



## Marketing Management

*Elixir Marketing Mgmt.* 74C (2014) 26879-26884

**Elixir**  
ISSN: 2229-712X

### Eco-label footprint: Consumers' product evaluation criteria

Aindrila Biswas and Mousumi Roy

Department of Management Studies, National Institute of Technology, Durgapur-713209, India.

#### ARTICLE INFO

##### Article history:

Received: 30 July 2014;

Received in revised form:

21 August 2014;

Accepted: 3 September 2014;

##### Keywords

Eco-labels,  
Nominal purchase involvement  
products,  
Extended purchase involvement  
products,  
Environmental attitude.

#### ABSTRACT

Environmental considerations such as the energy, resources or chemical used during manufacturing or environmental implications during its use or disposal stage has a vital role to play in the purchase decision making of consumers' specially in the developed economies. Consumers' concern for the environment with their demographics was identified as the first-order constructs in impacting choice decisions for products with eco-label footprints. Impact of eco-label was studied across two broad product categories. The study applied structural equation modeling and analysis of variance for hypothesis testing and data analysis. The results suggest the whacking role of eco-labels on products when associated with financial savings in market share augmentation for environmentally preferable alternatives subjected to consumers' environmental approach in an emerging market.

© 2014 Elixir All rights reserved

#### Introduction

Concern over a products' environmental compatibility has resulted in prohibitions from use of certain substances, enhanced environmental disclosures and stringer environmental compliance norms. Positive product related environmental information coupled with consumers' environmental apprehension can stimulate environmentally conscious consumption habits by exercising informed choice decisions. In order to prove the environmental performance certifications or compatibility of different products or services, manufacturers and service-providers tend to have the eco-label footprint for unchallenging marketing of their offerings (Van Birgelen et al., 2009). The eco-labels prove a products' or services' overall environmental performance based or life-cycle considerations or third party certifications (GEN, 2004). Lack of sufficient product information shackles environmentally cognizant purchase decisions. European Commission stresses upon easy accessible, unambiguous, credible product information either through product labeling or from other accessible sources like consumer and environmental NGOs, websites and more. The present study tries to address the leverage of eco-label footprint in configuring consumers' choice decisions in comparison to traditional alternatives, across two broad product categories. Moreover few studies are available on consumers' eco-label perceptions and receptions and credibility of such claims (Nilsson et., al. 2004). The section two provides a brief literature review, followed by methodology in the third section, analysis in the fourth section and conclusion in the fifth section respectively.

#### Theoretical background

##### *Eco-labels and its recognition among consumer segments*

Eco-labels are certain claims or symbols signifying a product or service's environmental performance and environmental quality and aims to acknowledge the users' or consumers' about its environmental compliance by virtue of third-party certifications, or other declarations (Carlson et al, 1993; GEN, 2004). It is a voluntary method of environmental performance certification and labeling practiced around the

world. The eco-label index being a directory were 445 eco-labels in 197 countries, across 25 industry sectors have been enlisted thus manifesting the wide corpus of eco-label footprints used across the globe. An Eco-label foot-print may encompass a products' carbon footprint, water footprint, use of natural resources in production process, recycling, life-cycle analysis, waste minimization etc. Eco-labels that precisely convey the products' environmental attributes help consumers to make informed choice decisions.

The increasing coverage of main eco-labels is analogous with enhancement in consumer recognition. Reports depict the circumscribed consumers' willingness and interest to observe, absorb and impersonate the product related information in the form of eco-labels. Studies show consumers preferential approach for environmentally labeled packaging for daily use purchase items (Rokka et.al, 2008). Distinguishable consumer clusters were identified based on their awareness of organic labels (Didier et.al, 2008). Research suggests the inclination of a segment of Indian consumers towards eco-labeled garments (Goswami, 2008). Studies indicate that consumers were most able to associate with certifying labels of humane treatment on animals or products of local origin (Howard & Allen, 2006). Heavy and light users of organic food products unveiled reduce environmental jeopardy, animal welfare, health and quality aspects as the main advantages of eco-labeled products (Nilsson, et.al; 2004). The food index and energy labels are easily interpreted unlike the carbon index by consumers pertaining to the unambiguous graphic interface and clarity in representation of percentage of official recommendations (Gaussin et.al, 2013).

