ending prices negatively impacts CPP.

### *2.1.7 Enhanced value*

Buyers contrast the advantages obtained relating to the price paid, which brings about the perception of significant value. For a few customers, price perception may be described as being identified with the congeniality of the price paid for the quality got in a buying transaction (Geçti, 2014). A few customers react to sales promotions to meet individual or moral values, for example, being a capable purchaser (Mittal, 1994). The prices having 9-ending is perceived as signalling enhanced value (Choi et al., 2012; Mulky et al., 2014; Jeong and Crompton, 2018). This enhanced value of the prices having 9-ending emanates from prospect theory (Kahneman and Tversky, 1979). One of prospect theory's focal fundamentals is that a price apparent as being lower than its scope of acknowledgment is viewed as gain. Hence, a 9-ending price is an increased confined message as opposed to a misfortune surrounded message making the illusion of a generously bring down the price, so it is seen to offer enhanced value (Crompton, 2016).

H<sub>7</sub> Enhanced-value image associated with the retail advertisement of 9-ending prices positively impacts CPP.

### 2.1.8 Discount price

The extensive review of the literature revealed a symbolic meaning that buyers may basically attach to the prices having 9-ending, known as a price-image effect, which is an outcome of the CPP based on the rightmost digit of the prices (Stiving and Winer, 1997; Gedenk and Sattler, 1999; Okuse, 2016). For many customers, the price having 9-ending connotes an image of sale price, low price or discount price (Schindler and Wiman, 1989; Quigley and Notarantonio, 1992; Schindler and Kirby, 1997; Stiving and Winer, 1997; Schindler and Kibarian, 2001; Thomas and Morwitz, 2005; Choi et al., 2014; Mulky et al., 2014; Quigley and Notarantonio, 2015; Jeong and Crompton, 2018). This is because the customers tend to pay less attention to a price's rightmost digit(s) [Gabor and Granger, 1964; Schindler and Kibarian, 1996; Kotler, (2000), p.470; Schindler and Kibarian, 2001; Mulky et al., 2014]. Therefore, the retailers who sell their products bearing low prices rather than high-prices (Stiving, 2000) frequently use 9-ending prices instead of regular prices to highlight price discounts (Huston and Kamdar, 1996). However, this low-price image may not necessarily be reflected in the marketplace (Schindler and Kibarian, 2001).

The prices having 9-ending have effect mostly on price perceptions when the distinction in the right-most digit changes the furthest left digit. That is, \$49.99 versus \$50 is more powerful than \$47.99 versus \$48 on the grounds that the furthest left digit changes from 5 to 4 (Thomas and Morwitz, 2009). It is probably going to be more effective at higher price levels, in light of the fact that the apparent dollar gain is substantially more noteworthy. Therefore, the gain from a \$29.99 price, if just the primary digit is prepared, would be \$30, contrasted with a \$1 gain at a \$2.99 price. In an investigation of US retailing, ads experimentally showed that utilisation of the prices having 9-ending was extensively higher in ads that were promoting a rebate/discount than in those for which no such a claim was made (Schindler, 2009).

H<sub>8</sub> Discount price image associated with the retail advertisement of 9-ending prices positively impacts CPP.

### 2.1.9 Misleading action

The prices having 9-ending may symbolise "tricky, charming, don't play these straight" [Schindler, (1991), p.798; Bambauer-Sachse and Grewal, 2011]. Along with this line, it has been proposed that the prices having 9-ending might be perceived as a misleading, manipulative market practice that makes doubt (Nguyen et al., 2007; Jeong and Crompton, 2018). This emblematic affiliation was confirmed by the findings of Diller and Brielmaier (1995) and Suri et al. (2004). In addition, different clarifications have been offered to clarify the illusion of generously bring down prices made by the prices having 9-ending, however, the most persuading is 'truncation' (Quigley and Notarantonio, 1992) which proposes that individuals cut-off perusing a price's digit before every one of them has been perceived and encoded. In this manner, the price perception is anchored by the furthest left digit(s). For instance, a price with 9-ending creates an illusion of a price discount to the consumers and so a chance to purchase the product on a discounted price or the product appears cheaper to the consumers (Schindler, 2006). In other word, consumers perceive the retail advertisement of products' 9-ending prices (e.g., \$99 and \$49.99) as an indication of sale or special offer

[Kotler, (1991), p.489; Berman and Evans, (1992), p.440; Quigley and Notarantonio, 1992; Schindler and Kibarian, 1995; Schindler and Kirby, 1995].

H<sub>9</sub> Misleading action (MA) image associated with the retail advertisement of 9-ending prices positively impacts CPP.

### *2.1.10 Consumers' price perception*

CPP has been an interesting topic for researchers for many decades because consumers use price as one of the most vital product information cues (Meng et al., 2008). "Consumers' price perception is the process by which consumers interpret price into meaningful mental cognitions" (Lichtenstein et al., 1993; Meng et al., 2008). "Price-endings refer to one, or all of the rightmost digits of a price" (Schindler, 1991; Schindler and Kirby, 1997; Stiving and Winer, 1997). The practice of certain price-endings as a mechanism to entice consumers has been one of the oldest, and pervasive pricing strategies (Monroe, 1990). The extant research surveys highlight that most of the prices advertised in media, especially in print media more especially in newspapers and shown at the retail outlets are odd prices. These odd prices either have endings at odd digits or are slightly below even or round figures such as \$999 instead of \$1,000 or \$449.99 instead of \$450 (Schindler and Kirby, 1997). This odd pricing strategy has been used widely because of a pervasive belief that a little change in price's ending digit(s) may significantly impact CPPs while upholding the price level.

