

商学研究所報

2017年2月

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consumer price perception

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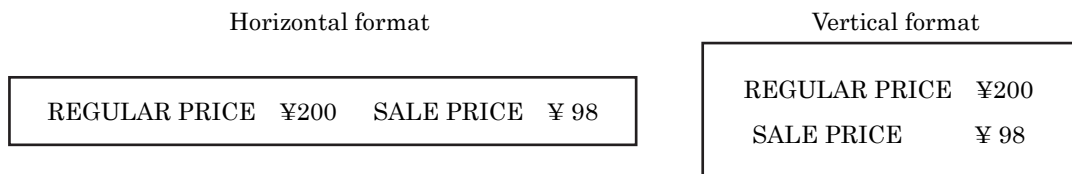
Abstract

Most retail advertisements, such as flyers or features, show both the sale price and an external reference price, such as the regular price. In such a case, how should advertisers display these prices? This study examines the effect of price placement format in advertisements. This study has two aims: (1) to examine the relationship between price perception and the format in the advertisement and (2) to examine the influence of psychological distance on price perception.

Introduction

Most retail advertisements, such as flyers or features, show both the sale price and an external reference price, such as the regular price. To address how advertisers should place prices in an advertisement, this study examines the effects of the price placement format. Figure 1 illustrates the vertical and horizontal formats this study will examine.

Figure 1: Advertisement price placement: Horizontal and vertical format



In addition, this study will consider the influence of temporal distance as psychological distance, defined as perceived distance of an individual toward an object, event, or person in terms of spatial, temporal, or social relevance. According to Construal Level Theory (CLT), psychological distance is one of the most important determinants at an individual's construal level, which affect whether they use primary, essential characteristics or secondary, peripheral characteristics in an evaluation. This research will focus on the effect of temporal distance as psychological distance on a consumer's price perception.

Therefore, the purpose of this research is (1) to examine the relationship between price perception and the format in the advertisement, and (2) to examine the influence of psychological distance on price perception.

Previous Research

Psychological distance and construal level

Trope and Liberman (2003) proposed CLT through a series of studies. CLT insists that a high construal level is related to abstract, simple thinking, while low construal level is related to concrete, complex thinking (Table 1). They also referred to the relationship between psychological distance and construal level, claiming that individuals form more abstract representations, or high construals, toward distant-future events than near-future events. High-level construals consist of primary, abstract, decontextualized features that convey the essence of information about future events, whereas low-level construals include secondary, concrete, contextual, and incidental details.

Table1: Distinguishing High-level and Low-level Construals
(Trope and Liberman, 2003)

| High-level Construals | Low-level Construals |
|-----------------------|--------------------------|
| Abstract | Concrete |
| Simple | Complex |
| Structured, coherent | Unstructured, incoherent |
| Decontextualized | Contextualized |
| Primary, core | Secondary, surface |
| Superordinate | Subordinate |
| Goal relevant | Goal irrelevant |

Relationship between psychological distance and the role of price

Earlier studies discuss the relationship between psychological distance and the role of price. Bornemann and Homburg (2011) claimed that price has two roles: as a quality indicator and as a sacrifice, and that the strength of the role of price differs depending on the psychological distance. Therefore, considerations related to the core benefits of a product should prevail from a psychologically distant perspective; whereas from a near perspective, cost-related considerations should come into play as well. In conclusion, when the psychological distance is far, quality has a stronger role than sacrifice. On the other hand, when the psychological distance is near, sacrifice has a stronger role than quality.

For expensive products in particular, they claimed, (1) perceived quality is higher when psychological distance is far, (2) perceived sacrifice is higher when psychological distance is close, and (3) quality evaluation is higher when psychological distance is far.

Construal level lottery experiment

Some previous researches examined the effect of construal level in the context of lottery experiments (Segristano et al. 2002, Trope et al. 2007), and empirically confirmed that a high construal level will promote a focus on the winning amount as desirability. On the other hand, a low construal level will promote a focus on the winning probability as feasibility.

