USING DELPHI METHOD TO DEVELOP TRADE-IN GREEN MARKETING CRITERIA: A CONCEPTUAL STUDY

Idris Gautama So, Rudy Aryanto, Henkie Ongowarsito, Bina Nusantara University
email: igautama@binus.edu

ABSTRACT.

Trade-in is a phenomenon in Indonesia in recent years (Sinaga, 2007) and trade-in is still offered by stores and hypermarket (So, 2012). Nowadays Trade-in is carried out in order to gain from the potential customers to beat the competition and is treated as a business strategy (SuaraMerdeka, 2010). Trade-in mechanism is carried out by surrendering old goods, where the value of the goods surrendered is treated as a discount to new product bought. In simple way, this trade-in looks like a green marketing activity. Green marketing itself is somehow still in a confusion to many parties, one of the understanding can be referred to the promotion of products with environmental concern such as recyclable, organic, or environmentally friendly. There are some reasons why companies are increasingly considering green marketing including grapping opportunities. Thus it is important to conduct a study to prevent trade-in becomes a green marketing myopia (Ottman et. al., 2006) or greenwash (Horiuchi, 2009). This paper intends to elaborate criteria of Trade-in to be recognized as green marketing. Adapting the Delphi method, this study develops the Criteria of Trade-in to be considered as green marketing. A pre-Delphi, three-round Delphi study and a post-Delphi methodological review are carried out. The results of the study are items criteria measure. The limitations of the study and suggestion for future research are discussed.

KEYWORDS. Trade-in, green marketing, Delphi method, greenwash, green marketing myopia

INTRODUCTION

Silitonga (2007) shows that based on a survey conducted by an electronic store figures out that among the promotions offered by electronic stores, the most influential types are trade-ins, discounts, interest free installment programs, and direct gifts. One of the reasons that makes the trade-in transaction is favorable to stores is that as stated by Hernitaningtyas (2005) who explained that in trade-in transaction the used product trade-in is usually valued at a lower price and can still be sold at a higher value The new product's price itself has little variance spread in value. That is why a huge profit gains can be got from these trade-in transactions. The rationales from both Silitonga (2007) and Hernitaningtyas (2005) conclude why trade-in become a phenomenon in Indonesia.

The used product in trade-in transaction somehow looks like a product that is useless to someone can be reused by someone else. Then people tend to relate trade-in transaction as a green marketing. Nonetheless, misjudging either or overemphasizing green marketing at the expense of the improvement of environmental quality and customer satisfaction can be termed as green marketing myopia (Ottman et. al., 2006), and looking only for profits or benefits to company can be categorized as greenwash (Horiuchi, 2009).

Based on the phenomenon of trade-in in Indonesia, and also the green marketing as a current and relevance issue, there is a need to determine the green marketing criteria for trade-in to put green marketing in trade-in at a proper place.

LITERATURE REVIEW

Trade-in is a transaction where a used good accepted by a seller as partial payment for another (Pearsall, 2012); a transaction where one has to surrender one's stuff as part of the purchase price of a new one (Neufeldt & Guralnik, 1988) to give a piece of article as part of the payment or trade for something new (Wiktionary1, 2009).

There are many researches on trade-in topics; many researches on trade-in pay more attention on rebates and prices. Okada's (2001) study examined the way in which a consumer can be guided to make replacement buying decisions that are more aligned with normative alternatives, and measured the negative effects of the write-off on a replacement purchase decision and also demonstrated ways in which it could be mitigated. Another study explained trade-in in drawing on the object of an automotive product and the focus is in the price of a new automotive product compared to the used automotive value which is related to consumer behavior (Zhu, et. al., 2008). Ray, Boyaci & Aras (2005) focused on uniform pricing, age dependent pricing, and age independent pricing. Thus, this paper is a conceptual study of trade-in exploring the criteria of trade-in in green marketing.

