# UNIT PRICE: A COMPARISON STUDY ON LABELLING FORMAT 

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#### Abstract

Case studies have shown labelling format or design plays a role in how effective unit pricing information is conveyed to consumers. This paper compares mandatory labelling requirement across the world and discusses characteristics that makes a good labelling. The discussion also takes into account implementation experience, best practices available and recommendation from stakeholder including consumer representatives. Five areas are studied namely base unit, information clarity, font character, label viewing and unit pricing requirement for advertisement. In summary an effective labelling comprises of the following: - base unit in grams for weight and milliliters for volume and indicated to net weight and emphasis should be given for pricing font size - both retail and unit price. Choice of information in labelling more relevant is important. Attention given for viewing angles for upper and bottom shelves and inclusion of unit price in advertisements and the type of advertisement must be clearly identified and informed to stakeholders. The study can be used as basis to do impact study of unit pricing labelling to consumers and to improve current labelling format that is implemented.


Key words: Price, Unit Pricing, Retail, Grocery, Consumers

## Introduction

The term 'Unit Pricing' or 'Unit Price' is a method of pricing goods to its standard basic unit (Francois, 2010) such as cost per 100 grams (grams) or per 200mililiter ( ml ). Unit price is generally displayed on shelf labels at retailers, grocery stores including application in e-commerce and advertisement (Hockert, 2014). Also referred to as truth-in-labelling (Hockert, 2014), the history of unit pricing can be traced as back to 70 s (Francois, 2010) in Massachusetts, United States, and as recent as 2010 mandatory implementation in Australia (ACCC, 2008). Unit Pricing is yet to be prevalent and accepted as industry practice in Asian countries as seen in western world like Europe, Canada and United Kingdom. However, there are increasing movement to advocate unit pricing in market through establishment of unit pricing standardization committee at international level. Consumer groups like Malaysian Association of Standards Users begin to recognize the importance of unit pricing as a tool to empower consumer buying decision process. The rationale behind introducing unit pricing policy is to benefit consumers at large.

Significant economic benefits to retailers and grocery store are known and recognized (Hockert, 2014), even though there were claims of unit pricing give negative impact to their businesses as well as claims unit pricing is not beneficial to certain groups of consumers ("What Cost Dual Pricing," $1970 \&$ Russo, 1977). There were also complication rises from years of loose mandatory implementation and voluntary practices of unit pricing by businesses. This includes non-standardized format or poor representation of unit pricing labelling and areas where unit pricing are non-applicable. This paper discusses the format of unit pricing labelling practiced around the world. This is important because case studies have shown that labelling format has a significant impact in maximizing or reducing the benefits consumers' gain through unit pricing. By understanding labelling format and its impact around the world, we can determine the characteristics that may yield maximum benefit to consumers in the future.

Currently, there are lack of current studies focusing on unit pricing particularly on labelling. Studies only focuses on implementation of labelling in a particular country and rarely compares with other implementation and experience around the world. The study can be referred by policy makers or government regulatory bodies in Malaysia and other interested countries to create and determine the best course action for unit pricing policies, including format for labelling. In addition, retail industries can use this study as basis to implement unit pricing in their business, voluntary or by mandatory implementation alike.

## 2. Literature Review

### 2.1 Unit Pricing \& Consumer

In an environment where product and package "downsizing" is prevalent (Hockert, 2014) and where price plays a major factor in purchase decision making (Francois, 2010), unit pricing rise as best tool to compare values between products when faced with choices from thousands of brands ranging from different sizes and shapes (Francois, 2010). Unit pricing can influence shopping behavior and benefit consumers who are looking for value and cheaper prices or alternatives. This is especially true for low income consumers (Isak-son and Maurizi 1973) where unit price can generate more savings at the check-out. In addition, middle and high income consumers who have restricted time for shopping, for example people with full-time job demand (Isak-son and Maurizi, 1973) and the need to look after their children (Mills, 2002) can save their time comparing price between brands by using unit pricing. This reduces their overall time spend for grocery shopping.

### 2.2 Unit Price Labelling for Consumer

While unit pricing proven to beneficial to consumers, case studies have shown the labelling format can influence the effectiveness of unit pricing information to consumers. The current method of providing unit pricing information around the world is through shelf labels and other in-store price. The labelling were meant to deliver pricing information to consumers and its retailer's responsibility to maintain the labels (Hockert, 2014). However, how these labels are displayed in terms of prominence, clarity, display accuracy use of metric unit abbreviations, text font size, bottom shelf labels viewing, promotional signing (Hockert, 2014) have impact on how consumers read, understand, and use the unit pricing information for their benefit. Francois, (2010) highlights many labelling issues that rise after the implementation pricing policy in Australia. Example of issues include the readability and clarity of labels, overloading labels with information and so on. A study in United Kingdom in 2003 shows 35 per cent of respondents did not use unit pricing information during purchases. One of the main reasons was consumers find the unit pricing confusing (Mitchell, Lennard, McGoldrick, 2003).