Effect of prices format on perception

Choi and Coulter (2012) examined the effect of price placement in advertisements on consumer perception. As shown in Table 2, they treated with two types of price difference: absolute price difference, such as “¥80 discount,” and relative price difference, such as “20% discount.” They also examined which price difference the consumer will focus on in horizontal and vertical formats.

Table 2: Price combinations and price differences

| | Regular price | Sale price | Absolute price difference | Relative price difference | |
|----------|---------------|------------|---------------------------|---------------------------|---|
| option 1 | \$99 | \$59 | \$40 | 40.4% | Option 1 is the greater absolute price difference option. |
| option 2 | \$35 | \$11 | \$24 | 68.6% | Option 2 is the greater relative price difference option. |

According to their results, when competitive prices are placed vertically, consumers are more likely to choose the price pair option representing the greater relative discount than the price pair option representing the greater absolute discount. On the other hand, when prices are placed horizontally, consumers are more likely to choose the price pair option representing the greater absolute discount than the price pair option representing the greater relative discount.

Empirically, the results show that in the vertical format, 46% of participants chose the option in which the absolute price difference was greater, while 54% chose the option in which the relative price difference was greater, which is not significant. On the other hand, in the horizontal format, 61% of participants chose the option in which the absolute price difference was greater, while 39% chose the option in which the relative price difference was greater, which is significant at 0.1% level. Therefore, they concluded that consumers are likely to choose the greater absolute difference option in

the horizontal format.

Hypotheses

In this study, we focus on the psychological distance as temporal distance. Therefore, we construct the hypotheses related to temporal distance.

Relationship between temporal distance and consumer price perception

Based on Sagristano et al. (2002), and Trope et al. (2007), we construct hypothesis 1 (H1) in terms of the relationship between temporal distance and consumer price perception.

H1: Consumers are likely to choose the option with the greatest relative price difference in the near future condition compared to the distant future condition.

Bornemann and Homburg (2011) showed that the sacrifice role of price is stronger in the near future condition than in the distant future condition. Based on H1 and this finding, we propose hypothesis 2 (H2):

H2: In the near future condition, consumers are likely to choose the option with the greatest relative price difference rather than the option with the greatest absolute price difference.

Relationship between temporal distance and price format

Based on Choi and Coulter (2012), we propose the following hypotheses on the relationship between temporal distance and price format.

H3: In the near future condition, consumers are likely to choose the option with the greatest relative price difference in the horizontal format rather than in the vertical format.

H4: In the distant future condition, consumers are likely to choose the option with the greatest absolute difference in the horizontal format rather than in the vertical format.

Study

Method

We collected data using a sample of seventy-nine undergraduate students taking in a marketing research class at a private university in Kanagawa Prefecture in June 2016.

The questionnaire survey was conducted as follows. Between the greater absolute price difference option and the greater relative price difference option, subjects were presented with 20 paired comparisons to choose from in a shopping situation.

The experimental conditions are designed using two temporal distance levels: one week later as the near future condition and four weeks later as the distant future condition and two format levels (vertical or horizontal format as in Figure 1). Subjects were assigned to one of the four conditions.

Subjects were asked to choose one option between the greater absolute price difference option and the greater relative price difference option for 20 patterns of choice in a condition. For each choice, participants also had the option to express an intention to purchase in both options. To check for manipulation of construal levels, participants were also asked about items of BIF scale (Vallacher and Wegner 1989) to measure subjects' construal level. We conducted chi-squared tests using the collected data to examine the former hypotheses.

Results and Discussion

The choices for each of the 20 patterns are shown in the Appendix. Here, we examine the aggregate results only.

The main effect of price display format and temporal distance on choice

First, we examine the main effect of price display format and temporal distance on choice. Table 3 shows the results for all data and in each condition. All the results are significant at 1%, or 5% level at least.

