A Quantitative Study on Challenges in Organic Clothing Purchase Behaviour

ISBN: 978-1-943295-14-2

Prachi Mishra
G. Devakumar
Ramaiah University of Applied Sciences
(prachimis@gmail.com)
(devakumar.ms.mc@msruas.ac.in)

With the term organic gaining attention globally among consumers, apparel retailers are bringing organic clothing range in their offerings. But price has remained a challenge and it needs to project real value of organic apparels taking care of cost and monetary benefits. Hence the current paper examines role of price and perceived value in the context of purchase behaviour for organic clothing. Data was gathered basis an online questionnaire survey with 200 respondents. The result revealed that price significantly impact perceived value towards organic apparel purchase behaviour. Also, perceived value substantially influences purchase behaviour.

Keywords: Challenges, Organic Clothing, Price, Perceived Value, Purchase Behaviour

1. Introduction

Organic business initially began with organic food product due to health-conscious individuals showing concern towards healthy living. But as buyers started expressing concerns linked to environment, they have displayed liking towards sustainable apparel (Chaudhary, 2018). Though organic produce displayed significant advancement in categories like organic food, organic clothing segment defined mainly through organic cotton remained stagnant in 1990s as per earlier research works (Ingram, 2014). Extensive process involved in organic production has remained a challenge for producers and those participating in such processes alike. With growing concerns related to environmental protection among consumers, manufacturers were bound to come up with substantial environmentally friendly produces like organic apparel. But absence of awareness on costing and advantages linked to organic clothing created challenge for the sustenance of organic textile sector. Findings from a study conducted on American adult by Cowan and Kinley (2014), indicated cost influences intention to purchase eco-friendly clothing. In their study, Curwen et al. (2012) found that perceived value and price were two among several challenges faced in formulating organic cloth type programme faced by an international clothing brand. Connell (2010) argued that due to high price of eco-conscious items compared to conventional products customers find it difficult to afford them. Zheng and Chi (2014) concluded that sales channel need to have wider spread to reduce high price perspective towards environmentally friendly apparels among buyers. As per Nguyen et al. 2019, research work on association between particular values and eco-friendly behaviours towards green clothing has not seen much progress and lacks clarity. In a study on eco-conscious clothing, Sonnenberg et al., 2014, revealed that while trying to purchase environmentally friendly apparel, respondents displayed concern related to price parameter. In his study on millennial consumers, Copeland (2019) found that consumers were not ready to give up price dimension in the context of responsible clothing purchase behaviour. Findings from a study on Romanian consumers purchase behaviour indicated that due to high price of organic products only some of them found it affordable (Popa and Dabija , 2019).In contrast , several studies speaks about consumers who are willing to accept high price for organic clothing produced (Holt, 2009; Pookulangara and ; Shephard,2011, Štefko and Steffek, 2018).According to a research work conducted by Moon and Lee (2018), it was found that consumer's perception linked to cause effectiveness value and monetary value influence intention to buy and even readiness to spend extra price in the context of eco-friendly clothing products.

Clothing manufacturers are focussing on sustainability aspect of clothing at present to acquire competitive advantage. But the major drawback of organic apparel is high price when compared to conventional clothing. Also, value for such product is still unclear.

Hence it is need of hour to analyse role of green price (GP) and green perceived value (GPV) towards organic apparel purchase behaviour (OAPB) to get insight into the existing challenges in the organic apparel industry in the context of developing country i.e. India. And develop model for consumer purchase behaviour for organic apparel product. Smart PLS 3.2.8 has been deployed to understand link and strength of associations between latent variables. And also, role played by green price and green perceived value towards purchase of organic apparel product.

2. Methodology

Quantitative technique was used to understand factors influencing purchase behaviour for organic clothing. Respective indicators linked to latent variables were framed basis literature review.

