

WHY CONSUMERS DON'T WALK THEIR TALK? THE MODERATION EFFECT OF AVAILABILITY AND PRICE BETWEEN GREEN INTENTION AND BUYING BEHAVIOR

**Abera Legesse Yada, Addis Ababa University, Punjabi University, Patiala
Satinder Kumar, Punjabi University**

ABSTRACT

Though the inconsistency between intention and behavior has been a question in marketing field, no attempt was made by researchers to know the reasons behind the mismatch. This study aims at finding possible roots of the discrepancy between consumers' feeling and actual consumption through in depth analysis of green product's price and availability. For this purpose, data was collected from 402 university academic staffs at Addis Ababa, Ethiopia. Multiple regression method was used to analyze the data and the result revealed that intention predicts behavior and price is proved to significantly moderate intention and behavior. The study also claims that price contributes to the gap between consumers' green intention and behavior.

Keywords: Moderation Effects, Price, Availability, Intention, Behavior, Ethiopia.

INTRODUCTION

The key challenge for mankind in this century is to find more sustainable and equitable ways to produce and consume. However, it seems humankind failed to understand how heavy the challenge is getting from time to time. To mention few evidence, Polonsky et al. (2012) listed different environmental changes including environmental pollution, climate inconsistencies, global warming and carbon emissions. Low birth weight, premature birth, and infant deaths are other horrific costs generations are paying for (Loss, 2013). The key point is who is making these damages? Who is shouldering the spiteful results of the damages? Who benefits out of care to environment? As saying goes "*What goes around comes around*" we are experiencing the mentioned climatic challenges due to our failure to care for land. Many empirical results including Grunert & Juhl (1995) evidenced that much of the damage to environment is made by human beings. With this recognition, marketing has been through many evolutionary stages of which marketing 3.0 is an instance. This marketing philosophy purely recognize the fact that consumers are conscious being and they care for the land they live in as damage to the land is destruction to everyone. Nevertheless, most consumers feel the current environmental trends but put less or no effort to minimize the level of the damages. On the other hand, despite the mismatch between intention and behavior, companies are trying to introduce green products with fewer side effects to environment. The inconsistency between feeling and actual behavior has been reported by many writers including Paco et al. (2013); Paco et al. (2014) and Joshi & Rahaman, (2015). The key issue here is, why such discrepancy? Attempts were made by many researchers to find out factors predicting consumers' intention and buying behavior, but none addressed the reasons behind the inconsistency.

This study proposes two marketing mix i.e green products availability and price as moderating variables between intention and behavior. Availability and price were chosen for further analysis as most consumers in Ethiopia claims absence of the product and price are main causes for the current anti-environment consumption pattern. The study used intention-behavior relationship claimed by theory of planned behavior to formulate the proposed relationships. Overall, this piece of work tries to examine the roles of availability and price play in reducing the gap between intention and green buying behavior.

LITERATURE REVIEW AND HYPOTHESIS

Consumer household purchase is responsible for 40% of the environmental damage (Grunert & Juhl, 1995). Bray et al. (2011) also claimed green products take only 1-3% of market share. One can imply from these statistical data that large proportion of the damage to environment is accounted to our consumption pattern and that there is very limited market share of green products relative to conventional items. Above all, though we are claimed to have intention towards green consumption, our intention rarely changes to actual behavior. Primarily, this study opts to raise the basic question of why intention fails to change to behavior. For further in-depth examination, as shown in Figure 1, intention is hypothesized to predict behavior and availability and price are claimed to affect the magnitude and direction of the named exogenous variable i.e green intention.