Table 3: The results of choice (all data)

| | n | % | χ^2 | p-value |
|--|-----|-------|----------|---------|
| Total(n=1580) | | | | |
| Greater absolute difference option is chosen | 717 | 45.4% | 13.49 | 0.00 |
| Greater relative difference option is chosen | 863 | 54.6% | | |
| Temporal distance: near future (n=920) | | | | |
| Greater absolute difference option is chosen | 490 | 53.3% | 3.91 | 0.05 |
| Greater relative difference option is chosen | 430 | 46.7% | | |
| Temporal distance: distant future (n=660) | | | | |
| Greater absolute difference option is chosen | 227 | 34.4% | 64.30 | 0.00 |
| Greater relative difference option is chosen | 433 | 65.6% | | |
| Layout: Vertical Layout (n=640) | | | | |
| Greater absolute difference option is chosen | 287 | 44.8% | 6.81 | 0.01 |
| Greater relative difference option is chosen | 353 | 55.2% | | |
| Layout: Horizontal Layout (n=940) | | | | |
| Greater absolute difference option is chosen | 430 | 45.7% | 6.81 | 0.01 |
| Greater relative difference option is chosen | 510 | 54.3% | | |

In Table 3, the results for all data are significant, but with the signs that are the opposite of those in Choi and Coulter (2012). Therefore, when the regular price and sale price are displayed vertically, consumers were more likely to choose the price pair representing the greater relative discount than the price pair representing the greater absolute discount. On the other hand, when these prices are displayed horizontally, consumers were be more likely to choose the price pair representing the greater absolute discount than the price pair representing the greater relative discount.

Influence of both price format and temporal distance on consumer choice

Next, we examine the influence of both the price format and temporal distance on consumer choice. From the result for all data in Table 4, neither the horizontal or vertical price format influenced consumer choice. This shows that the focus point of price difference will not change by format without considering temporal distance.

Table 4: Results: Price format and temporal distance on consumer choice (all data)

Total:

| | Greater absolute price difference option was chosen | Greater relative price difference option was chosen | Total |
|-------------------|---|---|-------|
| Vertical format | 287 | 353 | 640 |
| Horizontal format | 430 | 510 | 940 |
| Total: | 717 | 863 | 1580 |

$\chi^2 = 0.09$
df = 1
p-value = 0.79

Relationship between temporal distance and consumer choice

H1: Consumers are likely to choose the option with the greatest relative price difference in the near future condition compared to the distant future condition.

As shown in Table 5, hypothesis 1 was supported at 1 % significant level.

Table 5: Relationship between temporal distance and consumer price perception

Total:

| | Greater absolute price difference option was chosen | Greater relative price difference option was chosen | Total |
|--------------------|---|---|-------|
| Temporal distance: | | | |
| distant | 227 | 433 | 660 |
| near | 490 | 430 | 920 |
| Total: | 717 | 863 | 1580 |

$\chi^2 = 54.43$
df=1
p-value=0.00

H2: In the near future condition, consumers are likely to choose the option with the greatest relative price difference rather than the option with the greatest absolute price difference.

Table 6 shows the results for the near future condition. They are significant, though they run contrary to the hypothesis.

Table 6: Temporal distance: Near future condition

| | n | % | χ^2 | p-value |
|--|-----|-------|----------|---------|
| Temporal distance: near (n=920) | | | | |
| the greter absolute price difference option was chosen | 490 | 53.3% | 3.91 | 0.05 |
| the greter relative price difference option was chosen | 430 | 46.7% | | |

Relationship between temporal distance and display format

We next investigate the effect of temporal distance and price format on consumer choice. In the near future condition, the difference was not significant as shown in Table 7. However, in the distant future condition, the difference by the format was confirmed at the 5% significance level, as shown in Table 8.

H3: In the near future condition, consumers are likely to choose the option with the greatest relative price difference in the horizontal format rather than in the vertical format.

As shown in Table 7, hypothesis 3 was rejected, indicating that there was no difference by price format in the near future condition.

Table 7: The results in near future condition

| Temporal distance: near future condition | | | |
|--|---|---|-------|
| | Greater absolute price difference option was chosen | Greater relative price difference option was chosen | Total |
| Vertical format | 225 | 195 | 420 |
| Horizontal format | 265 | 235 | 500 |
| | 490 | 430 | 920 |
| | $\chi^2 = 0.01$ | | |
| | df = 1 | | |
| | p-value = 0.92 | | |

H4: In the distant future condition, consumers are likely to choose the option with the greatest absolute difference in the horizontal format rather than in the vertical format.