Recommendations has been studied and highlighted by Hockert (2014) and Francois, (2010) and these suggestions must be converted into reality whether through aggressive awareness to retailers that implement unit pricing on voluntary basis or through improvement of current legalization. This is to ensure consumers' confidence in the unit pricing system and the benefit gained by consumers, economy and the country (Hockert, 2014). However improving unit pricing system that is already been implemented can be prove very challenging as implementation of unit pricing can cost to up to millions of dollars, as it would involve updating IT system and labor costs (ACCC, 2008). This shows the importance to determine a unit price labelling format that is effective in delivering unit price information in a consumer-friendly way before the implementation of unit pricing policy. A theoretical framework is created on how labelling influences benefit of unit pricing to consumers.

Figure 1: How Labelling Influences Benefit of Unit Pricing to Consumer


### 2.3 Mandatory vs Voluntary Unit Price Labelling

The labelling format is heavily influenced by implementation of unit pricing on mandatory or voluntary basis. While mandatory and voluntary has its own benefits to offer, mandatory implementation has been favored. This is because labelling will be more uniform across stores, between retail brand owners and geography locations. This is particularly true for Australia who implement unit pricing on mandatory basis. The Queensland Consumers Association (QCA) claims unit pricing can be established more widely and faster through early and compulsory implementation compared to voluntary basis (ACCC, 2008). QCA also claim voluntary basis can reduce benefit of unit pricing to consumers and incur business a higher cost to implement. This is because labelling are implemented at ad-hoc basis and will vary between stores and may mislead consumers. Mandatory implementation of labelling format and characteristic would assist monitoring of compliance (ACCC, 2008).

The mandatory implementation in United States however does not support uniformity of unit price labelling. In United States, there are no federal mandate except state mandate or implementation on voluntary basis. There are only nine states with mandatory implementation which may differ with unique requirements in counties, cities or a state (Hockert, 2014). While this
scenario does not favor in uniform labelling across the country, the National Institute of Standards and Technology published a guide that supplements existing regulation by recommending best practice requirements which includes ideal labelling format and characteristic. In other countries like New Zealand, unit price are adopted voluntarily and commonly displayed (ACCC, 2008). In Canada, unit price are also adopted voluntarily except for Quebec (Francois, 2010). Regions such as European Union harmonizes labelling to be implemented by member countries through Directive 79/581/EEC.

### 2.4 Mandatory \& Best Practices Labelling Characteristic

The next section discusses labelling characteristic and format adopted by countries around the world. This discussion first highlights mandatory labelling which are widely used and monitored by regulatory agency. Secondly, best practices and recommendations from governing body and consumer representatives. Governing body on unit pricing such as National Institute of Standards and Technology (NIST) from United States created a guideline that enhance unit pricing information accuracy and usability in stores. In addition, recommendations from consumer representatives or groups are valuable because understanding consumer or society needs and marketplace are part of their core function (Kumar, Rao \& Narayana, 2015). United States of America, Australia, Canada (Quebec), United Kingdom \& European Union legalization and available best practices are compared and discussed based on five guiding areas from NIST. The areas for discussion are:

- Base unit
- Information clarity in labelling
- Font character
- Label viewing
- Unit pricing for advertisement


### 2.4.1 Base Unit

Base unit is the most important principle in unit pricing. Base unit is the measurement unit which referred by consumers to compare price. It is imperative that any measurement unit chosen is must be expressed uniformly disregarding the size or form of product within a category. The mandatory implementation in United Kingdom and Australia, basic unit measurement used for weight is grams while for volume is milliliters. The following are to illustrate the importance of base unit to unit pricing. In a retailer store, rice are sold in five and ten kilograms from different brands, loose from bulk, and pre-packet rice (no brand). In order to facilitate comparison in unit pricing, all of these rice product must have the same unit of measure (Hockert, 2014). For example, price per 100 grams (ACCC, 2008) for all type of product forms or weight. In Europe, the unit price must be indicated to net weight and net drained weight (Francois, 2010). This can increase overall benefit of unit price to consumers as they can compare price of what can be used rather comparing unit price which inclusive of weight that is not related to its primary use. In summary, common measurement units used are grams and milliliters and indicated to net weight or usable weight for consumers.

### 2.4.2 Information Clarity in Labelling

There is a general stress on the clarity of label associated to effectiveness of price information being transferred to consumers. This can be seen in Europe's Directive 98/6/CE, United Kingdom's Price Marking Order 2004 and United States' NIST Code Handbook 130. Hockert (2014) states that a good label can capture and direct consumers' attention to relevant information. According to legalization related unit pricing and NIST handbook, the characteristics that contributes to clarity in labelling are:

- Labels do not overflow with information.
- Selling price and unit price should not open to more than one interpretation, easily identifiable, clearly legible
- Clear display of sign in non-deceptive manner.

Price information is again given priority similar font size requirement in Canada \& NIST. In addition choice of information displayed plays an important role in clarity of label. According to Hockert (2014) \& Francois (2010), information on label should be more relevant to consumers than retailers' use. Some example are no display of retailers' logo in labels (Francois, 2010), and less prominence in displaying barcode and code order (Hockert, 2014) in comparison to information required by consumers to make purchase decision.

