

Submission to the NZ review of mandatory unit pricing for grocery products

July 2021

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This submission presents comments by two Australian academics based on research these academics and some of their colleagues published in recent years about how consumers respond to unit pricing, to the questions raised in the Discussion paper on Mandatory Unit Pricing for Grocery Products. The comments refer to all questions except Q3, Q6, Q17 and Q21. The research overall provides strong support for the proposed introduction of mandatory unit pricing in New Zealand. References and links to the paper abstracts are provided at the end of this document. Study summaries are provided in response to related questions.

Q1. Are there any other benefits or costs associated with mandatory unit pricing that are not mentioned above?

The discussion paper provides a comprehensive listing of the consumer benefits, most of the listed ones are also supported in the findings of our research. There are other benefits outlined below:

Firstly, our study published in the *Journal of Retailing* (Yao and Oppewal 2016a) shows that:

- Unit pricing increases the salience of price in decision making, making consumers more price-sensitive, which in turn activates a greater motivation to select cheaper products.
- The presence of unit price has a psychological priming effect that induces consumers to buy cheaper products.
- The priming effect is stronger for consumers with lower levels of price consciousness. For those who are less concerned about price, unit price acts as an additional reminder of the cost of the product.
- **Thus, unit pricing benefits consumers in the long run by promoting economical spending on groceries. This is especially the case for consumers who are less price-conscious.**

Secondly, our study published in the *European Journal of Marketing* (Yao and Oppewal 2016b) shows that:

- Unit pricing generally increases consumer satisfaction with the grocery shopping experience, even though unit price adds more information to the already existing information load that grocery shoppers encounter.
- **Thus, unit pricing benefits retailers in terms of increased customer satisfaction and possibly an improved store image.**
- Consumers make purchase decisions more quickly when unit prices are available; the presence of unit price leads consumers to be more easily and likely to buy lower the lower unit priced products.
- **Thus, unit pricing benefits consumers in making quick purchase decisions and improving their decision quality.**

Thirdly, our study published in the *Journal of Academy of Marketing Science* (Yao et al. 2020) shows that:

- Unit pricing helps consumers to more easily identify price-size tactics by which identical products are sold in different price–size combinations. These tactics include shrinkflation, simultaneous increases or decreases in both the product price and size, selling the same product in different packages at different prices across different retailers, and the application

of quantity surcharges (which is where the same product has a higher unit price when it is offered in a larger package).

- **Thus, unit pricing benefits consumers by helping them detect and avoid being affected by confusing price-size tactics, including but not limited to shrinkflation.**

Q2. Should grocery retailers be required to educate consumers about unit pricing by providing in-store and online pamphlets, posters and/or other guidance?

We believe there will be benefits in educating consumers about unit pricing to enhance awareness and usage. Our study published in the *Journal of Business Research* (Bogomolova et al. 2020), using eye-tracking technology, found:

- a. A significant proportion of consumers only notice unit pricing when it is presented in a salient format, such as when it is presented as highlighted text or in a bold font, or when the words “Unit Price” are displayed.
- b. Consumers start to ignore the unit price information over repeated product choices.
- c. This suggests that consumers notice but not automatically use unit pricing. Thus, it is important for grocery retailers to provide ongoing education and remind consumers to check and compare unit prices, in both in-store and online shopping environments.

Q3. No comment.

Q4. Which grocery retailers should a mandatory unit pricing standard apply to?

The mandatory unit pricing provision should be extended to smaller stores including convenience stores as much as possible. As indicated above, our studies show that consumers value unit pricing even in relatively simple choice settings. Unit pricing benefits consumers in making optimal purchase decisions, improving decision quality, and developing economical spending habits. As such, consumers will benefit from a consistent availability of unit pricing across different grocery retailers. In addition, unit pricing will also facilitate price comparisons of the same or similar products across stores brands and store formats.

For the same reasons and given the growth in online grocery shopping, unit pricing should also be mandatory for online stores, including online stores of brick-and-mortar grocery retailers and pure online grocery retailers, on their Apps and websites.