As shown in Table 8, hypothesis 4 was supported at 5% significance level, which is consistent with Choi and Coulter's (2012) results.

Table 8: Results for the distant future condition

| Temporal distance: in distant future condition | | | |
|--|---|---|-------|
| | Greater absolute price difference option was chosen | Greater relative price difference option was chosen | Total |
| Vertical format | 62 | 158 | 220 |
| Horizontal forma | 165 | 275 | 440 |
| | 227 | 433 | 660 |

$\chi^2 = 5.24$
 $df = 1$
 $p\text{-value} = 0.02$

Discussion

We now discuss the empirical analysis.

First, for the comparison based on temporal distance (hypothesis 1), consumers were more likely to choose the greater relative price difference option in the near future condition than in the distant future condition. This result is consistent with those of Segrignano et al. (2002) and Trope et al. (2007).

Second, for hypothesis 2, the result was statistically significant, but the signs were contrary to the hypothesis. This shows that consumers were likely to focus on the absolute price difference in the near future, a result inconsistent with those of Choi and Coulter (2012).

Third, the results confirmed the tendency to choose the greater absolute price difference option in the distant future condition.

Fourth, in the relatively inexpensive product condition treated in this study, the results are consistent with those of Kojima (1986), which showed that the percentage presentation emphasizing the absolute price difference is more effective for inexpensive products, while the actual price presentation emphasizing the relative price difference is more effective for expensive products.

Price placement in advertisements

In the near future condition, the results in this study do not confirm a statistically significant difference in consumer choice (hypothesis 3). On the other hand, in the distant future condition, the results confirm a tendency for consumers to choose the greater absolute price difference options.

Further research and limitations

There are some limitations in this research.

First, some of our findings are inconsistent with those of previous research. Our study confirmed the tendency for consumers to choose the greater absolute price difference option in the near future condition, though this is not consistent with Choi and Coulter (2012). It is not easy to find a reasonable interpretation to explain it.

Second, researchers should examine the effect of format on both choice and purchase intention empirically.

Third, it is possible that the manipulation on the construal level didn't work well in this study. BIF score to measure the construal level did not show any statistical difference between the near and distant future conditions (Average BIF, near condition=12.28; distant condition=12.46, t -value=-0.17, df =57.24, p -value=0.86). Therefore, future studies should consider improving the manipulation on construal levels with temporal distances.

Fourth, researchers should consider the effect of price format in the advertisement for many price ranges, from inexpensive to expensive products. Some previous studies, such as that by Kojima (1986), showed that the results differ by price range.

In addition to other elements in an advertisement, how to illustrate the sale price of a product must be one of the most important issues for effective promotion. Therefore, consumer research should continue to examine consumer price perceptions in advertisements.

Acknowledgement

This work was supported by JSPS KAKENHI Grant Number 15K03732.

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Appendix:

Table 9: Result (Temporal distance: distant future)