##### *Environmental Concern and stance towards eco-labels*

Individuals' inclinations exhibited towards environmental preservation and enhancement of discrete sanity will trigger purchase decisions for products with certain environmental claims or eco-label footprints (Rex & Baumann, 2007; Kilbourne & Pickett, 2008). Environmental concern is a conceptual term considered as an aggregation of attitude towards facts, with due consideration of the discrete individual and social behavioral consequences upon the

Tele:

E-mail addresses: [baindrila18@yahoo.com](mailto:baindrila18@yahoo.com)

© 2014 Elixir All rights reserved

environment (Weigel, 1983; Fransson and Gorling, 1999).

Recent studies have depicted that consumers' enhanced environmental concern is reflected in their purchase decision of environmentally compatible products. The environmental concern depicted in different studies includes home insulation, sustainable energy and water usage, ecologically responsive buying and product usage, consumption and ecologically responsible use of cars (Roberts & Bacon, 1997). Consumer acceptance for a product covers issues related to credibility of information, knowledge of information systems as well as environmental attributes (Nilsson, et.al; 2004). Survey on mothers' of pre-schoolers depicted the significant influence of their environmental concern, sustainable purchase and recycling behavior on their involvement in organic cotton clothing purchase (Gam et. al, 2010). Consumers' product knowledge, perceived consumer effectiveness and perceived personal relevance significantly affects purchase decision of environmentally sustainable textiles and apparels with eco-labels (Kang et. al, 2013). Studies have shown that exposure to environment related experiences enable consumers to react positively to eco-labels and this often become the crucial factor for the environmentally concerned segment to exhibit choice for purchase (Nik & Nik, 2009).

#### **Demographic Variables and stance towards eco-labels**

Awareness of energy labels, consumers' income, and place of origin had the highest impact in making purchase decision for energy efficient lamps (Reynolds et. al, 2007; D'Souza et. al, 2007). Consumer demographics and psychographics impact the choice behavior for eco-labeled garments (Goswami, 2008; Hustvedt. et.al, 2008).

Based on the above discussions the following hypotheses can be deduced:

H1: Environmental concern positively influences conscience for eco-labels.

H2: Demographic variables positively influence conscience for eco-labels.

H2a: Education positively influences conscience for eco-labels.

H2b: Income positively influences conscience for eco-labels.

H2c: Age positively influences conscience for eco-labels.

#### **Nominal and extended purchase involvement products**

Products are denoted on the basis of their need fulfillment objective, capacity, purpose or frequency of usage or consumption. Nominal purchase involvement products have the four distinct features- low risk cognizance, higher incidence of purchase, restricted appraisal among alternatives or substitutes with low post-purchase dissonance. The risk appetite of consumers' for these products are low either due to the higher incidence of purchase or pertaining to the low to moderate price range of products encompassed under this category. Simultaneously, the post-purchase dissonance is low pertaining to higher reversibility of the decisions or low to moderate investments made for these nominal purchase decisions. The nominal purchase involvement product include food products purchased on regular basis, domestic and personal hygiene products or any item of daily use or frequent purchase etc. On the contrary, the features associated with the extended purchase involvement products are high risk cognizance, conscientious evaluation among similar offerings and with often resultant high post purchase dissonance pertaining to higher irreversibility of decisions owing to higher investments made and exceptional or unusual nature of purchase (Dhar & Wertenbroch, 2000). The following items under the above two broad product categories - herbal food, domestic and personal hygiene products (nominal involvement) and A.C. and electronic appliances (extended

involvement) each with certain environmental seal or labels assigned, have been considered in this study (Khan & Dhar, 2006).

While considering the purchase with extended involvement, the process is influenced by the peripheral product properties, such as design, color, shape and even expected pleasure apart from the functional attributes. Conversely while considering the purchase of products with nominal involvement the products' main properties are highlighted with its practical benefits.

#### **Consumers' perception of eco-labels when applied to nominal or extended purchase involvement products**

Prior critiques have reported that consumers' rely more on eco-labeled product's performance, attributes and quality than on the emotional aspects or environmental externalities associated with them (Carlson et al., 1993; Shiluv Research Group and SII (2007). An affirmative apprehension about the functionality about products with eco-label footprints, will eventually foster sustainable consumption practices and environmentally- sustainable behavior (Khan and Dhar, 2006; Biswas and Roy, 2015). Consumer loyalty towards organic brands instigates them to make repeated purchase of the same thus showing a low post purchase dissonance (Nilsson, et.al; 2004). The evaluative criteria and use of information sources varies across different product categories like fast moving consumer goods to electrical products for the same consumer (McDonald et.al, 2009).