Q5. Which of the approaches to threshold requirements (store size, product range, annual revenue) should be used to set the threshold for mandatory unit pricing in New Zealand?

We recommend that of the suggested bases for determining a threshold, store size (e.g., floor size, number of SKUs) will be most practical to operate. Of note is that online retailers can only use the number of SKUs to assess the store size. A threshold based on revenue may lead to fluctuations over time, for example, it will be sensitive to inflation; a product range selection will be difficult to monitor and may lead to strategic behaviours by which certain product categories are avoided or removed by retailers in order not to be obliged to use unit pricing.

Q6. No comment.

Q7. Where should retailers be required to display unit pricing, and why?

Our answer is consistent with the Discussion paper – points 41 to 46. The unit price should be displayed at the point of sale, in both physical and online stores, as well as in print advertising, when the retail price is displayed. This will maximise the benefits of unit pricing to consumers.

The display of unit prices at the point of sale is more helpful than the display of unit prices in print advertising, because:

- a. Consumers make purchase decisions at the point of sale, rather than when they see the advertisement. They may need to compare unit prices at the point of sale.
- b. The advertisement does not necessarily display substitutes to the advertised product, while unit pricing primarily facilitates price comparisons.

Unit prices should also be displayed as much as possible for promotional offers (e.g., price discounts, pricing bundles). Promotional offers often appeal to consumers' emotional responses and stimulate quick or impulsive decision making. In such contexts it is particularly important that consumers have the relevant price information at hand. Our study published in the *European Journal of Marketing* (Yao and Oppewal 2016b) shows that consumers appreciate and benefit from the availability of unit prices when they are under time pressure. Our study findings generally suggest that consumers benefit when not only the original unit price of a product (unit price before the promotion), but also the promotional unit price of the product (unit price after the promotion) is displayed on the price ticket or/and the promotion tag. Because different brands may employ different types of promotions, displaying promotional unit prices will help consumers compare values of promotions and make informed purchase decisions.

Moreover, findings from our study published in *the Journal of Academy of Marketing Science* (Yao et al. 2020), suggest that consumers will also benefit to see the change in unit price if there have been any changes in prices and sizes/volumes within a certain time frame, for example, within 1 year. The presence of such information will make it easier for consumers to compare prices longitudinally and will help protect them from price increasing tactics such as "shrinkflation". We however acknowledge the practical limitations and additional costs to retailers and regulators of such a requirement and do not recommend it as a general rule; it is nevertheless worthwhile to consider the effects of price changes and the benefits of informing consumers to changes in price and unit prices.

Q8. Where the retail price is displayed on a product itself, should the unit price also be displayed on the product?

We believe the unit price should be displayed on the product package if the retail price is also displayed there. As packages will also display the volume or size of the product, the unit price can be easily added and will benefit consumers. This is a logical implication of the arguments about the benefits of a consistent display of unit pricing.

We do realize a limitation of this practice though. The retail price displayed on the product is the Recommend Retail Price (RRP). Retailers may sell products at prices different from the RRPs, for examples, small retailers such as convenience stores often do not follow the RRPs, or different retailers price the same products differently. In such cases, the retail price and unit price displayed on the product itself may be irrelevant and may confuse consumers.

Q9. Should grocery retailers be required to have a "sort and/ or filter by unit price" option on their website?

We believe that the availability of an option to sort products by unit prices will afford better price comparisons by consumers and help educate consumers about and reinforce the value of unit pricing. Although there will be additional programming costs, the added functionality is not different from sorting on other attributes and given that retailers will be obliged to provide unit pricing, the relevant price information is already available in their databases.

Q10. In which forms of advertising should retailers be required to display unit pricing?

We suggest that displaying unit prices in print medium might be more relevant than in audio and video formats.

Q11. What are the potential costs and benefits of including unit pricing in audio and video advertising formats?