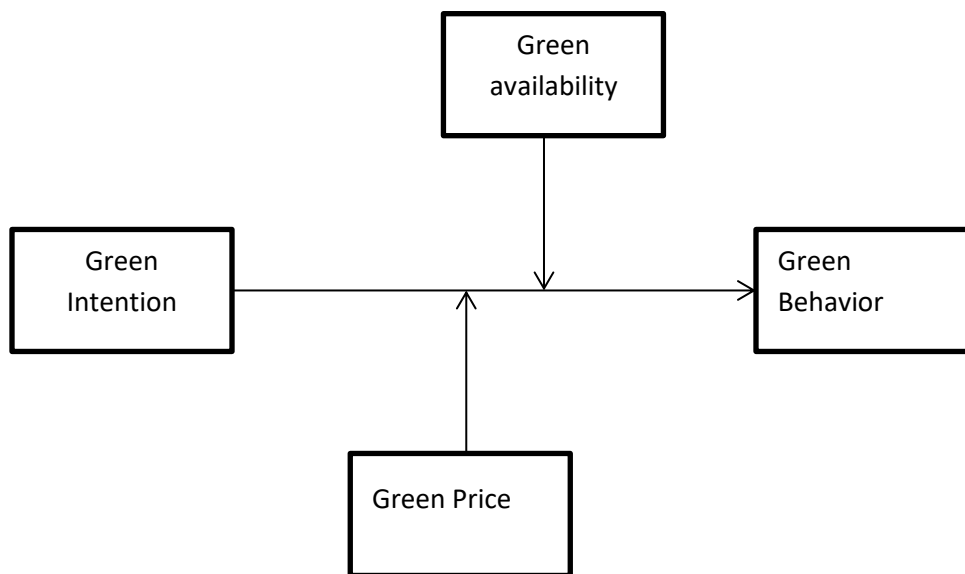


Figure 1
CONCEPTUAL FRAMEWORK

Based on the above framework, previous conceptual and empirical findings of the proposed variables and their relationships are reviewed as follows.

Green Purchase Intention

Ramayah et al. (2010) defined intention as willingness or determination to act in a certain way.

Though many agree on the inconsistency between intention and actual behavior, undeniable number of previous empirical studies including Ajzen (1991); Angelovska et al. (2012); Wee et al. (2014) & Kumar et al. (2017) evidenced that consumer performance is determined by his or her intent to perform the behavior. Theoretically, majority claims that intention predicts behavior though only very small portion of intention changes to actual consumption. With the objective of reconfirming the said relationships in new context and market settings, the following proposition is made.

H₁: Green purchase intention is a positive predictor of buying behavior.

Green Products Availability

A study made by Byrne et.al (1991) and Davies et al. (1995) claimed availability of green products is one of the obstacles to consumer purchase behavior. Besides, an empirical study made by Joshi and Rahaman (2015) and Karatu and Mat (2015) also echoed product availability as one external factor affecting consumers' buying behavior. Nevertheless, Sharaf & Perumal (2018) argue that product availability has no effect on green behavior. Hence, though there are for and against on the effect of availability, the above empirical results give clue that availability of green products affects the relationship between intention and consumers buying behavior. Therefore, based on the above empirical evidences and the conceptual framework, the following relationship is hypothesized.

H₂: Green product availability moderates the relationship between green intention and consumption behavior.

Green Products' Price

The concept of green price stands for economic resources of consumers and market price of green products. According to Vicente-Molina et al. (2013) price is a main barrier to green purchase behavior. If buyers feel that products are priced high, it is very likely that they become non purchaser (Lynn & Oldenquist, 1986; Osterhus, 1997 used in Gleim et al., 2013). Peattie (2001); Joshi & Rahaman (2015); Boztepe (2012) and Sharaf & Perumal (2018) said price significantly affects consumers' green buying behavior. However, Yadav & Pathak (2017) argue that price play insignificant role. Though Trivedi et al. (2015) admits the effect of price, they also claim that marketers can encourage users to buy green products by creating awareness regardless of its price. Chaudhary & Bisai (2018) also claimed that willingness to pay premium price for green products or service moderate the relationship between intention and green behavior. Despite the arguments among writers on the effect of the variable, this study opts to see the role price plays in minimizing the gap between willingness and behavior. Hence, based on the illustrated facts and objective, the following relationship is hypothesized.

H₃: Green products' price moderates the relationship between intention and actual buying behavior.

METHODOLOGY AND DATA

Taking the awareness level of academic staffs about the issue under study, teaching staffs of eight universities at Addis Ababa, Ethiopia were targeted.