2.1 Hypothesis (H)

Below Hypothesis was formulated for testing further through current study:

2.1.1 Hypothesis 1 (H1): Green price directly and significantly impact green perceived value for organic clothing products

2.1.2 Hypothesis 2 (H2): Green price directly and significantly impact organic apparel purchase behaviour.

2.1.3 Hypothesis 3 (H3): Green perceived value directly and significantly impacts organic apparel purchase behaviour.

2.2 Initial Model

It has been created based on review of existing literature related to factors impacting organic clothing purchase behaviour (figure1)

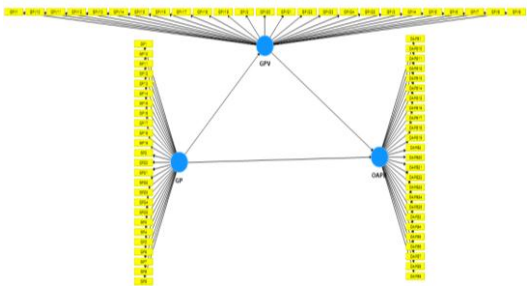

Figure 1 *Consumer Purchase Behaviour for Organic Apparel Product- Initial Model*

2.3 Research Design

Structured questionnaire survey method was deployed.

2.4 Sampling

Bangalore urban population was part of current study. Data was collected through google form online survey executed on existing buyers of range of organic products (organic food, organic clothing etc.) Total 221 responses were received out of which 21 were found incomplete hence 200 completely filled questionnaires were considered for final study

2.5 Pretest

10 number of respondents were randomly selected from a supermarket intercept dealing in various categories of organic products for pretesting the questionnaire. Questions were reframed and complex items were modified as per the respondents' feedback for ease of administration.

2.6 Questionnaire Design

The questionnaire included 4 sections namely demographic, 25 item each for green price, green perceived value and organic apparel purchase behaviour section. In addition to nominal and ordinal scale, and multi choice questions, 5point Likert scale was used for measuring items under each of three latent variables (green price, green perceived value and organic apparel purchase behaviour).

3. Data Analysis

SPSS tool and Smart PLS tool has been adopted to carry out data analysis for this study.

3.1 Respondents Demographic Characteristics

Female respondents' proportion (54%) in comparison to male participants (46%) remained higher (Table 1) in

Table 1 *Demographic Characteristics*

Characteristics		Frequency	Percentage
Gender	Male	92	46.0
	Female	108	54.0
Age	Up to 23 years (Gen Z)	6	3.0
	24-42 years (Gen Y)	182	91.0
	43-54 years (Gen X)	6	3.0
	55-73 years (Baby Boomers)	6	3.0
Qualification	Diploma	6	3.0
	Graduate	48	24.0
	Post Graduate	146	73.0
Social Role	Student	4	2.0
	Entrepreneur	8	4.0
	Professional	178	89.0

	Housewife	10	5.0
Household Income	25001-50000	46	23.0
	50001-75000	46	23.0
	75001-100000	38	19.0
	100001-150000	38	19.0
	Above 150000	32	16.0
Marital Status	Married	146	73.0
	Unmarried	54	27.0
Children	One	60	30.0
	Two	30	15.0
	NA	110	55.0
Family Size	1-3 members	144	72.0
	4-7 members	56	28.0
Place of purchase for organic apparel	Supermarket	48	24.0
	Shopping Malls	22	11.0
	Organic Stores	84	42.0
	Boutique Shops	12	6.0
	Online e commerce portal	24	12.0
	Farmer's market	10	5.0

This study (Table 1). Majority of respondents (91%) belonged to GenY (24-42 years) category and most of the participants were post graduates (73%).Out of total 200 respondents, most of them (178) were professionals. Household income of respondents were significant in the range of 25001-50000 and 50001 to 75000 (with 23% in each category). Married respondents (73%) were majorly part of the survey. Majority of respondents (110) have reported having no children. Accordingly, family size was restricted in the range of 1-3 for majority of the participants. It was interesting to note that organic stores were mostly selected (42%) towards place of purchase for organic clothing.