| pattern | regular price | sale price | absolute price difference | relative price difference | distant future | | | |
|---------|---------------|------------|---------------------------|---------------------------|----------------|-------|----------|---------|
| | | | | | Frequency | % | χ^2 | p-value |
| 1 | 99 | 59 | 40 | 40.4 | 8 | 24.2% | 8.76 | 0.00 |
| | 35 | 11 | 24 | 68.6 | 25 | 75.8% | | |
| 2 | 19 | 10 | 9 | 47.4 | 29 | 87.9% | 18.94 | 0.00 |
| | 97 | 70 | 27 | 27.8 | 4 | 12.1% | | |
| 3 | 95 | 65 | 30 | 31.6 | 7 | 21.2% | 10.94 | 0.00 |
| | 30 | 15 | 15 | 50.0 | 26 | 78.8% | | |
| 4 | 25 | 10 | 15 | 60.0 | 28 | 84.8% | 16.03 | 0.00 |
| | 89 | 59 | 30 | 33.7 | 5 | 15.2% | | |
| 5 | 79 | 55 | 24 | 30.4 | 14 | 42.4% | 0.76 | 0.38 |
| | 21 | 11 | 10 | 47.6 | 19 | 57.6% | | |
| 6 | 35 | 17 | 18 | 51.4 | 12 | 36.4% | 2.45 | 0.12 |
| | 87 | 45 | 42 | 48.3 | 21 | 63.6% | | |
| 7 | 85 | 45 | 40 | 47.1 | 18 | 54.5% | 0.27 | 0.60 |
| | 23 | 11 | 12 | 52.2 | 15 | 45.5% | | |
| 8 | 27 | 11 | 16 | 59.3 | 8 | 24.2% | 8.76 | 0.00 |
| | 77 | 35 | 42 | 54.5 | 25 | 75.8% | | |
| 9 | 75 | 49 | 26 | 34.7 | 24 | 72.7% | 6.82 | 0.01 |
| | 33 | 20 | 13 | 39.4 | 9 | 27.3% | | |
| 10 | 29 | 16 | 13 | 44.8 | 21 | 63.6% | 2.45 | 0.12 |
| | 69 | 41 | 28 | 40.6 | 12 | 36.4% | | |
| 11 | 90 | 60 | 30 | 33.3 | 4 | 12.1% | 18.94 | 0.00 |
| | 39 | 15 | 24 | 61.5 | 29 | 87.9% | | |
| 12 | 25 | 12 | 13 | 52.0 | 31 | 93.9% | 25.48 | 0.00 |
| | 55 | 39 | 16 | 29.1 | 2 | 6.1% | | |
| 13 | 49 | 40 | 9 | 18.4 | 6 | 18.2% | 13.36 | 0.00 |
| | 19 | 13 | 6 | 31.6 | 27 | 81.8% | | |
| 14 | 25 | 11 | 14 | 56.0 | 27 | 81.8% | 13.36 | 0.00 |
| | 45 | 29 | 16 | 35.6 | 6 | 18.2% | | |
| 15 | 28 | 20 | 8 | 28.6 | 5 | 15.2% | 16.03 | 0.00 |
| | 17 | 10 | 7 | 41.2 | 28 | 84.8% | | |
| 16 | 59 | 45 | 14 | 23.7 | 13 | 39.4% | 1.48 | 0.22 |
| | 80 | 65 | 15 | 18.8 | 20 | 60.6% | | |
| 17 | 65 | 60 | 5 | 7.7 | 8 | 24.2% | 8.76 | 0.00 |
| | 34 | 30 | 4 | 11.8 | 25 | 75.8% | | |
| 18 | 35 | 29 | 6 | 17.1 | 22 | 66.7% | 3.67 | 0.06 |
| | 57 | 49 | 8 | 14.0 | 11 | 33.3% | | |
| 19 | 42 | 32 | 10 | 23.8 | 12 | 36.4% | 2.45 | 0.12 |
| | 30 | 22 | 8 | 26.7 | 21 | 63.6% | | |
| 20 | 19 | 13 | 6 | 31.6 | 18 | 54.5% | 0.27 | 0.60 |
| | 39 | 29 | 10 | 25.6 | 15 | 45.5% | | |

Table 10: Result (Temporal distance: near future)