H<sub>10</sub> CPP towards the retail advertisements of products bearing 9-ending prices positively impacts CPTB the products bearing 9-ending prices.

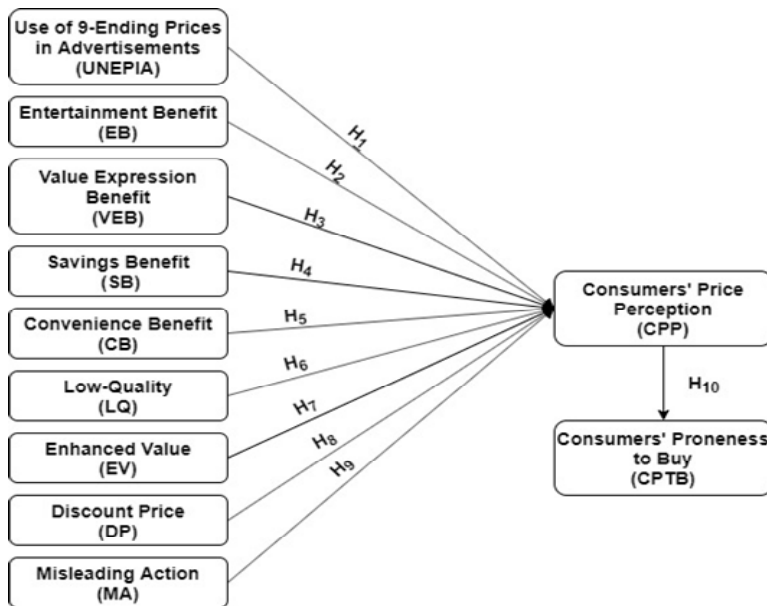
## *2.2 Theoretical framework*

The hypothesised theoretical framework of this study is based on the extensive review of literature pertaining to just-below or 9-ending pricing conducted using document analysis. "The document analysis is a systematic procedure for reviewing or evaluating documents, both printed and electronic (i.e., computer-based and internet transmitted) materials. Like the other analytical methods in qualitative research, the document analysis requires the data which are examined and interpreted in order to extract meaning, gain understanding and develop empirical knowledge" [Bowen, (2009), p.27].

## **3 Research methodology**

### *3.1 Measurement instrument*

In order to measure the pertinent constructs of the hypothesised theoretical framework (see Figure 2) of this study, a quantitative survey design using a structured questionnaire was employed. The questionnaire consisted of two sections. The first section contained questions pertaining to the demographic profile of the respondents. Data concerning the demographic profile of the respondents were collected by asking questions about the respondents' gender, age, educational qualification, marital status, occupation, and household income per month in Indian rupees. The second section contained questions pertaining to the pertinent constructs of the hypothesised theoretical framework.

**Figure 2** Hypothesised theoretical framework

In order to fulfil the objective of this study, the pertinent constructs were adapted from previous research studies' validated scales to facilitate communication to the Indian perspective. All the scales items were measured on a five-point Likert scale, affixed by (1) 'strongly disagree' and (5) 'strongly agree'. The five-point Likert scale was used in this study because this scale generates sufficient variance in data which is appropriate for statistical analysis (Hinkin, 1998). The pertinent construct of the hypothesised theoretical framework such as *UNEPIA* was measured using three items/statements framed on the basis of variables (e.g., catchy, pervasive, and attractive) ascertained by extensive review of the literature. The variable *catchy* was identified from Aalto-Setälä (2005) and the variables *pervasive* and *attractive* were identified from Asamoah and Chovancová (2011). The pertinent constructs, such as *entertainment benefit* (three items), *value expression benefit* (three items), *savings benefit* (three items), and *convenience benefit* (three items) were adapted from Chandon et al. (2000) and Gaston-Breton and Duque (2015). The constructs, such as *low-quality* (three items), and *enhanced-value* (three items) were adapted from Jeong and Crompton (2018). The construct such as *discount price* was measured using four items adapted from different extant studies (Jeong and Crompton, 2018; Mulky et al., 2014; Quigley and Notarantonio, 2015). *MA* was measured using four items adapted from different previous studies (Jeong and Crompton, 2018; Bambauer-Sachse and Grewal, 2011). *CPP* (three items) was adapted from Meng et al. (2008) and *CPTB* (four items) was adapted from Lichtenstein et al. (1993) and Gaston-Breton and Duque (2015).

In order to collect data, a questionnaire was prepared in the English language. The questionnaire was not translated into other regional languages because the respondents were from metropolitan and non-metropolitan cities of India. Prior to the collection of main data, content or face validity of the scales was ensured by showing the questionnaire to three academicians and two retail managers. The experts were asked to

examine the suitability of the items for measuring the related constructs in the Indian context (Edward et al., 2010; Osei-Frimpong, 2017). The experts suggested minor corrections that were incorporated into the questionnaire. Additionally, in order to detect misunderstanding items and elucidate the measuring instrument/questionnaire, a pilot test survey was carried out on a convenience sample of 40 respondents. The respondents did not find any misunderstandings and so no change was incorporated into the final version of the questionnaire. A preliminary analysis of the pilot study indicated that all the scales satisfied the internal consistency recording a Cronbach's  $\alpha > 0.70$  (Chauhan, 2015). In addition, all scale items measured a corrected item-total correlation  $> 0.3$ , which justified their inclusion in the questionnaire used in the main study (Osei-Frimpong et al., 2016). The final list of the items used to measure the pertinent constructs of the theoretical framework of this study is presented in Table 7 (see Appendix).