3.2 Reliability and Validity

Cronbach's alpha test (J, 1951) was carried out to understand reliability of data. It signifies association of a group of items to specific construct. Likert scale questionnaire is suitable for such analysis. The value generally comes between 0 and 1. According to Peterson any value above 0.6 is acceptable. As displayed in table no.2, all values for Cronbach's Alpha (CA) is above 0.6. Therefore, reliability of the scale has been met.

Table 2 *Reliability*

Construct		**Cronbach's Alpha Value (CA)**
Green Price (GP)	GP1 to GP25	0.709
Green Perceived Value (GPV)	GPV1 to GPV25	0.859
Organic Apparel Purchase Behaviour (OAPB)	OAPB1 to OAPB25	0.782

Smart PLS 3.2.8 tool was adopted as it is suitable for small sample size. When PLS algorithm was administered in this study to examine the discriminant validity of latent variable – green price (GP), green perceived value (GPV) and organic apparel purchase behaviour (OAPB), it was found that all the values were below cutoff value of 0.85; hence discriminant validity was established for all latent variables.

Table 3 *Discriminant Validity – Heterotrait - Monotrait Ratio (HTMT)*

	GP	**GPV**	**OAPB**
GP			
GPV	0.749		
OAPB	0.771	0.798	

3.3 Path Coefficient – Hypothesis Testing

Smart PLS provided existing relationship among constructs.

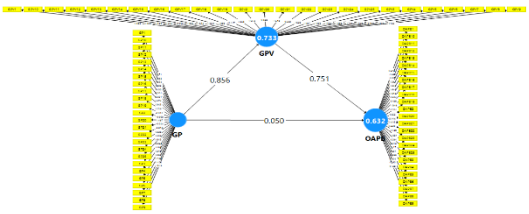

Figure 2 *Partial Least Square Path Model*

As per Chin, 1998, path coefficient (standardized) need to be minimum 0.2 but is expected to be above 0.3. The path coefficient for H1and H3 was above 0.3 (0.856 and 0.751) but for, H2 it was below 0.2 (figure 2). The outcome of running consistent PLS algorithm is displayed in figure 2.

The significance of association among constructs was examined by adopting bootstrapping technique using 1000 iterations that produces t-value for each path estimates (Chinomona and Sandada,2013). Figure 3 and table 4 details the outcome of PLS bootstrapping and consist of path estimate and t-values

Table 4 *Structural Equation Modelling Outcome*

Hypothesis proposed	Hypothesis	Path coefficient	T-Statistics	P values	Supported or Not Supported
Green Price (GP) ➡ Green Perceived Value (GPV)	H1	0.856	18.616	0.00	Supported
Green Price (GP) ➡ Organic Apparel Purchase Behaviour (OAPB)	H2	0.050	0.732	0.464	Rejected
Green Perceived Value (GPV) ➡ Organic Apparel Purchase Behaviour (OAPB)	H3	0.751	3.575	0.000	Supported

Hypotheses (H1,H2,H3) can be favoured depending on direction of path (negative or positive) of path coefficient (figure 2) and t value (figure 3).P value was significant for H1 and H3 (0.00) as detailed in table 4and for H2 p value remained insignificant at 0.464 hence H2 was rejected (Table 4)

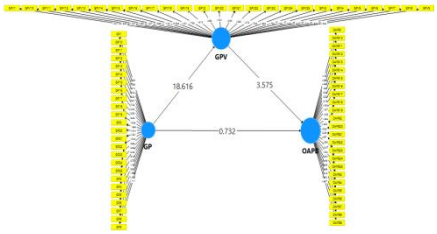

Figure 3 *Partial Least Square – Bootstrapping*

3.4 R^2 - Coefficient of Determination

Variance explained by independent variables represent R^2 or coefficient of determination. According to hair et al. 2014, an upper limit of 0.25, 0.5 and 0.7 are mainly used to explain weak, moderate and strong R^2. Figure 2 details the structural model.