| pattern | regular price | sale price | absolute price difference | relative price difference | near future | | | |
|---------|---------------|------------|---------------------------|---------------------------|-------------|-------|----------|---------|
| | | | | | Frequency | % | χ^2 | p-value |
| 1 | 99 | 59 | 40 | 40.4 | 27 | 58.7% | 1.39 | 0.24 |
| | 35 | 11 | 24 | 68.6 | 19 | 41.3% | | |
| 2 | 19 | 10 | 9 | 47.4 | 31 | 67.4% | 5.57 | 0.02 |
| | 97 | 70 | 27 | 27.8 | 15 | 32.6% | | |
| 3 | 95 | 65 | 30 | 31.6 | 15 | 32.6% | 5.57 | 0.02 |
| | 30 | 15 | 15 | 50.0 | 31 | 67.4% | | |
| 4 | 25 | 10 | 15 | 60.0 | 28 | 60.9% | 2.17 | 0.14 |
| | 89 | 59 | 30 | 33.7 | 18 | 39.1% | | |
| 5 | 79 | 55 | 24 | 30.4 | 29 | 63.0% | 3.13 | 0.08 |
| | 21 | 11 | 10 | 47.6 | 17 | 37.0% | | |
| 6 | 35 | 17 | 18 | 51.4 | 11 | 23.9% | 12.52 | 0.00 |
| | 87 | 45 | 42 | 48.3 | 35 | 76.1% | | |
| 7 | 85 | 45 | 40 | 47.1 | 36 | 78.3% | 14.70 | 0.00 |
| | 23 | 11 | 12 | 52.2 | 10 | 21.7% | | |
| 8 | 27 | 11 | 16 | 59.3 | 8 | 17.4% | 19.57 | 0.00 |
| | 77 | 35 | 42 | 54.5 | 38 | 82.6% | | |
| 9 | 75 | 49 | 26 | 34.7 | 33 | 71.7% | 8.70 | 0.00 |
| | 33 | 20 | 13 | 39.4 | 13 | 28.3% | | |
| 10 | 29 | 16 | 13 | 44.8 | 21 | 45.7% | 0.35 | 0.56 |
| | 69 | 41 | 28 | 40.6 | 25 | 54.3% | | |
| 11 | 90 | 60 | 30 | 33.3 | 12 | 26.1% | 10.52 | 0.00 |
| | 39 | 15 | 24 | 61.5 | 34 | 73.9% | | |
| 12 | 25 | 12 | 13 | 52.0 | 27 | 58.7% | 1.39 | 0.24 |
| | 55 | 39 | 16 | 29.1 | 19 | 41.3% | | |
| 13 | 49 | 40 | 9 | 18.4 | 22 | 47.8% | 0.09 | 0.77 |
| | 19 | 13 | 6 | 31.6 | 24 | 52.2% | | |
| 14 | 25 | 11 | 14 | 56.0 | 25 | 54.3% | 0.35 | 0.56 |
| | 45 | 29 | 16 | 35.6 | 21 | 45.7% | | |
| 15 | 28 | 20 | 8 | 28.6 | 14 | 30.4% | 7.04 | 0.01 |
| | 17 | 10 | 7 | 41.2 | 32 | 69.6% | | |
| 16 | 59 | 45 | 14 | 23.7 | 12 | 26.1% | 10.52 | 0.00 |
| | 80 | 65 | 15 | 18.8 | 34 | 73.9% | | |
| 17 | 65 | 60 | 5 | 7.7 | 18 | 39.1% | 2.17 | 0.14 |
| | 34 | 30 | 4 | 11.8 | 28 | 60.9% | | |
| 18 | 35 | 29 | 6 | 17.1 | 22 | 47.8% | 0.09 | 0.77 |
| | 57 | 49 | 8 | 14.0 | 24 | 52.2% | | |
| 19 | 42 | 32 | 10 | 23.8 | 24 | 52.2% | 0.09 | 0.77 |
| | 30 | 22 | 8 | 26.7 | 22 | 47.8% | | |
| 20 | 19 | 13 | 6 | 31.6 | 15 | 32.6% | 5.57 | 0.02 |
| | 39 | 29 | 10 | 25.6 | 31 | 67.4% | | |

Table 11: Result (Price placement format: vertical format)