The term green marketing coined by Ottman (1992) also Peattie (1995); consists of all activities and efforts designed to make and facilitate any exchanges intended to satisfy human needs or wants, to fulfill the satisfaction of these needs and wants occurred but with minimum unfavorable impact on the natural environment (Polonsky, 1994). It is obvious that green marketing tries to satisfy human needs or wants with minimal detrimental impact on the natural environment. Green marketing has also similar meaning to environmental marketing (Peattie & Ratnayaka, 1992; Coddington, 1993), ecological marketing (Fisk, 1974) ; Henion & Kinnear (1976), sustainable marketing (Fuller, 1999) and greener marketing (Charter & Polonsky,1999).

Qader (2011) discovers the reasons why green marketing is widely adopted by companies. The reasons are (1) green marketing brings opportunities in business, (2) it shows the company concerns about social responsibilities, on the other hands (3) government also gives pressure, (4) to maintain company's competitive position, and also (5) cost and profit consideration. To success in green market there are some things that should be considered, they are: the product must stand out of current product offered, the distinctive must be communicated effectively, ensure consumers get the information properly, targeted group of potential market ought to meet the price proposed, and the product must exceed the expectation of consumer since consumer may not want to sacrifice the performance of the product with green benefits (Stein & Koontz, 2009).

It is obvious that green marketing may be utilized widely by companies for many reasons, and at the same time it is also need to prevent companies from misconducting green marketing. Research has shown that there is a down-turn trend in trust in advertising from 30 percent 13 percent, and trust in company websites is down to 21 percent from 30 percent (Ottman et.al., 2006). There are at least two kinds of green marketing misconduct named (1) green marketing myopia, where study indicates that even many green products have failed because of marketers' myopic focus on their products' "greenness" over the

broader expectations of consumers or regulators / activists (Ottman et.al., 2006). Another green marketing misconduct named (2) greenwash, is a form of green marketing that is deceivingly used to promote the perception that an organization's aims and policies are environmentally friendly. It may be used to increase profits or to gain political/social support, greenwashing may be used to direct fashionable opinion to support otherwise questionable (Wikiteam1, 2012).

The reasons to carry out green marketing and its success factors show that doing green marketing needs serious care and consideration. To succeed in doing green marketing in trade-in transaction, the first thing to do is to determine the criteria of trade-in in green marketing. There are many methods that can be used to find the items criteria; one of the methods is using the Delphi approach.

DATA AND METHODOLOGY

The data in this paper are developed in pre-Delphi phase. The Delphi method is a controlled systematic method to collect data from a group of expert in a panel without allowing direct interaction among the experts (Dalkey & Helmer, 1963; Dalkey, 1969). The outcomes of Delphi method are meant to attain consensus among the experts in decision making through progressive multiple-round survey at the same time overcome the problem of individuals dominating the discussion, out-of-topic discussion, and group pressure in decision making (Dalkey, 1969).

The Delphi method has been developed about half a century ago since it was introduced by Rand Corporation (Brown, et. al., 1969; Dalkey et. al., 1969), yet it is still commonly used in the academic research (e.g. Gokhale, 2007; Hatcher & Colton, 2007; Huglin, et. al., 2007; Kramer et. al., 2007; Duke, 2009; Ong et. al., 2011). This study adapted the method proposed by Okoli & Pawloski (2004) and Ong et. al. (2011) to develop a modified-Delphi method that consists of a pre-Delphi round, three rounds of Delphi study and a post-Delphi methodological expert review (Ong et al., 2010) to develop the criteria of trade-in green marketing. The pre-Delphi round is prepared to identify and request the experts and develop the initial items for trade-in green marketing criteria. The three-round Delphi method will focus on brainstorming, short-listing and rating in order to develop, reduce and confirm the trade-in green marketing criteria. Finally, the post-Delphi method will be used to check up the suitability of language use and clarification of the items (Ong et.al., 2011)

The pre-Delphi round can be started with 5 criteria adopted from Ottman te. Al. (2006) and 5 criteria adopted from (Horiuchi, 2009). All these ten criteria may be determined as to prevent the trade-in transaction offered into green marketing myopia and greenwash. The discussion in delphi's rounds may elaborate more criteria or cut the criteria down from ten criteria based on the arguments of green marketing well–literate academicians, governmental officers, NGOs, business owners and professionals involved in the rounds.