Figure 2 shows result of consistent PLS algorithm as causal path model was examined. R square is 0.733 for association between green price (GP) and green perceived value (GPV) which is significant. It explains that in holistic way, green perceived value (GPV) describes 73.3% of green price (GP). Also, R^2 is 0.632 between green price and organic apparel purchase behaviour which further remains significant. It means organic apparel purchase behaviour explains 63.2% through green price (GP) and green perceived value (GPV).Hence green price has strong association with green perceived value and organic apparel purchase behaviour. Figure 4 details R square for latent variables GPV (0.733) and OAPB (0.632) both of them display strong relation with green price (GP).

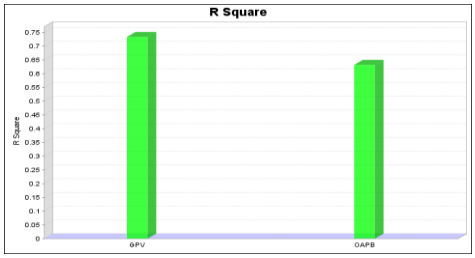

Figure 4 *R Square*

3.5 F^2- Effect Size

It allows to examine the effect size of exogenous variable on endogenous latent variable (Almusaddar et al. 2018). According to Hair et al. 2014, the f^2 value of < than 0.02 signifies no effect,0.02-0.15 indicates small effect and 0.15 to 0.35 refers to moderate effect whereas beyond 0.35 signals large effect of exogenous variable on endogenous variable Table 5 explains green price has large effect on green perceived value. Also, green perceived value has large effect on organic apparel purchase behaviour. Whereas green price has no effect on organic apparel purchase behaviour.

Table 5 *Effect Size F^2*

Effect Size f^2	**Performance**		
Exogenous Construct	**Endogenous Construct**	**F^2**	**Result**
Green price	Green perceived value	2.745	Large Effect
Green perceived value	Organic apparel purchase behaviour	0.409	Large Effect
Green price	Organic apparel purchase behaviour	0.002	No effect

3.6 Importance Performance Matrix Analysis (IPMA) It was carried out by taking organic apparel purchase behaviour as dependent variable (DV).Total effect and index value is used for the analysis. Table 6 indicate total effect and index value considered for the analysis.

Table 6 *Importance Performance Matrix Analysis*

Construct	**Total Effect of LV performance**	**Index value performance**	
	Importance	**LV index value**	**LV performances**
GP	0.547	3.321	56.021
GPV	0.578	3.535	57.111
OAPB	Target DV	3.260	53.624

It was found that both green perceived value and green price are important with green perceived value slightly more important at 0.578 compared to green price at 0.547 detailed in table 6.GPV is more significant than GP , same is also explained through figure 5 for organic apparel purchase behaviour (OAPB)

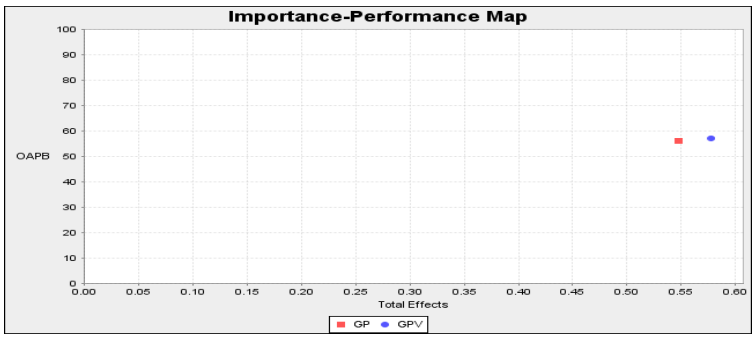

Figure 5 *Importance Performance Map*

The IPMA model in figure 6 indicates significant path as GP impact GPV and GPV impact OAPB highlighted in bold colour path direction. The path association between GP and OAPB is below 0.2 and hence not significant. Also, LV performance for GPV is highest followed by GP and OAPB same is detailed in table 6.