### *3.2 Data collection and sample*

In order to collect data, a well-known shopping mall was chosen from each of the metropolitan cities, e.g., Delhi, Mumbai, Chennai, Kolkata, Bengaluru, and select non-metropolitan cities, e.g., Patna, Ranchi, Bhubaneswar, Jaipur, and Lucknow of India. A mall-intercept survey technique (a convenience sampling method) was conducted in the chosen shopping malls using the structured questionnaire designed for the study during a period of two months (i.e., from January to February 2019). In order to collect data, the researcher himself visited the malls.

"The mall-intercept is a face-to-face or personal interviewing method" (Bush and Hair, 1985). Considering the limitations of generalisability, convenience sampling (e.g., mall-intercept survey) was used in this study as recommended by DelVecchio (2000) and Cheah and Phau (2011). The customers were followed amid their free hours, i.e., when they were in food courts or wandering around on the grounds of the shopping centres. Most importantly, the customers were pre-briefed the motivation behind the survey, later they were requested to take an interest in the survey. The customer who consented to respond was given the questionnaire. An aggregate of 875 questionnaires were disseminated to the customers out of which 487 (approx. 56%) responded questionnaires were collected. This degree of the reaction was due to on spot participation of the customers in the survey. After ensuring the completeness of the questionnaires, 405 totally filled usable questionnaires were held and the reactions/data were fed into SPSS version 22. The fed data were screened for normality check, for example, missing values, skewness, kurtosis, and outliers (Hartline et al., 2000). While examining missing values, no missing values were detected. Further, the dataset was examined for outliers. In order to compute outliers among the responses, Cook's distance was used. If the value of Cook's distance of response is greater than 1, it is a connotation of an outlier and must be removed from the dataset (Stevens, 1992). Five responses were identified as outliers and so they were eliminated from the dataset. In order to examine the normality of the dataset, skewness, and kurtosis values were used. The dataset was ensured normal as the values of skewness and kurtosis were below 3 and 10 (Kline, 2011). In this way, 400 valid responses were preserved for analysing the data.

## 4 Analysis and results

The data collected were subjected to multivariate statistical analyses. Primarily, in order to ascertain underlying factors from 36 measuring items, an exploratory factor analysis (EFA) using SPSS version 22 was performed on the dataset. The EFA was believed necessary because most of the pertinent constructs were adapted from the extant research studies validated scales to facilitate correspondence to the Indian context. In addition, some relevant constructs items were adapted from different extant studies and a construct such as the UNEPIA pertaining to the theoretical framework of the study was self-developed on the basis of the variables extracted from the previous studies through the extensive literature review. While performing the EFA, principal components analysis (PCA) with eigenvalues greater than 1 as the factor extraction method and varimax as factor rotation method were used (Osei-Frimpong et al., 2018).

The extracted eleven factors explained approx. 80% of the variance. In order to ensure sample adequacy, the KMO value was analysed. The obtained KMO value was 0.792, indicating a sufficient number of observations to apply the EFA on the dataset (Kaiser, 1970; Malhotra and Dash, 2014). “The Bartlett’s test of sphericity examines the null hypothesis that the correlation matrix (R matrix) of the variables is an identity matrix. It means if there is no significant correlation between the variables, there is no logic to apply the EFA on the dataset” (Chauhan, 2015). The obtained value of Kaiser-Meyer-Olkin (KMO) was 0.792 and Bartlett’s test of sphericity were as follows: chi-square = 10,136.791, df = 630, and significance level = 0.000. That is the p-value of the chi-square test was below 5% of the level of significance, i.e., with a 95% confidence level, the null hypothesis (‘R matrix was an identity matrix’) could not be accepted. It means there existed a significant correlation between the variables, i.e., the application of the EFA on the dataset was appropriate for reducing the number of variables to ascertain the underlying factors/constructs (Chauhan, 2015).

All the items loaded well on constructs they were intended to measure and there was no evidence of cross-loading. Factor loadings of all the items are illustrated in Table 7 (see Appendix).

A two-step approach to structural equation modelling advocated by Anderson and Gerbing (1988) was used in this study. The first step evaluated the covariance measurement model of the hypothesised theoretical framework (see Figure 2) by performing a confirmatory factor analysis (CFA). The CFA was performed to examine goodness-of-fit (GOF), construct reliability, and construct validity (e.g., convergent validity and discriminant validity) of the pertinent constructs of the hypothesised theoretical framework. The second step assessed the structural model of the hypothesised theoretical framework (see Figure 2) by executing hypotheses testing. In other words, the robustness of the relationships between the latent constructs of the pertinent structural model of the hypothesised theoretical framework was analysed by hypotheses testing. analysis of moment structure (AMOS) version 21 was used for structural equation modelling.

**Table 3** The demographic profile of respondents

<i>Demographic variables</i>	<i>Category</i>	<i>Frequency</i>	<i>Percent (%)</i>
Gender	Male	234	58.50
	Female	166	41.50
Age	Up to 20 years	88	22.00
	21 to 30 years	179	44.75
	31 to 40 years	109	27.25
	41 to 50 years	21	5.25
	Above 50 years	3	0.75
Education qualification	Higher secondary	5	1.25
	Senior secondary	18	4.50
	Graduation	129	32.25
	Post-graduation	166	41.50
	PhD and above	82	20.50
Marital status	Married	164	41.00
	Unmarried	236	59.00
Occupation	Employed (government/private/PSU)	108	27.00
	Not employed	42	10.50
	Student	177	44.25
	Business	40	10.00
	Professional	19	4.75
	Agriculture/farming	14	3.50
Household income per month in Indian rupees	Up to ₹20,000	57	14.25
	₹20,001–₹40,000	126	31.50
	₹40,001–₹60,000	96	24.00
	₹60,001–₹80,000	41	10.25
	₹80,001–₹100,000	39	9.75
	Above ₹100,001	41	10.25

#### 4.1 Covariance structure measurement model results: reliability and validity

The covariance structure measurement model of the hypothesised theoretical framework (see Figure 2) was assessed by executing the CFA (Bagozzi and Phillips, 1982). In order to confirm GOF, reliability (internal consistency among items of a construct) and construct validity (i.e., convergent validity and discriminant validity) of the pertinent constructs of the hypothesised theoretical framework, the following criteria were utilised.