For homogeneity purpose, the universities are grouped in to private and public. From these universities, 402 academic staffs are randomly approached to solicit the required data.

Of the approached participants, 341(84.8%) are male and 61(15.2%) are female staffs. Age ranged from early working to elderly age (19-24=18(4.5%), 25-54=334(83.1%), 55-64=41(10.2%) and 65+=9(2.2%)). Income ranges from 3000 Birr to 23,000+ Birr per month. 185(46%) earns 8001-13000 Birr while 128(31.8) earns 13,001-18,000 Birr per month and 24(6%) get the maximum income (23,000+Birr). Educational profile ranges from first degree 25(6.2%) to PhD and above 35(8.7%). Majority 227 (56.5%) are second degree holders and PhD holders are 114 (28.4). Overall, people of diverse gender, age, income, and education background participated in the study.

Data collection instruments were adopted from previous validated research works. Accordingly, instruments for green intention were adapted from Chan & Lau (2000); Kumar et al. (2017). Measurement scales for product availability and price are taken from Gleim et al. (2013); Trivedi et al. (2015) respectively.

Before running the multiple regressions, data was checked for missing values, outliers and normality. Microsoft excel 2010 was used to check for missing values and outliers and few observations are excluded from further analysis against this criterion. Data normality was examined using skewenes and kurtosis and all observations are found to have value between +2 and -2 (Garson, 2012) implying no kurtotic and skewed data.

Tolerance (T) and variance inflation factor (VIF) were used to check for Multicollinearity and data was examined against the threshold recommended by Garson (2012) i.e., Tolerance (T) value less than 0.20 and variance inflation factor (VIF) greater than 5 demonstrates presence of multicollinearity. Against these criteria, data is free of multicollinearity problem (Table 1). Multiple regression analysis is used to test the proposed hypothesis. The moderation effects of availability and price are triangulated using different statistical tools including R, R-square, adjusted R-square, F-ratio, standardized beta, t-value and P values.

RESULTS

As depicted in figure 1, intention is claimed to have direct effect on buying behavior where availability and price has a moderating role between the two variables. Using enter method, the moderating variables are allowed to join the model step by step and attempt was made to compare the effect of adding the moderating variables to the original equation (model without the moderator). Details of the statistical results are presented in Table 1.

Table 1									
THE MODERATION EFFECT OF GREEN PRODUCT AVAILABILITY AND PRICE									
Moderating Variable: Green products availability								Remark	
	With Out Moderator			With Moderator			Collinearity Statistics		
Independent Variable	β^*	t	Sig.	β^*	t	Sig.	T**	VIF***	
Green purchase intention	0.200	4.083	0.000	-.105	-1.556	0.121	0.525	1.906	GPI \rightarrow GB is Sig. @ P < 0.001
F-Ratio	16.674		0.000	9.576		0.000			
Durbin-Watson Statistics	1.861			1.877					
Model Summary									
R	0.200			0.214					GPI_GPA \rightarrow GB isn't
R2	0.040			0.046					
Adjusted R2	0.038			0.041					Significant
Moderating Variable: Green product's price									
Independent Variable	β^*	t	Sig.	β^*	t	Sig.	T**	VIF***	
Green purchase intention	0.200	4.083	0.000	0.459	5.147	0.000	0.284	3.524	Moderation effects of price is Significant @ P < 0.001
F-Ratio	16.674			22.116					
Durbin-Watson Statistics	1.861			1.778					
Model Summary									
R	0.200			0.316					
R2	0.040			0.100					
Adjusted R2	0.038			0.095					

*Standardized Coefficient Beta, **Tolerance, ***Variance Inflation Factor, GPI= Green purchase intention, GPA= green products availability, GB= green behavior, GPI_GPA= Products of the interacting variables (Moderating effects of GPA).

