An Eye-Tracking Investigation of the Price Label Layout Effect on Visual Attention and Choice

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The research tests how the layout of the unit price information: font size, position, signposting and colour coding; and consistency of the format, affect unit price usage during grocery choices. Eye-movements and purchase decisions are observed during a natural but experimentally designed shopping task.

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EXTENDED ABSTRACT

Unit price, the price per standardized unit of measure (e.g., per liter), is one of the ‘tools’ consumers use to ease price comparison (Aaker & Ford, 1983). However, many retailers present unit price information non-prominently and at varying locations on the price labels (Miyazaki et al. 2000). This research answers the US Government call for evidence regarding the link between the unit price layout and consumer use of this ‘tool’.

We examine four aspects of the unit price layout: (1) font size; (2) position on the price label in relation to the retail price; (3) the presence of the verbal cue “unit price”; and (4) coloured (yellow) background. Larger font size has been shown to increase attention duration almost two-fold (Pieters & Wedel, 2004). Proximity of an object to another element of interest resulted in visual attention transfer (Pieters & Wedel, 2004). Verbal cue within a text improved learning outcomes (Johnson, Butcher, Ozogul, & Reisslein, 2013). Colour attracts visual attention as a result of bottom up processes (Orquin & Mueller Loose, 2013).

Hypothesis 1: A more prominent layout, in the form of a larger font size, closer proximity to retail price, presence of verbal cue and coloured background, will result in increased visual attention to the unit price information during grocery choices.

Consistent display of unit prices maximise the ease of usage (Miyazaki et al. 2000). This is in line with the learning theories (Rothschild & Gaidis, 1981) and the eye-tracking literature reporting more attention to familiar objects (Orquin & Mueller Loose, 2013).

Hypothesis 2: Consistency (vs inconsistency) in the presentation format of the unit price information across categories will result in increased visual attention to the unit price information during grocery choices.

A convenience sample of 200 consumers completed a grocery shopping task of nine categories; each category presented three products (a total of 1800 choice observations). The high quality photos of products and price signage displayed on a computer screen with a built-in eye tracker (Tobii T120) replicated realistically-looking supermarket shelf. The study employed a 2 x 2 between-subjects factorial design with factors: layout of unit prices (good vs. poor) and consistency (consistent vs. inconsistent) in the position of unit prices across product categories. The layout of unit price information was manipulated in terms of: position (close to the retail price vs away), font size (6mm font height vs 4mm), presence of the word “unit price” vs absence, and background colour (yellow vs none). The consistency of unit price format varied when the unit price information was in the same position as in a preceding category.

We specified a two-level linear model for the fixation variables (time to first fixation on any unit price and total fixation duration on unit prices) with the inclusion of random variances at both the individual level (i) and the product category level (j), as

\[ y_{ij} = x_{ij}\beta + u_i + u_{ij} + \epsilon_{ij} \]

where \( u \) denotes the random effect. Predictors were experimental factors and their interactions terms.

Displaying unit prices in a ‘good’ layout led participants to attending more readily and more frequently to unit prices, while position consistency only acted as a moderator by influencing the effect of layout on fixation duration. There was a significant three-way interaction of layout × consistency × inter-brand (i.e., (c) × (d)) on the first fixation time such that for intra-brand categories the time is merely a function of layout (i.e., ‘good’ display resulted in fixating sooner on unit prices regardless of the consistency). Using bootstrap resampling method (Zhao, Lynch, and Chen’s, 2010), separate mediation tests for unit price presence, layout quality and position consistency, show positive and significant (95% CI excluding zero) indirect-only effects for all factors, suggesting the longer participants fixated on unit prices, the more they selected the lowest unit priced products.

The paper contributes to the marketing theory and practice by uncovering the role visual communication of price information in the supermarket environment plays in consumer choices, contributing to the discussion on bottom up vs top down cognitive processes through examination of visual attention.

REFERENCES