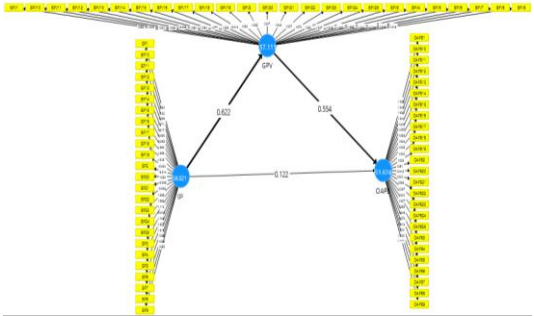

Figure 6 *IPMA Model*

4. Result and Discussion

We found females were more interested in such study related to sustainable purchase behaviour as their proportion remained high overall (table 1).Most of the respondents belonged to Gen Y (24-42 years) group, qualified post graduates and visited organic stores for organic cloth purchase.

Green price was significantly associated with green perceived value due to same Hypothesis one (H1) was supported in this study. Similar result was obtained in a study by Epuran et al. (2015), where it was found that expensive (highly priced) clothing products increases consumers satisfaction basis perceived hedonic values. Price for organic cloth does not significantly impact organic clothing purchase behaviour hence H2 was rejected. Similarly, in a research work by, price remained insignificant as a moderator between shopping values and fashion product attribute. In similar way, Ellis et al. (2012) found consumers were ready to spend 25 percent premium for organic cotton t-shirt though perception on product quality matters. In this study also GPV appeared significantly impacting OAPB hence H3 was supported. The result aligns with earlier study by Članek (2019) who found perceived value having important role in purchase process for regional clothing products. Also, findings of a study done on consumers in USA indicated various monetary and cause effectiveness values impacts purchase intention for environment friendly apparel products(Moon and Lee, 2018).Also the IPMA model clearly indicate that green perceived values will determine purchase behaviour and that green price has significant influence on perceived value. The result of the study conducted by Li, Li and Kambele (2012), aligns with current finding as it found consumers are willingness to spend more for luxury fashion brands basis perceived values (social/emotional, economical, utilitarian). Further green perceived value has large impact on organic apparel purchase behaviour as per findings from this study. Similar results were found in a study by, where green value appeared to have significant influence on purchase intention for up cycled products.

5. Conclusion

In this study we have examined the relationship between green price, green perceived value and organic apparel purchase behaviour constructs. The findings show green price has significant influence on green perceived value. Also, green perceived value has significant impact on organic apparel purchase behaviour. Related Hypothesis was supported – H1 and H3. Same has been emphasised in IPMA model. Green price influence on organic apparel purchase behaviour remained insignificant Accordingly, H2 was rejected. To conclude, marketers need to formulate differentiation strategies basis price for organic apparel products. Also value driven strategies is significant in Indian context as found in current study. Marketers need to focus on environmental benefits related to green products so as to facilitate recognition of green perceived values by consumers as argued by Wei and Jung (2017). Finally, consumers are possibly prepared to spend more or less price depending on several attributes which they value as fabric material, durability or comfort based on which they make purchase decisions for apparel products, same was concluded by Lindahl (2019).The role of green perceived value has been well emphasised through our findings and as such not only green price , other factors influencing green perceived value like perceived benefits (Kataria et al.,2016) could possibly have important say in buying behaviour for organic apparel in Indian context. And as such, marketing strategies revolving around such value perceptions need to be carefully considered during formulating strategies to promote and overcome challenges linked to organic apparel business sustenance.