The suggestion for the parties involved in the Delphi's round are as seen in the Table 1, as follow:

Table 1: Category and expert selection for Delphi study

Expert Category	Description (well-literate in green-marketing)	Invitation Porposed (person)
Academician	- Doctorate degree - Research interests in the area of marketing/green marketing	20
Government or NGO officers	- Officials of Ministry of Environmental (ME) - Wahana Lingkungan Hidup (WALHI) - Both ME and WALHI officials must involved in assisting industry	25
Business Practitioners	- Companies' owner	25
Business Professionals	- At least Managerial levels in marketing / operation / financial	30

The Delphi's first round will be the brainstorming where all the experts will elaborate all the trade-in green marketing criteria should be applied. The ten pre-Delphi criteria will be the ice-breaker for the elaboration. In this round there will be many ideas discussed as the experts are coming from different background of work, education, experience and expertise. The second Delphi's round will be the shortlisting phase. In this round the ideas from pre-Delphi and first Delphi's round will be short listed to narrow down the trade-in green marketing criteria. The list may be less than or more than ten items criteria. Once the list of criteria is agreed, then the Delphi's third round will take place. The third Delphi's round will be the rating phase. There will be a Likert scale of 4 for rating (scale 1 for 'not important' to scale 4 for 'very important') applied to be determined by the expert for each and every item criteria elaborated. The mean and content validity index (CVI) will be calculated. The CVI was calculated based on the number of experts rate the items as important (rating of three and four in the Likert scale) divided by the total number of expert responds to the items (Rubio et. al., 2003). Table 2 shows the time approximately needed to run the Delphi's rounds for this study

Table 2. Approximate Time to Run Delphi's Three-round

Round	Activity	Time Needed (Month)
Pre-Delphi	- Elaborate ten item Criteria for Delphi's first round - Determine experts to be invited - Prepare and send invitation to experts - Process the experts' responds	2
Delphi's first round	- Brainstorming based on the ten criteria provided - Elaborate ideas of experts to determine the appopriate item criteria of trade-in green marketing - Discuss and determine the schedule of Delphi's second round	1
Delphi's second round	- Short list the criteria elaborated from first round from each and every of he experts - The experts' responses will be recapitulize - Discuss and determine the schedule of Delphi's third round	1
Delphi's third round	- Rate the shortlisted criteria with Likert scale of 4 - Calculate the mean and content validity index (CVI) of each and every item criteria	1
Post-Delphi	- Language smoothing preparation for items to become items in questionnaire	

A valid item should have a CVI score of 0.80 or above (Davis, 1992; Rubio et al., 2003), yet since this is a social science study then the mean from equal to 3 (important) to 4 (very important) is still can be acceptable (Ong, et.al., 2011). Table 3 shows the valid item decision.

Table 3. Item Criteria Validity Decision Based on Mean and CVI

Mean	CVI	Decision
>=3	>= 0.8	Valid
<3	>-0.8	Valid
>=3	<0.8	Valid
<3	<0.8	Not-valid

RESULT AND DISCUSSION

The result of this study will produce the trade-in green marketing criteria based on the opinion of experts invited in Delphi's rounds. This study seems simple but actually this study is not an easy one. The low respond rate of the invited experts (Ong, et. al., 2011) is one of the challenge to be overcome, although in fact, as low as two experts are needed but five experts are desirable to control for agreement by chance in content analysis (Meurer, et. al., 2002).

The result of this study may be used for further research of trade-in and green marketing. The items criteria that will be transformed into questionnaire may be used for further research in related to trade-in and/or green marketing.

Once the items criteria resulted, they can also directly be used by related parties, e.g. government, NGO, business owners, business professionals as a common language to communicate among each other. The result can also be socialized in order to prevent the business practitioners from conducting green marketing myopia or greenwash.

CONCLUSION

The studies of trade-in were more on behavioral aspects in business transactions; on the other hand study of green marketing in trade-in transaction is still new. Thus this paper aims in elaborating trade-in green marketing criteria. The items criteria produced are believed may prevent business misconduct regarding to green marketing in trade-in transactions into green marketing myopia or greenwash.