| pattern | regular price | sale price | absolute price difference | relative price difference | vertical format | | | |
|---------|---------------|------------|---------------------------|---------------------------|-----------------|-------|----------|---------|
| | | | | | Frequency | % | χ^2 | p-value |
| 1 | 99 | 59 | 40 | 40.4 | 17 | 53.1% | 0.13 | 0.72 |
| | 35 | 11 | 24 | 68.6 | 15 | 46.9% | | |
| 2 | 19 | 10 | 9 | 47.4 | 23 | 71.9% | 6.13 | 0.01 |
| | 97 | 70 | 27 | 27.8 | 9 | 28.1% | | |
| 3 | 95 | 65 | 30 | 31.6 | 7 | 21.9% | 10.13 | 0.00 |
| | 30 | 15 | 15 | 50.0 | 25 | 78.1% | | |
| 4 | 25 | 10 | 15 | 60.0 | 25 | 78.1% | 10.13 | 0.00 |
| | 89 | 59 | 30 | 33.7 | 7 | 21.9% | | |
| 5 | 79 | 55 | 24 | 30.4 | 17 | 53.1% | 0.13 | 0.72 |
| | 21 | 11 | 10 | 47.6 | 15 | 46.9% | | |
| 6 | 35 | 17 | 18 | 51.4 | 11 | 34.4% | 3.13 | 0.08 |
| | 87 | 45 | 42 | 48.3 | 21 | 65.6% | | |
| 7 | 85 | 45 | 40 | 47.1 | 19 | 59.4% | 1.13 | 0.29 |
| | 23 | 11 | 12 | 52.2 | 13 | 40.6% | | |
| 8 | 27 | 11 | 16 | 59.3 | 10 | 31.3% | 4.50 | 0.03 |
| | 77 | 35 | 42 | 54.5 | 22 | 68.8% | | |
| 9 | 75 | 49 | 26 | 34.7 | 19 | 59.4% | 1.13 | 0.29 |
| | 33 | 20 | 13 | 39.4 | 13 | 40.6% | | |
| 10 | 29 | 16 | 13 | 44.8 | 18 | 56.3% | 0.50 | 0.48 |
| | 69 | 41 | 28 | 40.6 | 14 | 43.8% | | |
| 11 | 90 | 60 | 30 | 33.3 | 6 | 18.8% | 12.50 | 0.00 |
| | 39 | 15 | 24 | 61.5 | 26 | 81.3% | | |
| 12 | 25 | 12 | 13 | 52.0 | 27 | 84.4% | 15.13 | 0.00 |
| | 55 | 39 | 16 | 29.1 | 5 | 15.6% | | |
| 13 | 49 | 40 | 9 | 18.4 | 15 | 46.9% | 0.13 | 0.72 |
| | 19 | 13 | 6 | 31.6 | 17 | 53.1% | | |
| 14 | 25 | 11 | 14 | 56.0 | 20 | 62.5% | 2.00 | 0.16 |
| | 45 | 29 | 16 | 35.6 | 12 | 37.5% | | |
| 15 | 28 | 20 | 8 | 28.6 | 8 | 25.0% | 8.00 | 0.00 |
| | 17 | 10 | 7 | 41.2 | 24 | 75.0% | | |
| 16 | 59 | 45 | 14 | 23.7 | 10 | 31.3% | 4.50 | 0.03 |
| | 80 | 65 | 15 | 18.8 | 22 | 68.8% | | |
| 17 | 65 | 60 | 5 | 7.7 | 14 | 43.8% | 0.50 | 0.48 |
| | 34 | 30 | 4 | 11.8 | 18 | 56.3% | | |
| 18 | 35 | 29 | 6 | 17.1 | 17 | 53.1% | 0.13 | 0.72 |
| | 57 | 49 | 8 | 14.0 | 15 | 46.9% | | |
| 19 | 42 | 32 | 10 | 23.8 | 18 | 56.3% | 0.50 | 0.48 |
| | 30 | 22 | 8 | 26.7 | 14 | 43.8% | | |
| 20 | 19 | 13 | 6 | 31.6 | 12 | 37.5% | 2.00 | 0.16 |
| | 39 | 29 | 10 | 25.6 | 20 | 62.5% | | |

Table 12: Result (Price placement format: horizontal format)