6. Reference

1. Chinomona, Richard, and Maxwell Sandada. "Customer Satisfaction , Trust and Loyalty as Predictors of Customer Intention to Re-Purchase South African Retailing Industry." *Mediterranean Journal of Social Sciences*, vol. 4, no. 14, 2013, pp. 437–46, doi:10.5901/ mjss.2013.v4n14 p 437.
2. Connell, K. Y. H. (2010) 'Internal and external barriers to eco-conscious apparel acquisition', *International Journal of Consumer Studies*, 34(3), pp. 279–286. doi: 10.1111/j.1470-6431.2010.00865.
3. Članek, I. znanstveni (2019) 'The Influence of Consumers ' Perception on Perceived Value and Purchase Intention with respect to Regional Products Based on a C-A-B Model', Tekstilec, 7(October), pp. 219–228. doi: 10.14502/Tekstilec019.62.219-228.
4. Copeland, L. R. (2019) 'Media Strategies Impacting Millennials' Sustainable Apparel Purchase Intention', Journal of Sustainability Education, 20(April), pp. 1–15.
5. Cowan, K. and Kinley, T. (2014) 'Green spirit: Consumer empathies for green apparel', International Journal of Consumer Studies, 38(5), pp. 493–499. doi: 10.1111/ijcs.12125.
6. 4. Curwen, L. G. et al. (2012) Challenges and solutions of sustainable apparel product development: a case study of eileen fisher. Colorado State University. Available at: https://mountainscholar.org/bitstream/handle/10217/67990/Curwen_colostate_0053N_11212.pdf?sequence=1.
7. Ellis, J. L., McCracken, V. A. and Skuza, N. (2012) 'Insights into willingness to pay for organic cotton apparel', Journal of Fashion Marketing and Management, 16(4), pp. 571–586. doi: http://dx.doi.org/10.1108/13612021211246053 Downloaded.
8. Epuran, G., Gârdan, I.P., Gârdan, D.A. and Bumbas, F., 2015. Hedonic value of clothing products/Valoareahedonica a produselor vestimentare. Industria Textila, 66(3), p.164.

9. Ingram, M. (2014) 'Producing the natural fiber naturally : Technological change and the US organic cotton industry Producing the natural fiber naturally : Technological change and the US organic cotton industry', Agriculture and Human Values, 19(November), pp. 325–336. doi: 10.1023/A.
10. Kataria, A. et al. (2016) 'An Exploration of Consumers " Perceived Value of Sustainable Brands in India', Asian Journal of Business Research, 6(2), pp. 1–19. Doi: 10.14707/ajbr.160026.
11. Li, Guoxin, Li, Guofeng and Kambele, Z. (2012) 'Luxury fashion brand consumers in China : Perceived value, fashion lifestyle, and willingness to pay ☆', Journal of Business Research. Elsevier Inc., 65(10), pp. 1516–1522. Doi: 10.1016/j.jbusres.2011.10.019.
12. Lindahl, E. (2019) The Outdoor Apparel Industry : Measuring the Premium for Sustainability with a Hedonic Pricing Model. Claremont Colleges. Available at: https://scholarship. claremont.edu / scripps_theses/1322%0AThis.
13. Moon, H. and Lee, H. (2018) 'Environmentally friendly apparel products : the effects of value perceptions', social behavior and personality, 46(8), pp. 1373–1384. Doi: https://doi.org/10.2224/sbp.6392 ENVIRONMENTALLY.
14. Nguyen, M. T. T., Nguyen, L. and Nguyen, H. V (2019) 'Materialistic values and green apparel purchase intention among young Vietnamese consumers', Young Consumers, (September). doi: 10.1108/YC-10-2018-0859.
15. Popa, I. D. and Dabija, D. C. (2019) 'Developing the Romanian organic market: A producer's perspective', Sustainability (Switzerland), 11(2), pp. 1–15. doi: 10.3390/su11020467.
16. Wei, X. and Jung, S. (2017) 'Understanding Chinese Consumers' Intention to Purchase Sustainable Fashion Products : The Moderating Role of Face-Saving Orientation', Sustainability, 9(1570), pp. 1–15. Doi: 10.3390/su9091570.
17. Yu, S. and Lee, J. (2019) 'The Effects of Consumers' Perceived Values on Intention to Purchase Upcycled Products', Sustainability, 11(1034), pp. 1–20. Doi: 10.3390/su11041034.
18. Zheng, Y. and Chi, T. (2015) 'Factors influencing purchase intention towards environmentally friendly apparel: An empirical study of US consumers', International Journal of Fashion Design, Technology and Education, 8(2), pp. 68–77. doi: 10.1080/17543266.2014.990059.