The GOF measurements of the covariance structure measurement model were evaluated utilising the fit indices such as  $\chi^2 = 669.950$ ;  $\chi^2/DF = 1.250$ ; GFI = 0.920; AGFI = 0.900; TLI = 0.984; CFI = 0.986; and RMSEA = 0.025. All the obtained values of the fit indices are as per the recommended values for a very good model fit (see Table 4). This ensures that the covariance structure measurement model of the hypothesised theoretical framework sensibly fits the current data (Arbuckle, 2006).



Cronbach's  $\alpha$  statistics were utilised to confirm the internal consistency among items (i.e., reliability) of each of the pertinent constructs (Fornell and Larcker, 1981). If Cronbach's  $\alpha$  for a construct is greater than 0.70, then the reliability of the construct is considered to be good (Hair et al., 1998). In this study, Cronbach's  $\alpha$  values for all the pertinent constructs ranged from 0.789 to 0.954 (see Table 5), provided evidence for the good reliability of the relevant constructs (Chauhan, 2015). In order to certify construct validity, convergent validity and discriminant validity of the relevant constructs were measured.

The convergent validity of the relevant constructs was assessed by examining the standardised factor loadings (or standardised regression weights), average variance extracted (AVE), and composite reliability (CR). As the standardised regression weights for all constructs item loadings exceeded the recommended level of 0.50 (Casaló et al., 2008; Edward et al., 2010), see Table 5. Besides, all the values of the standardised factor loadings were also significant at  $p < 0.05$ . These provide evidence for the convergent validity of the pertinent constructs. Table 5 illustrates AVE for all the pertinent constructs ranging from 0.567 to 0.874, exceeded the recommended level of 0.50 (Fornell and Larcker, 1981). The CR of each of the pertinent constructs exceeded the recommended value of 0.7 (Chauhan, 2015), see Table 5. Thus, the convergent validity of all the eleven latent constructs is supported.

**Table 4** Threshold values of fit indices recommended for a good or a very good model fit in SEM

<i>Index</i>	<i>Recommended values for a good fit</i>	<i>Recommended values for a very good fit</i>	<i>Sources</i>
$\chi^2$	-	-	
Root mean square error of approximation (RMSEA)	<0.08	<0.05	Byrne (1998)
Goodness-of-fit index (GFI)	>0.85	>0.9	Bollen (1989), Byrne (2010), Papke-Shields et al. (2002) and Chauhan (2015)
Adjusted goodness-of-fit index (AGFI)	>0.8	>0.9	Byrne (2010) and Chauhan (2015)
Comparative fit index (CFI)	>0.8	>0.9	Byrne (1998) and Zhang et al. (2002)
Tucker Lewis index (TLI)	>0.8	>0.9	Byrne (1998) and Zhang et al. (2002)
$\chi^2/df$	>1 and <5	>1 and <3	Bollen (1989) and Byrne (1998)

Finally, in order to confirm the discriminant validity of the relevant constructs, squared multiple correlations (SMC) values were compared with the square root of AVE. Since the value of SMC for each item was less than the value of the square root of AVE of the construct from which the item belongs (Fornell and Larcker, 1981) and exceeded the recommended level of 0.3 (Bagozzi and Yi, 1988), ensured the discriminant validity of the constructs (Chin et al., 1997), see Table 5. Therefore, acceptable values for GOF of the covariance structure measurement model of the hypothesised conceptual framework, the reliability of the scales and validity of the constructs were achieved. Satisfying

reliability and validity concerns of the measures indicate their acceptability for hypotheses testing (Mathieu and Taylor, 2006).

**Table 5** Result of CFA, reliability and construct validity

<i>Constructs</i>	<i>Items</i>	<i>SFL</i>	<i>SMC</i>	<i>Cronbach's <math>\alpha</math></i>	<i>CR<sup>a</sup></i>	<i>AVE<sup>b</sup></i>
Use of 9-ending prices in advertisements (UNEPIA)	UNEPIA1	0.833	0.694	0.822	0.826	0.615
	UNEPIA2	0.843	0.711			
	UNEPIA3	0.663	0.440			
Entertainment benefit (EB)	EB1	0.835	0.698	0.824	0.827	0.618
	EB2	0.851	0.724			
	EB3	0.658	0.433			
Value expression benefit (VEB)	VEB1	0.800	0.640	0.804	0.808	0.585
	VEB2	0.683	0.466			
	VEB3	0.805	0.648			
Savings benefit (SB)	SB1	0.936	0.876	0.934	0.935	0.829
	SB2	0.887	0.787			
	SB3	0.907	0.823			
Convenience benefit (CB)	CB1	0.901	0.811	0.883	0.884	0.719
	CB2	0.821	0.675			
	CB3	0.819	0.671			
Low-quality (LQ)	LQ1	0.831	0.691	0.789	0.796	0.567
	LQ2	0.733	0.537			
	LQ3	0.688	0.473			
Enhanced-value (EV)	EV1	0.979	0.950	0.860	0.877	0.712
	EV2	0.593	0.351			
	EV3	0.909	0.827			
Discount price (DP)	DP1	0.817	0.667	0.913	0.905	0.706
	DP2	0.864	0.746			
	DP3	0.774	0.599			
	DP4	0.900	0.811			
Misleading action (MA)	MA1	0.801	0.642	0.889	0.896	0.685
	MA2	0.940	0.884			
	MA3	0.824	0.679			
	MA4	0.731	0.534			
Consumers' price perception (CPP)	CPP1	0.923	0.851	0.954	0.954	0.874
	CPP2	0.951	0.905			
	CPP3	0.930	0.866			
Consumers' proneness to buy (CPTB)	CPTB1	0.939	0.882	0.952	0.945	0.813
	CPTB2	0.929	0.863			
	CPTB3	0.931	0.866			
	CPTB4	0.800	0.640			