T-value, F-Ratio and standardized coefficients are used to triangulate the effects of the proposed moderating variables. The model summary and residual correlation effects were also examined using R, R-square, adjusted R-square and Durbin-Watson methods. Collinearity was checked using tolerance and variance inflation factor and found okay as recommended by Garson (2012). The Durbin-Watson values are all closer to 2 indicating absence of residual correlation as supported by Andy (2009). Overall, Tolerance; variance inflation factor and Durbin-Watson values in Table 1 manifest that there are no Multicollinearity and residuals correlation issue. All are okay as per the threshold recommended by Garson (2012) & Andy (2009) respectively.

Green purchase intention is found significant at $\beta=.200$, $t=4.083$, $P<0.001$. Standardized coefficient of 0.200 and P value of 0.000 is an indication of robust predictive capacity of intention over the green buying behavior. However, as claimed by Paco et al. (2014); Joshi & Rahaman, (2015) mostly consumers fail to change their intention to actual buying behavior.

The failure to change intention to actual buying behavior has been always a question to researchers. To this end, this study opted to examine the secret behind this inconsistency and proposed green products availability and price as moderating variables between intention and buying behavior to further examine their role in the said mismatch.

Accordingly, as depicted in Table 1; multiple regression approach is used to check for the moderating effect of availability and price. And the moderating variables are regressed over the outcome variable using enter methods to know the interaction effect of the proposed variables.

Albeit intention is found to have significant effect over green behavior, it failed to show same effect when green products availability interacts with green intention. This is manifested by changes of β value from .200 to -.105, t-value from 4.083 to -1.556 and P value from .000 to .121. These statistical values evidence that the interaction effect of green products availability isn't significant. Model summary shows slight change i.e strength of relationship, proportion of variation explained by availability and model prediction accuracy has shown small increase. To be specific, R increased from 0.200 to 0.214, R-square from .040 to .046 and adjusted R-square moved from 0.038 to 0.041. Overall, it can be said though the total impact of the interaction effect isn't significant, including availability as a moderator improved the overall prediction capacity of the outcome variable. The model summary statistics may imply availability of green products has its own effect but doesn't play as such significant role in changing intention to actual buying behavior. In conclusion, the contradiction we see between statistical indicators imply that availability has slight effect but not as such significant. In Ethiopian market settings and culture, usually consumers think over available items are cheap and of less quality. Therefore, one may infer from the statistics that we need to ensure availability but shall also keep balance of products availability.

Besides, statistical summary in table 1 also indicate significance change on the model when the interaction value of price is added to the model. This can be seen from change in R from 0.200 to 0.316, R-square move from 0.040 to 0.100 and adjusted R-square from 0.038 to 0.095. The adjusted coefficient of determination tells significant model change due to the interaction between price and intention. Specifically, price has significantly improved proportion of variation explained by the independent variables. This can be evidenced by the improvement on β value from 0.200 to 0.459 and t-value from 4.083 to 5.147. Overall, triangulation of the above statistical results tells that green products' price play significant moderating role between intention and green buying behavior. And it can also be inferred that the more the product is affordable, the more the consumption.

DISCUSSIONS

As mentioned under the conceptual framework, theory of planned behavior where intention is believed to explain green behavior is used as reference to develop relationship between the variables. According to the study framework, intention predicts behavior and products availability, and price are assumed to moderate the relationship between intention and behavior.

Accordingly, vivid statistical analysis showed that intention has significant effect on actual green consumption. Though many has reservation on the possibility of intention to change to behavior, many also supported the positive relationship between the two variables including Angelovska et al. (2012); Wee et al. (2014); Lai & Cheng (2016); Jaiswal & Kant (2018); Kumar, et al. (2017); Nguyen et al. (2018).

Besides, examining the moderation effect of availability and price is another objective of this manuscript. Accordingly, each variable was allowed to join the model step by step to see the modification associated to the interaction effects. The result evidenced that availability doesn't moderate intention and behavior which goes with previous finding of Sharaf & Perumal (2018). Balachander & Stock (2009) and Amaldoss & Jain (2010) also claimed that availability may not necessarily lead to purchase as excess availability may create low quality perception. However, the triangulated statistics of price proved significant moderating effect between the two variables. The claimed relationship seems similar with previous empirical results including Vermeir & Verbeke (2006); Boztepe (2012); Gleim et al., (2013); Zhao et al. (2013); Johsi & Rahaman (2015); Sharaf & Perumal (2018); Chaudhary & Bisai (2018).