We have no particular view but like to raise the issue that the increasing use by consumers in their shopping of Artificially Intelligent Voice Assistants (AIVAs) will increase the relevance of regulation of how price information is conveyed in audio. Within AIVAs there is less scope to provide detailed information such that consumers will be more likely to make their decisions based on limited information, for example, they will apply decision heuristics that limit their choice sets and utilizes only a single quality or price attribute. For a discussion and overview of this issue in general, please refer to Dellaert et al. (2020).

Q12. a) What should be the standard and non-standard measurements for unit pricing in New Zealand? b) Should one litre or 100 millilitres be used as the standard measurement for volume? c) Should one kilogram or 100 grams be used as the standard measurement for weight?

We suggest that:

- a. Where possible, weight- or volume-based unit pricing should be prioritized as the standard, even when products are sold in bundles or multipacks. This will generally provide the greatest transparency and opportunity for consumers to compare product prices.
- b. By exception, item-based unit pricing can be used for product categories where weight/volume is not applicable or not relevant to the product's function or value, such as tissue, paper towels, batteries, etc.
- c. For weight- and volume-based unit pricing, it is not recommended to use one standard measurement of unit pricing for all product categories, because different product categories vary in weight/volume significantly. For example, for a super glue (\$2.85/3 ml), the unit price will be \$95 per 100 ml using the measurement of 100 millilitres, or \$950 per litre using the measurement of one litre. Both unit prices will create unrealistically high price perceptions and confuse consumers, and a unit price of \$0.95 per ml seems more appropriate. In another example, for a bag of rice (\$32/10 kg), the unit price will be \$0.32 per 100 gram using the measurement of 100 grams which may create low price perceptions, or \$3.20 per kg when using the measurement unit of one kg, which seems more appropriate.
- d. Research has produced mixed results regarding the effects of measurement of unit pricing on consumer perceptions and judgements. Our study published in the *European Journal of Marketing* (Yao and Oppewal 2016b) shows that unit prices stated as per kg or per 100 gram do not change consumer product choices or perceptions of information load. However, Fecher et al. (2019) in their study published in the *Journal of Retailing and Consumers Services* found that products are perceived as more expensive when unit prices are stated per kg than when they are stated per 100 g.
- e. Thus, using a consistent measurement of unit pricing with the same product category should be the rule of thumb, rather than using a standard measurement of unit pricing across all product categories. In addition, products within the same product category are unlikely to significantly vary in weight/size and have, a realistic unit of measurement of unit pricing should be able to fit all products within the same category.

Q13. Should the same unit of measurement be used for all products within the same product category?

We definitely agree there should be a consistent use of the same unit of measurement within each category. Whereas there may be exceptions for particular categories of products to use different units, using different units within a category may easily lead to confusion. Within a product category, brands may use different units of measurement for product weight/volume, for example, one brand can display its laundry liquid as 2 litre while another brand may display its laundry liquid as 2000 ml. It is crucial to use a consistent measurement of unit pricing within the same product category in order to allow consumers to easily compare prices of different products.

Q14. Is the Australian approach to product exemptions appropriate for New Zealand?

Yes. However, we wish to note that the exemption for bundles of different products provides a potential loophole for retailers to offer products in ways that consumers cannot easily compare the bundle value with the values of the loose items.

Q15. Should mandatory unit pricing apply to tobacco products in New Zealand?

No, we do not recommend this. However, if mandatory unit pricing would apply to tobacco products, caution should be exercised for deciding the measurement of unit pricing, for example, as per cigarette or per gram. Different brands of cigarettes vary in weight and thus the price per cigarette may not be precise, and loose tobacco products are packed and sold in weight.

Q16. Should mandatory unit pricing apply to alcohol products in New Zealand?

No, we agree with the stated arguments and do not recommend this.

Q17. No comment.

Q18. Should New Zealand adopt a principle-based approach to the display of unit pricing, or should there be more prescriptive requirements around font size, font, contrast, and location?