Notes: SFL – standardised factor loadings, SMC – squared multiple correlations, CR – composite reliability, AVE – average variance extracted, <sup>a</sup>composite reliability (CR) =  $(\sum SFL)^2 / (\sum SFL)^2 + (\sum \text{indicator measurement error})$ , <sup>b</sup>average variance extracted (AVE) =  $\sum SMC / (\sum SMC + \sum \text{standard measurement error})$ .

## 4.2 Structural model assessment results and hypotheses testing

Prior to assessing the structural model of the hypothesised theoretical framework of this study (see Figure 2), some significant tests were performed to certify that there were not any problematic issues with the dataset. First of all, common method bias was examined, which if present could result in ambiguous decisions (Podsakoff et al., 2003). Hence, in order to ensure the absence of common method bias, Harman's one-factor test was performed (Podsakoff and Organ, 1986). The consequences provided 15.427% of total variance for a single factor which is less than 50%, suggests the absence of common method bias in the dataset, and also confirms the application of structural equation modelling technique to the dataset (Podsakoff and Organ, 1986).

In order to ensure the absence of multicollinearity between two or more observed variables, the variance inflation factor (VIF) of the observed variables including the interaction terms were examined. The highest value of VIF recorded among the variables was 6.524, confirming that the assumption of the multicollinearity was not violated when compared to a cut-off point of 10 (Hair et al., 2006). After confirming the covariance structure measurement model of the hypothesised theoretical framework and the absence of common method bias and multicollinearity from the dataset, structural equation modelling technique using maximum-likelihood estimation was utilised to analyse the hypothesised relationships between the latent constructs of the hypothesised theoretical framework (see Figure 2). The GOF measurements of the structural model was evaluated using the fit indices such as  $\chi^2 = 1,074.730$ ;  $\chi^2/DF = 1.850$ ; GFI = 0.869; AGFI = 0.850; TLI = 0.946; CFI = 0.950; and RMSEA = 0.046. All the obtained values of the fit indices are as per the recommended values for a good model fit (see Table 4). This ensures that the structural model of the hypothesised theoretical framework of this study (see Figure 2) sensibly fits the current data (Arbuckle, 2006).

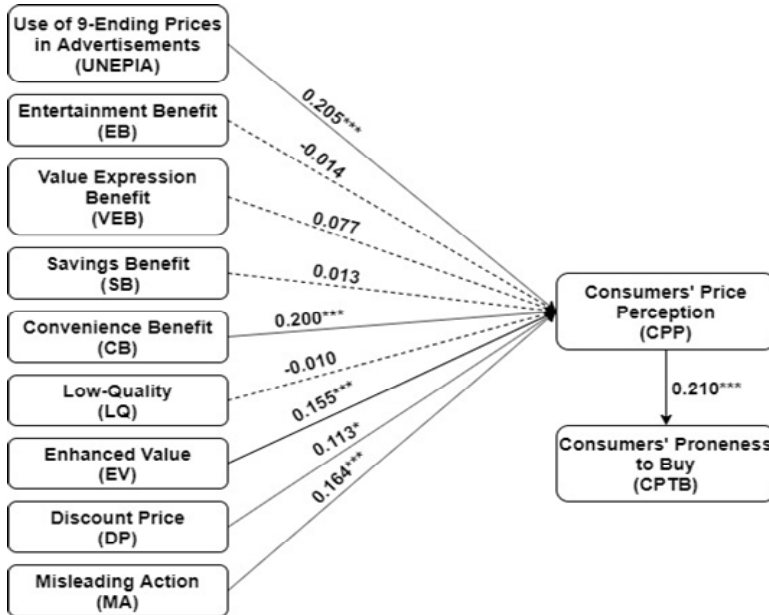
### 4.2.1 Hypotheses testing

Table 6 summarises the outcomes of hypotheses testing. Standardised  $\beta$ -estimates were used to show the robustness of relationships between independent and dependent constructs of the pertinent structural model of the hypothesised theoretical framework of this study (see Figure 2). H<sub>1</sub> stated that the use of 9-ending prices in advertisements positively impacts CPP. The outcome of hypotheses testing supported H<sub>1</sub> ( $\beta = 0.205$ ,  $p \leq 0.001$ ). H<sub>2</sub> anticipated a positive relationship between entertainment benefit image associated with the retail advertisement of products' 9-ending prices and CPP. The result of hypotheses testing made us reject H<sub>2</sub> ( $\beta = -0.014$ ,  $p > 0.05$ ). H<sub>3</sub> anticipated a positive impact of value expression benefit image associated with the retail advertisement of products bearing 9-ending prices on CPP. The result of hypotheses testing made us reject H<sub>3</sub> ( $\beta = 0.077$ ,  $p > 0.05$ ).