Based on the above discussion the following hypotheses can be deduced:

**H3.** Consumers' cognizance for performance of extended purchase involvement products will be favorably impacted by the existence of eco-labels on such products.

**H4.** Consumers' cognizance for performance of nominal purchase involvement products will be favorably impacted by the existence of eco-labels on such products.

**H5.** An extended purchase involvement product with eco-label will be perceived more favorably than a nominal purchase involvement product with similar claim.

#### **Research Methodology**

##### **Pre-test selection of products**

An on-line pre-test among 32 participants (male 68.75%, female 31.25%) was carried out. In the pre-test we examined the choice behavior for nominal and extended purchase involvement products- a) Herbal food with eco-labels b) ayurvedic personal hygiene products and environmentally preferable domestic hygiene products c) recyclable paper; all falling in the first category and d) Electronics with energy star labeling e) A.C. with energy star labeling f) green personal computers and notebooks (extended purchase involvement products). The participants were asked to rate the extent to which they are aware of eco-labels for the above products; their purchase habits for the above products on a five point likert scale (1 is the lowest and 5 the highest score).

##### **Data collection**

Data for the survey was collected from different consumers at different large and small retail stores in two Metro cities and one tier-two city of India. During the period of data collection 257 respondents completed the questionnaire, after removing the incomplete responses from the sample, a valid response of 198 respondents were retained.

##### **Measurement instrument**

Multi-item scales were used to measure the model constructs. A five point Likert scale with 1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree, 5=Strongly Agree were used for the questionnaire. Before checking its

reliability, assessment of convergent and discriminant validity and unidimensionality of a scale was made.

#### **Analysis and result**

##### ***Descriptive statistics of eco-label awareness for different demographic segments***

##### ***Validity and reliability***

The results of exploratory factor analysis suggest that all the items had loadings higher than 0.40 which has been considered as a minimum threshold values for consideration of items (Chen, 2013). The psychometric properties of the constructs with AVE (Average Variance Extracted), CR (Composite Reliability) and Cronbach's Alpha have been reported in Table II. High composite reliability above 0.70 as specified by Fornell and Larcker, 1981, signifies internal consistency. The cronbach's alpha value above 0.59 demonstrates reliability of the data. The AVE for all the constructs being above than 0.50 as recommended by Fornell and Larcker, 1981 and the inter-construct correlation matrix represented in Table III supports discriminant validity. The combined results of Table II and Table III supports construct validity.

##### ***Path analysis***

A Structural Equation Modeling was applied to test the overall model fitness with the help of multiple fit indices such as GFI (0.92), CFI (0.92), IFI (0.92),  $\chi^2/df$  (1.81) as presented in Table IV. The analysis of the data was done using 20.0 version of AMOS (Analysis of Moments Structures) software. The standardized regression coefficients of the different hypothesized paths are depicted in fig.1 and Table V. The squared multiple correlations ( $R^2$ ) explaining the percentage of variance are given for the latent variables- eco-label awareness, choice behavior for nominal purchase involvement product and choice behavior for extended purchase involvement product have been provided. The model tries to measure the impact of consumers' demographics- education, age and income on their eco-label awareness and subsequent choice behavior with respect to purchase decision of nominal and extended purchase involvement products with eco-labels.

##### ***Analysis of variance to measure eco-label conscience***

A one-way Analysis of Variance was performed for the respondents grouped into two categories who were either conversant with or not conversant with eco-labels based on score across the eco-label awareness scale (Table VI). The non-conversant segments awareness and inquisition and purchase habits were far less inclined towards products with eco-label footprints than their counterparts conversant with such labels.

##### ***Variation in eco-label conscious consumers' perception across product categories***

Assessment of 'conversant consumer cluster's' eco-label perception and its variation across two selected product categories were performed using Analysis of Variance (Table VII). The aware segment was categorized into two sub-groups- HPNII (Higher perception for nominal purchase involvement items) consumer cluster for which products' eco-label displays a conditional effect for purchase decision making of nominal purchase involvement products than for extended purchase involvement products (46%). Conversely for the HPEII [Higher perception for extended purchase involvement items] cluster (54%) emphasis is given more on products' environmental claim for purchase decision of extended involvement products (HPEII).

Table VII shows for eco-label conscious consumers environmental claims will have significantly higher impact while making purchase decision for extended purchase

involvement products that for nominal involvement items. An extended purchase involvement product with eco-label will be perceived more favorably than a nominal purchase involvement product with similar claim. Thus H5 is supported.