This paper adopts Delphi method with some adaptations. There are five steps in this adapted Delphi method, the five steps are: (1) pre-Delphi, (2) first Delphi round, (3) second Delphi round, (4) third Delphi round, and (5) post-Delphi. The Delphi method itself has already well-known since 1960's but still relevance until these days.

REFERENCES

Brown, B., S. Cochran, & N Dalkey (1969). *The Delphi, II: Structure of Experiments*. The Rand Corporation.

Charter, M & MJ Polonsky (1999). *Greener Marketing:a Global Perspective on Greening Marketing Practice*, 2nd edition. Greenleaf, Sheffield.

Coddington, W (1993). *Environmental Marketing: Positive Strategies for Reaching the Green Consumer*. McGraw-Hill, New York.

Dalkey, N. (1969). *The Delphi Method: An Experimental Study of Group Opinion*. The Rand Corporation

Dalkey, N., B. Brown, & S. Cochran, (1969). *The Delphi Method, III: Use of Self Ratings to Improve Group Estimates*. The Rand Corporation.

Dalkey, N. and O. Helmer, (1963). *An Experimental Application of the Delphi Method to the Use of Experts*. Management Science, *9*(3), pp.458 – 467.

Davis, L. (1992). *Instrument Review: Getting the Most from Your Panel of Experts.* Applied Nursing Research, *5*(4), pp.94 – 104.

Duke, S. (2009). *Educating Public Relations Students to Enter the Blogosphere: Results of a Delphi Study.* Journalism & Mass Communication Educator, *63*(4), pp.319 – 322.

Fisk, G (1974). *Marketing and the Ecological Crisis*. Harper and Row, London.

Fuller, D (1999). *Sustainable Marketing: Managerial–Ecological Issues*. Sage: Thousand Oaks, California

Gokhale, A. A. (2007). *Offshore Outsourcing: A Delphi Study*. Journal of Information Technology Case and Application Research, *9*(3), pp.6 – 18.

Hatcher, T. and S. Colton, (2007). *Using the Internet to Improve HRD Research – The case of the Web-based Delphi Research Technique to Achieve Content Validity of an HRD-Oriented Measurement.* Journal of European Industrial Training, *31*(7), pp.570 – 587.

Henion, KE & TC Kinnear (1976). *Ecological Marketing*. American Marketing Association, Chicago, IL

Hernitaningtyas, Kesie (2005). *Tukar Ponsel, Tukar Tambah*. www.kompas.com/selular/news/0510/24/201921.htm, p.1. Accessed on 28th April 2007

Horiuchi, Rina, Ryan Schuchard, Lucy Shea & Solitaire Townsend (2009) *Understanding and Preventing Greenwash: A Business Guide.* BSR and Futerra http://www.bsr.org/reports/Understanding_Preventing_Greenwash.pdf accessed 17 February 2011

Huglin, L., L. Johnsen, L. & A. Marker, A. (2007). *Research Priorities in Performance Technology – A Delphi Study.* Performance Improvement Quarterly, *20*(1), pp.79 – 95.

Kramer, B. S., A. E. Walker, & J. M. Brill (2007). *The Underutilization of Information and Communication Technology-Assisted Collaborative Project-Based Learning among International Educators: A Delphi Study.* Educational Technology, Research and Development, 55(5), pp.527 – 543.

Meurer, S. J., D. M. Rubio, M. A. Counte, & T. Burroughs (2002). *Development of a Healthcare Quality Improvements Measurement Tool: Results of a Content Validity Study*. Hospital Topics, 80(2), pp. 7 – 13.

Neufeldt, Vitoria & David B Garulnik (1988). *Webster's New World Dictionary of American English,* Simon & Schuster, New York. p.271, p.337, p.1417

Okada, Erica Mina (2001) *Trade-ins, Mental Accounting, and Product Replacement Decisions,* Journal of Consumer Research 27. pp.433-446

Okoli, C and Pawloski, S D (2004). *The Delphi Method as a Research Tool: An Example, Design Considerations and Applications'*, Information and Management, *42*(1) pp.15 – 29.