H<sub>4</sub> stated that savings benefit image associated with the retail advertisement of products' 9-ending prices positively impacts CPP. However, the result of hypotheses testing did not support H<sub>4</sub> ( $\beta = 0.013$ ,  $p > 0.05$ ). H<sub>5</sub> predicted that convenience benefit image associated with the retail advertisement of products' 9-ending prices positively impacts CPP. The result of the structural model supported H<sub>5</sub> ( $\beta = 0.200$ ,  $p \leq 0.001$ ). H<sub>6</sub> anticipated a negative relationship between low-quality image associated with the retail advertisement of products bearing 9-ending prices and CPP. The outcome of hypotheses testing made us reject H<sub>6</sub> ( $\beta = -0.010$ ,  $p > 0.05$ ). H<sub>7</sub> stated a positive relationship between

enhanced-value image associated with the retail advertisement of 9-ending prices and CPP. The outcome of the structural model supported H<sub>7</sub> ( $\beta = 0.155, p \leq 0.001$ ). H<sub>8</sub> anticipated a positive impact of discount price image associated with the retail advertisement of 9-ending prices on CPP. The result of hypotheses testing supported the H<sub>8</sub> ( $\beta = 0.113, p \leq 0.05$ ).

**Figure 3** Structural model of the hypothesised theoretical framework of the study



Notes: \*\*\* $p \leq 0.001$ , \* $p \leq 0.05$ ,  $\longrightarrow$  signifies significant relationship and  $\dashrightarrow$  signifies non-significant relationship.

**Table 6** Results of hypotheses testing

Hypotheses	Regression weights	Standardised $\beta$ -values	t-values (CR)	p-values	Results
H <sub>1</sub>	UNEPIA $\longrightarrow$ CPP	0.205	3.890	***	Accepted
H <sub>2</sub>	EB $\longrightarrow$ CPP	-0.014	-0.267	0.790	Rejected
H <sub>3</sub>	VEB $\longrightarrow$ CPP	0.077	1.451	0.147	Rejected
H <sub>4</sub>	SB $\longrightarrow$ CPP	0.013	0.264	0.791	Rejected
H <sub>5</sub>	CB $\longrightarrow$ CPP	0.200	3.927	***	Accepted
H <sub>6</sub>	LQ $\longrightarrow$ CPP	-0.010	-0.189	0.850	Rejected
H <sub>7</sub>	EV $\longrightarrow$ CPP	0.155	3.211	0.001	Accepted
H <sub>8</sub>	DP $\longrightarrow$ CPP	0.113	2.242	0.025	Accepted
H <sub>9</sub>	MA $\longrightarrow$ CPP	0.164	3.287	0.001	Accepted
H <sub>10</sub>	CPP $\longrightarrow$ CPTB	0.210	4.056	***	Accepted

Note: \*\*\* mean p-value is less than or equal to 0.001 OR  $p \leq 0.001$ .

H<sub>9</sub> predicted a positive association between misleading action image associated with the retail advertisement of 9-ending prices and CPP. The outcome of hypotheses testing supported H<sub>9</sub> ( $\beta = 0.164, p \leq 0.001$ ). H<sub>10</sub> stated a positive impact of CPP towards the retail advertisements of products bearing 9-ending prices on CPTB the products bearing 9-ending prices. The result of the structural model supported H<sub>10</sub> ( $\beta = 0.210, p \leq 0.001$ ). In addition, the model explained 0.152% variations in CPP towards the retail advertisements of products bearing 9-ending prices and 0.044% variations in CPTB the products bearing 9-ending prices. The smaller values of  $R^2$  for the CPP and the CPTB may be because of psychological factors and also because of the first study in the Indian context (Falk and Miller, 1992).

## 5 Discussion of the study

This study attempts to understand the effect of the ubiquitous use of 9-ending prices (e.g., ₹999, ₹99.99, and ₹49) in retail advertisements of newspapers and free-home drop advertising materials offered by the mall retail stores on Indian CPP and proneness to buy. Outcomes show that the use of 9-ending prices in retail advertisements positively impacts CPP. This means the Indian consumers perceive the retail advertisements of prices having 9-ending as catchy and common. In addition, the advertisements of prices having 9-ending connote an image of a good deal, discounting or high value to Indian consumers (Mulky et al., 2014). The findings are consistent with (Aalto-Setälä, 2005; Asamoah and Chovancová, 2011). Entertainment benefit, a type of hedonic benefit (Chandon et al., 2000; Gaston-Breton and Duque, 2015) image associated with the retail advertisement of products' prices having 9-ending did not have any significant positive impact on CPP. This highlights that the Indian consumers do not perceive the advertisements of the prices bearing 9-ending as entertaining, fun giving and enjoyable. This contradicts (Chandon et al., 2000; Gaston-Breton and Duque, 2015). Value expression benefit, a type of hedonic benefit (Chandon et al., 2000; Gaston-Breton and Duque, 2015) image associated with the retail advertisements of products bearing 9-ending prices did not show any significant positive effect on CPP. This means in India, purchasing products bearing 9-ending prices does not make the consumers feel as smart shoppers and bring any feeling of pride. The rationale for this may be either ubiquitous practice of 9-ending prices in retail advertisements (see Table 2) or as the Indian consumers do not perceive any big difference between ₹149 and ₹150 (Mulky et al., 2014). Savings benefit, also a utilitarian benefit (Chandon et al., 2000; Gaston-Breton and Duque, 2015) image associated with the retail advertisements of products' 9-ending prices did not show any significant positive effect on CPP. This explains that the Indian consumers do not perceive any monetary savings on purchasing products that are labeling with the prices having 9-ending. This result shows consistency with (Mulky et al., 2014; Kumar and Pandey, 2018).