#### **Discussion and conclusion**

The study explored the role of environmental concern and demographics in shaping consumer purchase decisions based on the evaluated parameter of presence of eco-labels or environmental claims which has been considered to embark higher functional value on products across different categories. The findings substantiates consumers' enhanced trust on eco-labeled alternatives which often promises improved life-span, enhanced energy saving and other environmental compatibility. Even though a significant consumer segment seem to be inapprehensive about eco-labels mostly due to lack of awareness about products with environmental claims and their compatible edge over traditional alternatives, the level of conversance can be enhanced by virtues of environmental programs and product promotion campaigns with thrust on environmental aspects being symbolized by eco-labels. While making nominal purchase decisions, the less-conversant segment seem to ignore the evaluative criteria of presence of eco-labels, however for extended purchase decisions with higher risk cognizance and irreversibility of decisions presence of eco-labels such as energy-stars do have an impact in their purchase decisions. As higher number of energy stars symbolizes higher energy saving and sensitivity, thus the recurring cost-saving appetite of a buyer gets attracted. So whether less, moderate or highly conversant with eco-labels, the concept of financial saving on recurring basis in the form of reduced electricity consumption makes both the groups behave similarly. Apart from emphasizing on the environmental or global benefits, an eco-label when affixed to a product targeted for the emerging markets should highly emphasize on the personal benefits as well, due to the financial sensitivity of consumers in such markets.

Eco-label conscience plays a dominant role for products with extensive risk involvement due to its high price, low frequency of purchase or due to high technicalities in the product than those products with high purchase prevalence and minimal evaluation among alternatives being undertaken.  $R^2$  values of 0.41 for choice of extended purchase involvement products with eco-labels and 0.17 for nominal purchase involvement products being low thus indicates that impact of eco-label on consumers' perception about functionality or choice behavior for extended purchase involvement products is much higher than the nominal ones. Thus eco-label conscience acts as a more rigorous evaluation parameter for making choice of extended involvement purchase items than nominal purchase items. Consumer demographics and environmental awareness explains 38% variance of consumers' eco-label awareness, their level of education and environmental concern being the most significant indicators for consumers' to exhibit conscience for such labels.

Environment will be benefited from International trade of eco-labeled products with proper enforcement if the cost is not made to fall disproportionately of the developing economies (Basu et. al; 2003). Thus the over-arching goal of environmental labeling programs of the facilitation of environmentally sustainable purchase habits among consumers and motivation of sustainable production processes among the manufacturers will be achieved.

**Table I. Demographics and eco-label awareness**

Age (inYrs)	ELA	Education	ELA	Income (INR)	ELA
Under 25	3.09	Certificate/Diploma	2.74	Less than 20000	3.42
25-35	3.11	Bachelors Degree	3.22	20000-40000	3.62
36-45	4.00	Masters Degree	3.92	40001-60000	3.51
46-60	3.97	Doctoral Degree	3.78	60001-80000	3.80
Above 60	3.79	Others	3.99	Above 80000	3.72

ELA [Eco label Awareness]

**Table II. Psychometric properties of scale**

Measurement items	Loadings	Alpha	AVE	CR			
<i>Environmental Concern</i>							
It is important to me that the products I use don't harm the environment.	0.70	0.61	0.54	0.91			
I consider the potential environmental impact of my actions when making many of my consumption decisions.	0.76						
I am concerned about wasting the resources of our planet.	0.74						
<i>Eco label Awareness</i>							
I prefer to purchase products with environmental-labeling.	0.71	0.72	0.49	0.95			
Eco-labels symbolize products' positive environmental attributes.	0.72						
Products with eco-labels are always less environmentally harmful than the traditional substitutes.	0.66						
I always check the eco-labels or environmental certifications on products before purchase.	0.71	0.59	0.50	0.92			
<i>Choice behavior for extended purchase involvement product</i>							
I always read the energy labeling of electronic appliances or check the energy stars before purchase .	0.62						
I have purchased desktops, laptops with environmental labeling as it saves energy and generates less e-waste and can be recycled.	0.73	0.83	0.65	0.98			
I have purchased cooling A.C. for domestic purpose based on the energy star ratings .	0.76						
<i>Choice behavior for nominal purchase involvement product</i>							
I always purchase personal hygiene products with environmental labeling or certifications.	0.84	0.77	0.74				
I always check the eco-labeling before buying personal hygiene products.	0.86						
Eco-labels help me to distinguish between organic or herbal food products and traditional substitutes.	0.77						
I always check the eco- labeling present if any, on products' packaging before buying articles of daily need.	0.74						