| pattern | regular price | sale price | absolute price differenc | relative price differenc | horizontal format | | | |
|---------|---------------|------------|--------------------------|--------------------------|-------------------|-------|----------|---------|
| | | | | | Frequency | % | χ^2 | p-value |
| 1 | 99 | 59 | 40 | 40.4 | 18 | 38.3% | 2.57 | 0.11 |
| | 35 | 11 | 24 | 68.6 | 29 | 61.7% | | |
| 2 | 19 | 10 | 9 | 47.4 | 37 | 78.7% | 15.51 | 0.00 |
| | 97 | 70 | 27 | 27.8 | 10 | 21.3% | | |
| 3 | 95 | 65 | 30 | 31.6 | 15 | 31.9% | 6.15 | 0.01 |
| | 30 | 15 | 15 | 50.0 | 32 | 68.1% | | |
| 4 | 25 | 10 | 15 | 60.0 | 31 | 66.0% | 4.79 | 0.03 |
| | 89 | 59 | 30 | 33.7 | 16 | 34.0% | | |
| 5 | 79 | 55 | 24 | 30.4 | 26 | 55.3% | 0.53 | 0.47 |
| | 21 | 11 | 10 | 47.6 | 21 | 44.7% | | |
| 6 | 35 | 17 | 18 | 51.4 | 12 | 25.5% | 11.26 | 0.00 |
| | 87 | 45 | 42 | 48.3 | 35 | 74.5% | | |
| 7 | 85 | 45 | 40 | 47.1 | 35 | 74.5% | 11.26 | 0.00 |
| | 23 | 11 | 12 | 52.2 | 12 | 25.5% | | |
| 8 | 27 | 11 | 16 | 59.3 | 6 | 12.8% | 26.06 | 0.00 |
| | 77 | 35 | 42 | 54.5 | 41 | 87.2% | | |
| 9 | 75 | 49 | 26 | 34.7 | 38 | 80.9% | 17.89 | 0.00 |
| | 33 | 20 | 13 | 39.4 | 9 | 19.1% | | |
| 10 | 29 | 16 | 13 | 44.8 | 24 | 51.1% | 0.02 | 0.88 |
| | 69 | 41 | 28 | 40.6 | 23 | 48.9% | | |
| 11 | 90 | 60 | 30 | 33.3 | 10 | 21.3% | 15.51 | 0.00 |
| | 39 | 15 | 24 | 61.5 | 37 | 78.7% | | |
| 12 | 25 | 12 | 13 | 52.0 | 31 | 66.0% | 4.79 | 0.03 |
| | 55 | 39 | 16 | 29.1 | 16 | 34.0% | | |
| 13 | 49 | 40 | 9 | 18.4 | 13 | 27.7% | 9.38 | 0.00 |
| | 19 | 13 | 6 | 31.6 | 34 | 72.3% | | |
| 14 | 25 | 11 | 14 | 56.0 | 32 | 68.1% | 6.15 | 0.01 |
| | 45 | 29 | 16 | 35.6 | 15 | 31.9% | | |
| 15 | 28 | 20 | 8 | 28.6 | 11 | 23.4% | 13.30 | 0.00 |
| | 17 | 10 | 7 | 41.2 | 36 | 76.6% | | |
| 16 | 59 | 45 | 14 | 23.7 | 15 | 31.9% | 6.15 | 0.01 |
| | 80 | 65 | 15 | 18.8 | 32 | 68.1% | | |
| 17 | 65 | 60 | 5 | 7.7 | 12 | 25.5% | 11.26 | 0.00 |
| | 34 | 30 | 4 | 11.8 | 35 | 74.5% | | |
| 18 | 35 | 29 | 6 | 17.1 | 27 | 57.4% | 1.04 | 0.31 |
| | 57 | 49 | 8 | 14.0 | 20 | 42.6% | | |
| 19 | 42 | 32 | 10 | 23.8 | 18 | 38.3% | 2.57 | 0.11 |
| | 30 | 22 | 8 | 26.7 | 29 | 61.7% | | |
| 20 | 19 | 13 | 6 | 31.6 | 21 | 44.7% | 0.53 | 0.47 |
| | 39 | 29 | 10 | 25.6 | 26 | 55.3% | | |

平成29年2月10日 発行

専修大学商学研究所報

第48巻 第9号

発行所 専修大学商学研究所
〒214-8580
神奈川県川崎市多摩区東三田2-1-1

発行人 神 原 理

製 作 佐藤印刷株式会社
〒150-0001 東京都渋谷区神宮前2-10-2
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Bulletin of the Research Institute of Commerce

Vol. 48 No.9

February 2017

The effect of the advertising price display format on consumer price perception

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Published by
The Research Institute of Commerce
Senshu University

2-1-1 Higashimita, Tama-ku, Kawasaki-shi, Kanagawa, 214-8580 Japan