Ong, Jeen Wei, Peik Foong Yeap & Hishamuddin Ismail (2011) Developing Management ICT Commitment through a Modified-Delphi Method. Proceedings: 9th Asian Academy of Management Conference. pp. 143-150

Ong, J. W., Hishamuddin Ismail and Yeap, P. F. (2010). *Proposing a Modified-Delphi Method for Questionnaire Development and Validation in Entrepreneurship Study.* Proceeding of Global Conference on SME and Entrepreneurship, 26th – 27th August 2010, Kuala Lumpur, Malaysia.

Ottman , Jacquelyn A., Edwin R. Stafford, & Cathy L. Hartman (2006). *Avoiding Green Marketing Myopia.* issue of Environment. 48/ 5, Heldref Publications, pp.22-36 http://www.heldref.org/env.php accessed on 7th October 2012

Pearsall, Judy (2012). *Oxford Dictionaries online projects.* Oxford University Press http: //oxforddictionaries.com/definition/english/trade-in Accessed on 29th July 2012

Peattie K. (1995) *Environmental Marketing Management.* Pitman. London.

Peattie K & M Ratnayaka (1992). *Responding to green movement.* Industrial Marketing Management **21**, pp. 103–110

Polonsky, Michael Jay. (1994). *An Introduction To Green Marketing.* Electronic Green Journal,1(2), http://www.escholarship.org/uc/item/49n325b7 Accessed on 10 November 2011

Qader, Iman Khalid A. (2011) *Green Marketing Practices in Electronic Manufacturing Companies in Malaysia and the Common Problems Facing Electronic Green Manufacturers.* Proceedings: 9th Asian Academy of Management Conference. pp. 256-267

Ray, Saibal, Tamer Boyaci, & Necati Aras (2005). *Optimal Prices and Trade-in Rebates for Durable, Remanufacturable Products.* Manufacturing & Service Operations Management 7. pp.208-228;

Rubio, D. M., M. Berg-Weger, S. S. Tebb, E. S. Lee, and S. Rauch. (2003). *Objectifying Content Validity: Conducting a Content Validity Study in Social Work Research.* Social Work Research, *27*(2), pp. 94 – 104.

Silitonga, Linda B. (2007). *Toko elektronik modern kuasai 51% pangsa pasar.* Harian Bisnis Indonesia dated 3rd December 2007. Also http://indonesian-retailer.blogspot.com/ 2007_12_01_archive.html accessed 5th May 2008

So, Idris Gautama (2012). *The Mental Accounting Process of Indonesians – A Study of Trade-in intention with JND as the Mediating and Culture as Moderating Factors,* PhD Dissertation

Stein, Julie and Ann Koontz (2009). *Green Marketing Trends – Guidance for Wildlife Friendly Products to Understand and Access Green Markets.*USAIDS and Enterprise Work/VITA

Wikiteam1 (2012). *Greenwashing.* http://en.wikipedia.org/wiki/Greenwashing accessed on 17 August 2012

Wiktionary1 (2009) *Trade_in,* http://en.wiktionary.org/wiki/trade_in accessed on 12th January 2009

Zhu, Rui (Juliet), Xinlei (Jack) Chen, Srabana Dasgupta (2008). *Can Trade-Ins Hurt You? Exploring the Effect of a Trade-In on Consumers' Willingness to Pay for a New Product.* Journal of Marketing Research: 45 / 2, pp. 159-170

BIOGRAPHY

Idris Gautama So is a lecturer at School of Business Management, Bina Nusantara University. Idris has interest in research area of marketing, entrepreneurship and ebusiness, and he can be reached via email idrisgs@gmail.com

Rudy Aryanto is a lecturer at School of Business Management, Bina Nusantara University. Rudy has interest in research area of marketing, and entrepreneurship, and he can be reached via email raryanto@binus.edu

Henkie Ongowarsito is a lecturer at School of Business Management, Bina Nusantara University. Henkie has interest in research area of MIS, ebusiness, and quality management and he can be reached via email henkieong@gmail.com