**Table III. Discriminant Validity**

Constructs	ECN	ELA	CEI	CNI
Environmental Concern	0.73			
Eco label Awareness	0.24	0.70		
Choice behavior for extended purchase involvement product	0.28	0.34	0.71	
Choice behavior for nominal purchase involvement product	0.11	0.28	0.19	0.81

ECN [Environmental Concern]; ELA [Eco label Awareness]; CEI [Choice behavior for extended purchase involvement product]; CNI [Choice behavior for nominal purchase involvement product]

**Table IV. Model fit indices**

Index	Value	Criteria	Reference
Chi <sup>2</sup> /df	1.81	<2	Tseng et al., 2013
RMSEA	0.06	<0.10	
CAIC	338.10	Saturated Model=661.85 Independence Model=918.61 Best fit if less than both	
GFI	0.92	>0.90	
CFI	0.92	>0.90	
IFI	0.92	>0.90	
PNFI	0.67	>0.50	

**Table V. Standardized regression coefficients**

Path	Estimate	p-value	Results
ECN → ELA	0.26	0.008**	H1 is supported
EDU → ELA	0.39	0.000***	H2a is supported
INC → ELA	0.15	0.028*	H2b is supported
AGE → ELA	0.26	0.000***	H2c is supported
ELA → CEI	0.65	0.000***	H3 is supported
ELA → CNI	0.41	0.000***	H4 is supported

ECN [Environmental Concern]; EDU [Education]; INC [Income]; ELA [Eco-label Awareness]; CEI [Choice behavior for extended purchase involvement product]; CNI [Choice behavior for nominal purchase involvement product]

**Table VI. Result of Analysis of variance for the two consumer groups**

Measurement items	Not conversant with eco-labels	Conversant With eco-labels	F value	Sig
	[20%]	[80%]		
I always read the energy labeling of electronic appliances or check the energy stars before purchase	.285	3.61	15.26	0.000***
I have purchased desktops, laptops with environmental labeling as it saves energy and generates less e-waste and can be recycled.	2.95	3.56	9.19	0.003**
I have purchased cooling A.C. for domestic purpose based on the energy star ratings	3.05	3.44	3.23	0.074
I always purchase personal hygiene products with environmental labeling or certifications.	2.80	3.44	14.30	0.000***
I always check the eco-labeling before buying personal hygiene products.	3.46	4.05	15.54	0.000***
Eco-labels help me to distinguish between organic or herbal food products and traditional substitutes.	3.37	4.03	14.80	0.000***
I always check the eco- labeling present if any, on products' packaging before buying articles daily need.	3.32	3.56	3.37	0.068