### 2.4.3 Font Character

According to oxford dictionary, font is a set of type of one particular face and size (Font - definition, oxford dictionary). Requirement or recommendation regarding fonts are available from Canada \& United States. The Consumer Protection Act from Canada highlights price information must be in 28 -point bold type print compared to 10 -point type print for other information. In comparison, NIST suggest retail price font size should be proportionate to size of actual label and unit price font size to be as large as possible - with condition no less than 6 mm and no less than $50 \%$ of the retail price font size. In summary emphasis is given for pricing font size - both retail and unit price compared to other information on label.

### 2.4.4 Label Viewing

According to NIST, labels should be displayed in a way all relevant information can be easily seen and read by consumers - which influenced by viewing angle and label placement. This element is also weigh heavily in legalization to maximize benefit of unit pricing to consumers. For example in United Kingdom, labels should be affixed in a way that consumers do not have to request assistance from others. This commonly can be done by following what has been done in Canada, where labels in relation to unit pricing must be placed next to the said product for the convenience of consumers (Francois, 2010). In addition to label placement, viewing angle plays a big role in ensuring information can be easily captured by consumers. Attention should be given for difficult viewing angle scenarios - for example lower and upper shelves (Hockert, 2014). In addition, efforts should be taken to ensure unit price information are not blocked or obscured.

### 2.4.5 Unit Pricing for Advertisement

Advertisements that mentions selling price must incorporate unit price as can be seen in Europe and Australia. However in Europe, this depends on nature of the product (Francois, 2010). It is important to specify the type of advertisement that need incorporation of unit pricing like in Australia. This is because in United Kingdom, the Price Marking Order on advertisement is arguable as it ambiguous. Major retailers in United Kingdom claims it does not cover some forms of in-store advertising. It gave raise to misleading advertisement in United Kingdom, defeating the purpose of why unit price was enacted in the first place. In summary, a clear rules on types of advertisement that need to incorporate unit price must be clearly indicated to stakeholders to avoid confusion or double interpretation.

## Summary

The comparison and discussion on mandatory implementation of unit pricing labelling across the world and their experience helps to outline important and key characteristic that makes unit pricing labelling more effective and maximize the benefit of unit pricing to consumers. Based on the five principles discussed, the characteristics that would make effective labelling are:

- Base unit in grams for weight and milliliters for volume and indicated to net weight
- Emphasis should be given for pricing font size - both retail and unit price
- Choice of information in labelling is important - more relevant to consumers
- Labels should be clear and easily read
- Attention for viewing angles for upper and bottom shelves
- Inclusion of unit price in advertisements and the type of advertisement must be clearly identified and informed to stakeholders.

The characteristics above can be used as basis to further evaluate its impact to consumers to create a promising and effective unit price labelling. The limitation of this study however does not incorporate consumers' literacy factor in the country. Interested countries and implementing agency must do in-depth study of what the best labelling format would be for their consumers and may use the above characteristic as basis of their research.

## References

Australian Competition \& Consumer Commission (ACCC), public hearing transcript, Melbourne, 19 May 2008, p. 101.
Australian Competition \& Consumer Commission (ACCC) (2008) "Report of the ACCC inquiry the competitiveness of retail prices for standard groceries.
Font - definition of font in English from the Oxford dictionary. (n.d.). Retrieved May 28, 2016, from http://www.oxforddictionaries.com/definition/english/font
Francois, D-G., (2010). "Unit Pricing: An Effective Tool". Option Consommateur.
Hockert, C. (2014). "Unit Pricing Guide, A Best Practice Approach to Unit Pricing". NIST Special Publication 1181, U.S Department of Commerce.
Isakson, H. R. and A. R. Maurizi. (August 1973). "The Consumer Economics of Unit Pricing". Journal of Marketing Research.
Kumar. R., Rao, Nageswara. R., \& Narayana. M.S. (2015) "The Role of NGOs in Consumer Protection". International Journal of Innovative Research in Science, Engineering and Technology Vol. 4, Issue 2, February 2015.
McAlister, Anna R., Soo Kim, and Chen Lou (2013, May). Design Elements in Unit Price Labels Influence Consumers' Information Processing Abilities. Special session paper presented at Marketing and Public Policy Conference, Washington, DC.
Mills. G (2002). "Retail Pricing Strategies and Market Power".
Mitchell, V. W., D. Lennard and P. McGoldrick. (2003). "Consumer Awareness, Understanding and Usage of Unit Pricing". British Journal of Management 14: 173-187.
Russo, J. E., Krieser, G. and Miyashita, S (1975). "An Effective Display of Unit Price Information". Russo, E. J. (1977). "The Value of Unit Price Information". Journal of Marketing Research Vol. 14, No. 2 (May, 1977), pp. 193-201.
Study by Svetlana Bogomolova and Justin Cohen (Ehrenberg-Bass Institute for Marketing Science, University of South Australia), Harmen Oppewal (Monash University), and Jordan Louviere (Institute for Choice, University of South Australia), February, 2014