Theoretical and Managerial Implications

As claimed above, there is a mismatch between intention and green purchase behavior and most scholars failed to expose the reasons behind the inconsistency. The main reasons of the gap could be any individual or situational factors but this study tried to examine two situational factors including availability and price of green products as a main cause for the incongruity. To this end, statistical examination of availability and price evidenced that actual consumption of green products depends on the price level of the products. In specific term, consumers are price elastic and consumption level varies across different price levels. This relationship is a new established relationship leading to theoretical conclusion that price play significant role to minimize the gap between willingness and actual consumptions. The result of this study also gives clue to future researchers that there are overlooked variables that need further insightful examination between intention and actual behavior. Overall, this study play great role in establishing new theoretical relationships which could be a reason for the inconsistency between intention and behavior.

On the other hand, statistical test of the study attests the moderating role of price implying a need to set reasonable price for green products. However, mostly green products are costly compared to conventional items. The key issue to the stake holders here is balancing these contradicting issues. To this end, one has to bear in mind that green marketing is beyond making profit as it also involves discharging one's social responsibility, building brand loyalty and respecting the law of the land. One can't deny that being green requires additional costs but it also creates an opportunity to enjoy unpaid promotion and acceptance by those who care for the nature. Therefore, it can be drawn from the above statements that green doesn't bear only cost but it has also windows of opportunity to make money out of it.

Hence, the result messages to marketers and policy makers the need to balance the cost of the products and consumers ability to pay. In general, the study claims that price is one factor for the mismatch between intention and behavior as the effect of intention varies at different price level.

Limitations and Future Research Directions

With the assumption that university staffs are better aware of the issue under study, only institutions at universities level in Addis Ababa, Ethiopia was targeted. Yet, of the selected university employees, academic staffs are allowed to participate in the process. Concluding this result to country level could be difficult due to the limited area coverage and participants. Hence,

the researchers believe including other part of the society and regions may give more complete insight about the issue. Therefore, future researchers are advised to consider other regions and consumers to generalize the results.

DECLARATIONS

Author Contribution Statement

Authors initiated and designed, collected, analyzed and interpreted the data and wrote the paper.

Funding Statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing Interest Statement

The authors declare no conflict of interest.

Additional Information

No additional information is available.

REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Process*, 50(2), 179–211.
- Amaldoss, W., & Jain, S. (2010). Reference groups and product line decisions: An experimental investigation of limited editions and product proliferation. *Management Science*, 56, 621–644.
- Andy field (2009). *Discovering statistics using SPSS. 3rd ed.* Dubai, Printed by Oriental Press.
- Angelovska, J., Sotiroska, S.B., & Angelovska, N. (2012). The impact of environmental concern and awareness on consumer behavior. *Journal of international environmental application and science*, 7(2), 406-416.
- Balachander, S., & Stock, A. (2009). Limited edition products: When and when not to offer them. *Marketing Science*, 28(2), 336-355.
- Boztepe, A. (2012). Green Marketing and its Impact on Consumer Buying Behavior. *European Journal of Economic and Political Studies*, 5(1), 5-21.
- Bray, J., Johns, N., & Kilburn, D. (2011). An exploratory study into the factors impeding ethical consumption. *Journal of Business Ethics*, 98(4), 597-608.
- Byrne, P.J., Toensmeyer, U.C., German, C.L. & Muller, H.R. (1991). Analysis of consumer attitude toward organic produce purchase likelihood. *Journal of Food Distribution Research*, 22(2), 49-62.
- Chaudhary, R., & Bisai, S. (2018). Factors influencing green purchase behavior of millennials in India. *Management of Environmental Quality: An International Journal*, 29(5), 798–812.
- Davies, A., Titterington, A.J. & Cochrane, C. (1995). Who buys organic food? A profile of the purchasers of organic food in Northern Ireland. *British Food Journal*, 97(10), 17-23.
- Garson, G.D. (2012). *Testing Statisticaal Assumptions*. Statistical Associates Publishing.
- Gleim, R.A. Smith, S.J, Andrews. D. & Jr,C.J.J. (2013) Against the Green: A multi-method examination of the barriers to green consumption. *Journal of retailing*, 89(1), 44-61.
- Grunert, S.C., & Juhl, H.J. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of economic psychology*, 16(1), 39-62.
- Jaiswal, D., & Kant, R. (2018). Green purchase behavior: A conceptual framework and empirical investigation of Indian consumers. *Journal of retailing and consumer services*, 41, 60-69.