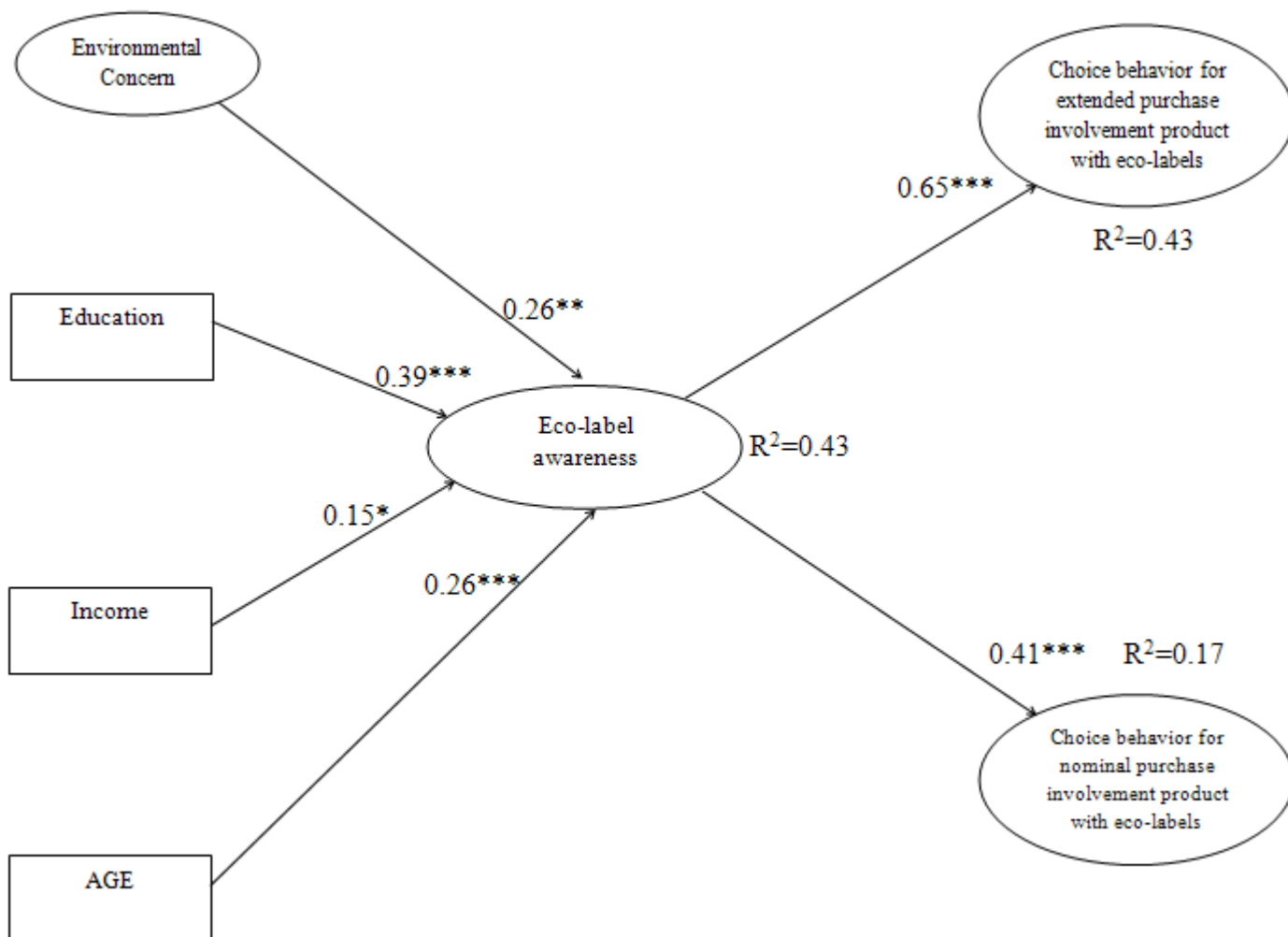
\*\*\* p<=0.001; \*\* p<=0.01

**Table VII. Eco-label perceptions for the aware cluster**

Eco-label perceptions	HPNII	HPEII	F-value	Sig
	[53%]	[47%]		
Environmental labeling of electronic items is more essential than of cosmetics.	3.88	4.27	5.62	0.019*
Environmental compliance of expensive items should be disclosed mandatorily even if not always for articles of daily need.	3.27	4.12	29.75	0.000***
While buying specialty products I give more preference on eco-labels than for routine purchase items.	2.92	4.04	43.26	0.000***
I evaluate items which I buy less frequently based on eco-labels than for items of more frequent purchase.	2.92	3.99	40.55	0.000***

\*p>=0.05; \*\*\* p<=0.001.

HPNII [Higher perception for nominal purchase involvement items]; HPEII [Higher perception for extended purchase involvement items]