Convenience benefit, also a utilitarian benefit (Chandon et al., 2000; Gaston-Breton and Duque, 2015) image associated with the retail advertisements of products' 9-ending prices showed a significant positive impact on the Indian CPP. This explains that the retail advertisements of products' 9-ending prices diminish consumers' search and decision costs and so increase their purchasing convenience. Thus the findings are consistent with (Chandon et al., 2000; Gaston-Breton and Duque, 2015). The low-quality image associated with the retail advertisements of products bearing 9-ending prices did

not show any significant negative impact on CPP. However, a weak relationship between low-quality image associated with the 9-ending prices and CPP may be predicted from the results, because  $H_6$  produced an insignificant relationship between low-quality image associated with 9-ending prices and consumers price perception towards the retail advertisements of products bearing 9-ending prices ( $\beta = -0.010$ ,  $t = -0.189$  at  $p > 0.05$ ). The enhanced-value image associated with the retail advertisements of 9-ending prices was found to show a significant positive impact on CPP. This means consumers prefer to purchase the products tagged with the prices having 9-ending because they perceive a high-value from the prices having 9-ending. This finding is consistent with Choi et al. (2012) and Mulky et al. (2014) however contradicts (Quigley and Notarantonio, 2015) and partially contradicts (Jeong and Crompton, 2018). Moving further, discount price image associated with the retail advertisements of prices having 9-ending was found to have a significant positive impact on CPP. It means the retail advertisements of 9-ending prices connote a meaning of low-price or a discounted price to the Indian consumers and so they sometimes perceive the product's labelling with 9-ending prices on sale or special offer. The finding is consistent with many previous studies (Bliss, 1952; Lambert, 1975; Dodds and Monroe, 1985; Berman and Evans, 1986; Schindler and Wiman, 1989; Stiving and Winer, 1997; Schindler and Kirby, 1997; Schindler, 1991, 2006; Schindler and Kibarian, 2001; Guido and Peluso, 2004; Bizer and Schindler, 2005; Kleinsasser and Wagner, 2011; Choi et al., 2014; Quigley and Notarantonio, 1992; Mulky et al., 2014) however partially contradicts (Jeong and Crompton, 2018). MA image associated with the retail advertisements of 9-ending prices was found to show a significant positive impact on CPP. This shows that the prices having 9-ending connote an image of misleading or cheating to the Indian consumers and therefore they get attracted to the products bearing 9-ending prices. It means that a 9-ending price creates an illusion of low or discounted price to the Indian consumers. This finding is consistent with previous studies [Schindler, (1991), p.798; Diller and Brielmaier, 1995; Suri et al., 2004; Nguyen et al., 2007; Bambauer-Sachse and Grewal, 2011; Jeong and Crompton, 2018]. The CPP towards the retail advertisements of products bearing 9-ending prices was found to have a significant positive impact on CPTB the products tagged with the 9-ending prices. This means the retail advertisements of products' 9-ending prices displayed in newspapers and in free home-drop advertising materials (e.g., leaflets and weekly magazines) can be one of the reasons for greater traffic in the Indian mall retail stores.

## **6 Findings and implications of the study**

This research is one of the pioneering efforts to study the use of 9-ending prices in the Indian context. It examined the effect of the prevalent use of 9-ending prices in retail advertisements in newspapers and in free home-drop advertising materials on Indian CPP and consequently on their proneness to purchase the products bearing 9-ending prices.

The findings of this study would aid mall retail stores and pricing managers to understand when and for which customer group 9-ending prices should be promoted. The findings would also aid fulfil consumers' need for price information. This research offers practical implications for retailers to improve the effectiveness of retail advertisements of products bearing 9-ending prices displayed in newspapers and in free home-drop advertising materials. But, the retailers and the managers are required to be cognizant that ubiquitous retail advertisements of products bearing 9-ending prices highlight different

benefits to different groups of consumers. That is, the prices having 9-ending do not connote a signal of a good deal to all the consumers however those communicate the meaning of misleading action to them. In a nutshell, the widespread use of 9-ending prices in retail advertisements impact the Indian CPP which persuades their proneness to buy the products bearing 9-ending prices. Above all, the current research produces suggestions that may be fruitful to academicians, retailers, pricing managers of various national and international repute for devising pricing and advertising strategies for retail products in the Indian context.

## 7 Limitations of the study and scope for future research

Though the current research provides some additional contributions to the existing field of study with a focus on Indian consumers, still, this has some limitations. First, the study is confined to the metropolitan and non-metropolitan cities of India. The people of metropolitan and non-metropolitan regions have a better opportunity for shopping in malls as compared to the people of rural regions, and therefore the findings may not be generalised. Moreover, future studies can be conducted by taking samples from more parts of India including rural regions. Second, since the data was collected in retail malls and so it is acknowledged that the prices having 9-ending may not apply to luxury and high-end goods in India. Third, the present study is concerned itself with the CPP towards the retail advertisements of products bearing 9-ending prices persuading the CPTB the products bearing 9-ending prices. Therefore, further studies may use consumers' involvement profile and sale proneness as moderating factors. In addition, future studies may examine the impact of factors such as value consciousness, price consciousness, and coupon proneness on CPP towards the retail advertisements of products bearing 9-ending prices. Future studies may also consider the cultural aspects of 9-ending prices in India.

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## Notes

- 1 <https://www.ibef.org/industry/retail-india.aspx> (accessed 2 February 2019).
- 2 <https://www.worldometers.info/world-population/india-population> (accessed 4 February 2019).
- 3 <https://www.ibef.org/industry/retail-india.aspx> (accessed 4 February 2019).
- 4 <https://www.ibef.org/industry/retail-india.aspx> (accessed 15 February 2019).
- 5 <http://www.thehindu.com/news/national/tamil-nadu/25-paise-coins-invalid-from-June-30/article14956388.ece> (accessed 20 March 2019).