We support the use of a principle-based approach as long as there are clear guidelines as to how the principles can be measured and assessed. A fully prescriptive approach will be costly and represent a level of rigidity that as noted in the discussion paper may stifle innovation. Instead of prescribing all details, if consumers are sufficiently aware of and educated about the benefits of unit prices it will be in the retailer's interest to ensure the unit price is sufficiently legible. The interests for specific subgroups of consumers should be considered such as those with poor eye-sight as well as that many shoppers will seek to make the purchase decision process as effortless as possible, which will be helped by a clear and consistent display of unit prices.

Q19. In your view, what are the most important principles or requirements for the display of unit pricing?

We in general support the principles as used in Australia but consider there should be fewer exemptions for smaller stores and online retailers.

Q20. What should officials keep in mind when considering a more prescriptive option that specifies minimum requirements for the display of unit pricing?

Our study published in the *Journal of Business Research* (Bogomolova et al. 2020), using eye-tracking technology in a simulated shopping task, found:

- a. Enhancing the layout of the unit price through a combination of factors including larger font size, yellow highlighting, closer proximity to retail price and displaying the words 'Unit Price' makes that it attracts greater visual attention (60 percent more 'fixations' on the unit price) compared to when the unit price information is presented in a standard layout (as a 'standard' the authors used a real-life price label from an leading Australian grocery retailer).
- b. Our analysis showed that this increase in attention was mostly due to the effect of colour highlighting of the unit price, not the other three factors.
- c. However, the data collection for this study was conducted in 2014, five years after the implementation of mandatory unit pricing in Australia. By then Australian consumers might have been well aware of and often utilized unit pricing when shopping for groceries. Also it should be noted that the study was conducted in lab setting; although not aware of the purpose of the study, participants may have been paying more attention to their purchase decision than when shopping for their groceries in a real store context. Moreover, they observed the products at eye height, not in different angles and distances as happens in real store settings.

When mandatory unit pricing is newly launched in New Zealand, the following factors may therefore be helpful to draw consumers' attention to the unit price.

- a. The words "Unit Price" could be displayed.
- b. The unit price is preferably placed close to the retail price, for example, right below the retail price.
- c. The unit price should be displayed in a sufficiently large font, for example, at least 50% of the font size of the retail price.
- d. The unit price could be highlighted through a different colour background – noting colour print may involve more costs and may not be easy to implement and also may not be noticeable for consumers who are colour blind.

Q21. No comment.

References

- Bogomolova, Svetlana, Harmen Oppewal, Justin Cohen, and Jun Yao (2020). How the layout of a unit price label affects eye-movements and product choice: An eye-tracking investigation. *Journal of Business Research*, 111, 102-116. <https://doi.org/10.1016/j.jbusres.2018.10.049>
- Dellaert, Benedict GC, Suzanne B. Shu, Theo A. Arentze, Tom Baker, Kristin Diehl, Bas Donkers, Nathanael J. Fast et al. (2020). Consumer decisions with artificially intelligent voice assistants. *Marketing Letters* 31 (4), 335-347. <https://doi.org/10.2139/ssrn.3462714>
- Fecher, André, Thomas Robbert, and Stefan Roth (2019). Same price, different perception: measurement-unit effects on price-level perceptions and purchase intentions. *Journal of Retailing and Consumer Services*, 49 129-142. <https://doi.org/10.1016/j.jretconser.2019.03.017>
- Yao, Jun, and Harmen Oppewal (2016a). Unit pricing increases price sensitivity even when products are of identical size. *Journal of Retailing*, 92 (1), 109-121. <https://doi.org/10.1016/j.jretai.2015.09.002>
- Yao, Jun, and Harmen Oppewal (2016b). Unit pricing matters more when consumers are under time pressure. *European Journal of Marketing*, 50 (5-6), 1094-1114. <https://doi.org/10.1108/EJM-03-2015-0122>
- Yao, Jun, Harmen Oppewal, and Di Wang (2020). Cheaper and smaller or more expensive and larger: how consumers respond to unit price increase tactics that simultaneously change product price and package size. *Journal of the Academy of Marketing Science*, 48 (6), 1075-1094. <https://doi.org/10.1007/s11747-019-00716-z>