\*\*\* p<=0.001; \* p<=0.05

**Fig I. A path diagram**

## References

- [1] Ayalon, O., Avnimelech, Y., & Shechter, M., (2000). Application of a comparative multidimensional life cycle analysis in solid waste management policy: the case of soft drink containers. *Journal Environmental Science and Policy*, **3**, 135-144.
- [2] Basu. A., Chau. N.H., & Grote. U., (2003). Eco-Labeling and Stages of Development. *Review of Development Economics*, **7(2)**, 228–247.
- [3] Carlson, L., Grove, S.J., & Kangun, N., (1993). A content analysis of environmental advertising claims: a matrix method approach. *Journal of Advertising*, **22**, 27-39.
- [4] Dhar, R., & Wertenbroch, K., (2000). Consumer choice between hedonic and utilitarian goods. *Journal of Marketing Research*, **37**, 60-71.
- [5] Didier. T., & Lucie. S., (2008). Measuring consumer's willingness to pay for organic and Fair Trade products. *International Journal of Consumer Studies*, **32(5)**, 479–490.
- [6] D'Souza, C., Taghian, M., Lamb, P., & Peretiatko, R. (2007). Green decisions: demographics and consumer understanding of environmental labels. *International Journal of Consumer Studies*, **31**, 371-376.
- [7] Fornell, C., & Larcker, D.F., (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, **18**, 39–50
- [8] Gam.H.J., Cao. H., Farr.C., & Kang.M. (2010). Quest for the eco-apparel market: a study of mothers' willingness to purchase organic cotton clothing for their children. *International Journal of Consumer Studies*, **34 (6)**, 648–656.
- [9] Gaussin.M., Hu. G., Abolghasem.S., Basu.S., Shankar. M.R., & Bidanda.B. (2013). Assessing the environmental footprint of manufactured products: A survey of current literature. *International Journal of Production Economics*, **146**, 515–523.
- [10] Goswami., P. (2008). Is the urban Indian consumer ready for clothing with eco-labels? *International Journal of Consumer Studies*, **32 (5)**, 438–446.
- [11] Gray, G., (2007). Sustainability Research Strategy. Available at: <http://www.epa.gov/sustainability/> (updated 21.05.08.).
- [12] Howard. P.H., & Allen. P. (2006). Beyond organic: consumer interest in new labeling schemes in the Central Coast of California. *International Journal of Consumer Studies*, **30 (5)**, 439–451
- [13] Hustvedt. G., Peterson H.H., & Chen. Y.J., (2008). Consumer willingness to pay for sustainable apparel: the influence of labeling for fibre origin and production methods. *International Journal of Consumer Studies*, **32(5)**, 427–437.
- [14] Kang. J., Liu. C., & Kim. S.H. (2013). Environmentally sustainable textile and apparel consumption: the role of consumer knowledge, perceived consumer effectiveness and
- [22] Roberts, J.A., & Bacon, D.R., (1997). Exploring the subtle relationships between environmental concern and ecologically conscious consumer behavior. *Journal of Business Research*, **40**, 79-89.
- [23] Rokka. J., & Uusitalo. L., (2008). Preference for green packaging in consumer product choices Do consumers care?, *International Journal of Consumer Studies*, **32(5)**, 516–525.
- [24] Shiluv Research Group and SII, (2007). Characterizing the Status of the Ecolabel in Israel. Submitted to the Government Publishing Office.
- [25] Tseng S.C., & Hung S.W. (2013). A framework identifying the gaps between customers' expectations and their perceptions in green products. *Journal of Cleaner Production*, **59**, 174-184.
- [26] Van Birgelen, M., Semeijn, J., & Keicher, M., (2009). Packaging and pro environmental consumption behavior. *Environment and Behavior*, **41**, 125-146.
- [27] GLOBAL ECOLABELLING NETWORK (GEN) INFORMATION PAPER: July, 2004
- [28] Biswas, A., Roy, M. (2015) Leveraging factors for sustained green consumption behavior based on consumption value perceptions: testing the structural model. *Journal of Cleaner Production*, **95**, 332-340
- [15] Khan, U., & Dhar, R., (2006). Licensing effect in consumer choice. *Journal of Marketing Research*, **10**, 259-266.
- [16] Kilbourne, W., & Pickett, G (2008). How materialism affects environmental beliefs, concern, and environmentally responsible behavior. *Journal of Business Research*, **61**, 885–893.
- [17] McDonald. S., Oates. C., Thyne. M., Alevizou. P, & McMorland. L.A. (2009). Comparing sustainable consumption patterns across product sectors. *International Journal of Consumer Studies*, **33 (2)**, 137–145.
- [18] Nik. R., & Nik R.A. (2009). Eco-Labeling Perspectives amongst Malaysian Consumers. *Canadian Social Science*, **5(2)**
- [19] Nilsson. H., Tuncer. B., & Thidell A. (2004). The use of eco-labeling like initiatives on food products to promote quality assurance—is there enough credibility? *Journal of Cleaner Production*, **12**, 517–526.
- [20] Rex, E., & Baumann, H (2007). Beyond ecolabels: what green marketing can learn from conventional marketing. *Journal of Cleaner Production*, **15 (6)**, 567-576.
- [21] Reynolds. T.W., De Sisto. T.P., Murray. B., & Kolodinsky. J., (2007). Promoting energy efficiency in small island states: overcoming barriers to the adoption of compact fluorescent lighting in Saint Lucia. *International Journal of Consumer Studies*, **31(5)**, 460–467.