## Appendix

**Table 7** Results of EFA

<i>Constructs items</i>		<i>Factor loadings</i>
<i>Use of 9-ending prices in advertisements (Aalto-Setälä, 2005; Asamoah and Chovancová, 2011)</i>		
UNEPIA1	The advertisements of products bearing 9-ending prices (e.g., ₹199, ₹499, ₹69, and ₹99.99) appear catchy to me.	0.824
UNEPIA2	The advertisements of products bearing 9-ending prices (e.g., ₹199.99, ₹499, ₹69, and ₹99) appear pervasive to me.	0.791
UNEPIA3	The advertisements of products bearing 9-ending prices (e.g., ₹199, ₹499.99, ₹69, and ₹99) attract me at the store.	0.793
<i>Entertainment benefit (Chandon et al., 2000; Gaston-Breton and Duque, 2015)</i>		
EB1	The advertisements of products bearing 9-ending prices are fun to me.	0.800
EB2	The advertisements of products bearing 9-ending prices are entertaining to me.	0.788
EB3	The advertisements of products bearing 9-ending prices are enjoyable to me.	0.816
<i>Value expression benefit (Chandon et al., 2000; Gaston-Breton and Duque, 2015)</i>		
VEB1	The advertisements of products bearing 9-ending prices make me feel good about myself on purchasing the products.	0.851
VEB2	The advertisements of products bearing 9-ending prices make me feel proud of myself on purchasing the products.	0.808
VEB3	The advertisements of products bearing 9-ending prices make me feel a smart shopper about myself on purchasing the products.	0.864
<i>Savings benefit (Chandon et al., 2000; Gaston-Breton and Duque, 2015)</i>		
SB1	I really save money on buying a product bearing a 9-ending price.	0.945
SB2	I really spend less on buying a product bearing a 9-ending price.	0.932
SB3	I feel that I am getting a good deal on buying a product bearing a 9-ending price.	0.936
<i>Convenience benefit (Chandon et al., 2000; Gaston-Breton and Duque, 2015)</i>		
CB1	The advertisements of products bearing 9-ending prices remind me that I need the products.	0.862
CB2	The advertisements for products bearing 9-ending prices make my purchasing easy.	0.850
CB3	The advertisements of products bearing 9-ending prices help me remember what I need.	0.842

**Table 7** Results of EFA (continued)

<i>Constructs items</i>		<i>Factor loadings</i>
<i>Low-quality (Jeong and Crompton, 2018)</i>		
LQ1	The advertisements of products bearing 9-ending prices suggest that the products are of poor quality.	0.870
LQ2	The advertisements of products bearing 9-ending prices make me doubt that these are of good quality.	0.832
LQ3	The advertisements of products bearing 9-ending prices mean the products' quality is not reliable.	0.810
<i>Enhanced value (Jeong and Crompton, 2018)</i>		
EV1	The advertisements for products bearing 9-ending prices make them more acceptable I will buy them.	0.937
EV2	The advertisements of products bearing 9-ending prices make me prefer them to purchase.	0.764
EV3	The advertisements of products bearing 9-ending prices are more likely to capture my attention when selecting a product.	0.914
<i>Discount price (Jeong and Crompton, 2018; Mulky et al., 2014; Quigley and Notarantonio, 2015)</i>		
DP1	The advertisements of products bearing 9-ending prices suggest that the products' prices are being discounted (Jeong and Crompton, 2018).	0.898
<i>Discount price (Jeong and Crompton, 2018; Mulky et al., 2014; Quigley and Notarantonio, 2015)</i>		
DP2	The advertisements of products bearing 9-ending prices indicate that the products' prices have been recently reduced (Jeong and Crompton, 2018).	0.882
DP3	The advertisements of products bearing 9-ending prices suggest that the products are on sale (Mulky et al., 2014; Quigley and Notarantonio, 2015).	0.873
DP4	The advertisements of products bearing 9-ending prices suggest a terrific bargain (Quigley and Notarantonio, 2015).	0.892
<i>Misleading action (Jeong and Crompton, 2018; Bambauer-Sachse and Grewal, 2011)</i>		
MA1	The advertisements of products bearing 9-ending prices indicate a trick to mislead consumers (Jeong and Crompton, 2018).	0.789
MA2	The advertisements of products bearing 9-ending prices indicate that the products' prices are unfair because they are used to make the prices look smaller than actually, they are (Jeong and Crompton, 2018).	0.799
MA3	The advertisements of products bearing 9-ending prices present the products' prices in an unclear way (Bambauer-Sachse and Grewal, 2011).	0.857
MA4	The advertisements of products bearing 9-ending prices present a quite complex price information (Bambauer-Sachse and Grewal, 2011).	0.818



**Table 7** Results of EFA (continued)

<i>Constructs items</i>		<i>Factor loadings</i>
<i>Consumers' price perception (Meng et al., 2008)</i>		
CPP1	The advertisements of products bearing 9-ending prices indicate that the products are worthy.	0.902
CPP2	The advertisements of products bearing 9-ending prices indicate that the products' prices are acceptably correct.	0.922
CPP3	The advertisements of products bearing 9-ending prices indicate that the products are valuable.	0.922
<i>Consumers' proneness to buy (Lichtenstein et al., 1993; Gaston-Breton and Duque, 2015)</i>		
CPTB1	I have a favourite brand, but most of the time I buy the brand that is priced at a 9-ending price.	0.927
CPTB2	Compared to most people, I am more likely to buy brands that are priced at 9-ending prices.	0.966
CPTB3	When I buy a brand that is priced at a 9-ending price, I feel that I am getting a good deal.	0.928
CPTB4	One should try to buy the brand that is priced at a 9-ending price.	0.900