- Joshi, Y., & Rahman, Z. (2015), Factors Affecting Green Purchase Behavior and Future Research Directions. *International Strategic Management Review*, 3,131-136.
- Karatu, H.M.V., & Mat, N.K.N. (2015). Predictors of green purchase intention in Nigeria: The mediating role of environmental consciousness. *American journal of economics*, 5(2), 296-304.
- Kumar, B., Manrai, A.K., & Manrai, L.A. (2017). Conceptual framework and empirical study crossmark. *Journal of Retailing and Consumer Services*, 34, 1–9.
- Lai, K.M.C. & Cheng, W.L.E. (2016). Green purchase behavior of undergraduate students in Hong Kong. *The social science journal*, 53:67-76.
- Loss, M. (2013), Green Marketing: *Marketing Strategies and Consumer Behavior*, Dr.N.K. Singh for global vision publishing house, New Delhi.
- Nguyen,N. Lobo, A. & Nguyen, B.K. (2018). Young consumers' green purchase behavior in an emerging market. *Journal of Strategic Marketing*, 26(7), 583-600.
- Paco, D., A., Alves, H., Shiel, C., & Filho, L. (2013), Development of a Green Consumer Behavior Model. *International Journal of Consumer Studies*, 37, 414-421.
- Paco, D., Alvesa, H., Shielb, C., & Filho, L. (2014), Analysis of the Measurement of the Construct "Buying behavior" in Green Marketing. *Journal of Integrative and Environmental Science*, 11(1), 55-69.
- Peattie, K. (2001). Golden goose or wild goose? The hunt for the green consumer. *Business Strategy and the Environment*, 10(4): 187-89.
- Polonsky M, Vocino A, Grau S, Garma R, & Ferdous A. (2012). The impact of general and carbon related environmental knowledge on attitudes and behavior of US consumers. *Journal of Marketing Management*, 28(3/4), 238–263.
- Ramayah, T., Lee, C., W., J., & Osman, M. (2010), Green product purchase intention: Some insights from a developing country. *Journal of resources conservation and recycling*, 54, 1419-1427.
- Sharaf, M.A. & Perumal, S. (2018). How does green products' price and availability impact Malaysians' green purchasing behavior? *The journal of social sciences research*, 4(3), 28-34.
- Trivedi, R.H., Patel, J.D., & Savalia, J.R. (2015). Pro-environmental behavior, locus of control and willingness to pay for environmentally friendly products. *Marketing Intelligence & Planning*, 33(1), 67-89.
- Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude - Behavioral intention gap. *Journal of Agricultural and Environmental Ethics*, 19(2), 169–194. <https://doi.org/10.1007/s10806-005-5485-3>.
- Vicente-Molina, M.A., Fernández-Sáinz, A., & Izagirre-Olaizola, J. (2013). Environmental knowledge and other variables affecting pro-environmental behavior: Comparison of university students from emerging and advanced countries. *Journal of Cleaner Production*, 61, 130-138.
- Wee, C.S., Ariff, M.S.B. Md., Zakuan, N. Tajudin, M.N.M. Ismail, K., & Ishak, N. (2014). Consumers' perception, purchase intention and actual purchase behavior of organic food products. *Review of Integrative Business Economics Research*. 3(2), 378-397.
- Yadav, R., Pathak, S.G. (2017). Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior. *Ecological Economics*, 134, 114-122.
- Zhao, H., Gao, Q., Wu, Y., Wang, Y. & Zhu, X. (2013). What affects green consumer behavior in China? A case study from Qingdao. *Journal of Cleaner Production*, 1–9.