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Demographic Controversies and Green Buying Intention: The Moderating Effects of Gender, Age, Income and Education

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ABSTRACT
A lot has been debated on the inconsistent empirical results of green customers' personal profiles. The inconsistence results among writers created difficulty in finding the right market segment to green products.To examine this discrepancy, a total of 402 academic staffs from universities in Addis Ababa, Ethiopiawere randomly approached. Data was examinedusing multiple regression analysis method.The finding revealed that personal norm, perceived consumer effectiveness, attitude towards green behavior and trust in green products significantly predictsintention and income, gender, education and age plays significant moderating role between limitedpsychometric factors andintention. The result also exhibited that male, younger, lower income earners and educated consumers are greener.
Key words: Demographic Variables, Psychometric Variables, Intention, Moderation, Ethiopia

1. Introduction

Environmental campaigner, policy makers and marketers are always in dilemma on personal profiles of green consumers.Shrum et al.(1995) and Roberts (1996) in Trivedi et al. (2015) argued that profiling environmentally conscious consumers has given mixed results. Baker (2003) also echoed the fact that study made on demographic variables failed to show strong indicative output. Beyond the inconsistency of the findings, intense analysis of these variables was also overlooked (Joshi and Rahaman, 2015). On the other hand, Bodur andSarigollu (2005)

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in Trivedi et al. (2015) claimed that the effect of the said variables varies in different geographic locations and findings in a given context and culture can't be universalized. As remarked by Sekaran and Bougie (2010), academic research is relevant if (1) nothing is known about a topic, (2) much is known about the topic, but the knowledge is scattered and not integrated, (3) much research on the topic is available, but the results are contradictory, or (4) established relationships don't hold in certain situations. With reference to this, existing empirical results shows there is no integration and consistency among different findings on consumers' demography. Besides, to the knowledge of the researchers, no scientific research was made in this area in Ethiopian context. Hence, the disputing results among writers and contextual difference of results are the main reason to write this manuscript. And the researchers believe that the results of the study add value to existing theory and solve the disputing research results among writers in the field.

2. Literature Review and Hypothesis

Theory of planned behavior is used as reference for theoretical model development. Theory of planned behavior doesn't specify the exact factors associated to particular behavior and determining those variables are left to the researcher (George 2004). Ajzen (2002) also mentioned that it is important to identify specific factors to better understand the cognitive foundation of behavioral control. Hence, the study used theory of planned behavior as reference with minor extension to introduce new relationships. As portrayed in figure 1, psychometric factors are proposed to affect buying intention while the demographic factors moderate the two variables. Overall, the study aims at reconfirming the psychometric variables contextually and taking position on the contradicting results of demographic variables.

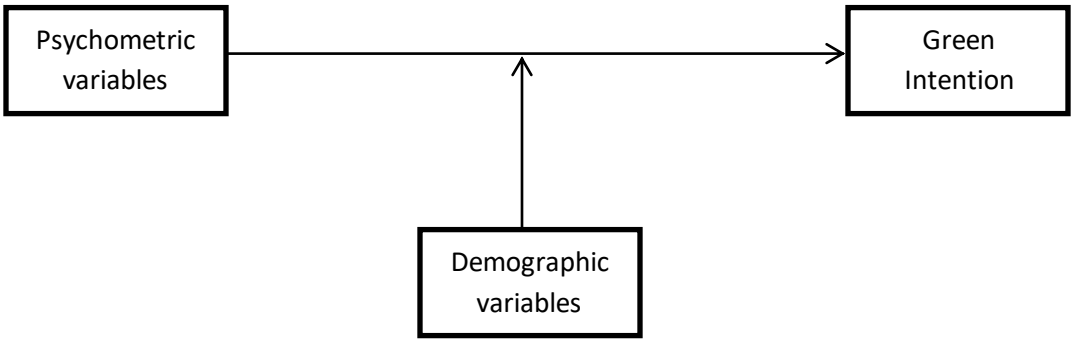

Figure 1: Theoretical foundation

2.1. Proposed Psychometric Variables and their Relationship With Green Purchase Intention

Used in Gleim and et al. (2013), Osterhus, (1997) looks personal norm as what a person feels should do in a given consumptioni.e feeling of strong moral obligation to engage in green behavior. Moser (2015) and Nguyen et al. (2018) echoed the positive relationship between

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personal norm and green intention. Besides, Haws et al. (2010) in Taufique et al. (2014)also proved that consumers with higher green value tend to make consistent consumption pattern.

Joshi and Rahaman (2015); Sharma and Trivedi (2016) and Nazri et al. (2017) are writers claiming the significant influence of environmental knowledge on the consumer green buying intention. Yet, Nazri et al. (2017) and Nguyen et al. (2018) alsosupported the positive relationship between environmental knowledge and green buying behavior.

Defined in the work of Heo and Muralidharan (2017), Sjoberg (1989); Takala (1991); Gärling (1999) viewed environmental concern as an evaluation of own or others' behavior and its consequences on environment. On the other hand,Lee (2008, 2009) and Bertrandias&Elgaaied-Gambier (2014) resonated that environmental concern is found to be a determinant of green products choice. Writers like Ellen et al. (1991); Mainieri et al. (1997);Polonsky et al. (2014);Heo and Muralidharan (2017) andJaiswal& Kant (2018) evidenced the effect of environmental concern on intention.

Perceived consumer effectiveness is defined as perceived belief of consumerto make a difference in solving environmental damage (Ellen et al. 1991).Bandura (1986) and Cleveland et al. (2012) said it is an internal control of locus held by consumers that their personal commitment can make a difference in sustaining the environment. Research works includingKinner et al. (1974); Ellen et al. (1991); Roberts (1996);Vermeir and Verbeke (2006); Cleveland et al. (2012) and Wesley et al. (2012) claimed perceived consumer effectiveness is a significant predictor of behavior. Besides, Jaiswal and Kant (2018) claimed it positively affects green purchase intention.

Set of views about a given object or an act which may be changed to intention to actualize the act is an attitude (Schwartz, 1992,Ramayah et al., 2010). Attitude is also defined by Ajzen (2001) as an evaluation of objects, people or topics characterized by a clear inclination toward one direction. Different writers including Mainieri et al. (1997); Verbeke and Viaene (1999); Chan (2001); Vermeir&Verbeke (2006); Zhao et al. (2013); Lai and Cheng (2015) and Nguyen et al. (2018) believe that attitude explains consumers' intention to buy green products.

Using Rizwan et al. (2013) and Terenggana et al.(2013) works, Karatu and Mat (2015) explained green trust as one's will to rely on one object, beliefs and credibility of products' environmental performance. It is consumers' "willingness to depend on a product, service, or brand based on the belief or expectation resulting from its credibility, benevolence, and ability about its environmental performance" (Chen, 2010). Referringto the works of Chan (1999); Ng &Paladino (2009); Paspalis (2011); Gupta & Dash (2012); Pornpratang&Lockard (2013); Karatu and Mat (2015), Chen and Chang (2013) claimed trust on green products' performance has a positive influence on green purchase intention.

Jager et al. (2000) view subjective norm as what tells an individual consumer about the appropriateness of the behavior. These may include the influence of friends, families, peers, neighbors and coworkers. Gleim and et al. (2013) and Joshi and Rahaman (2015) found in their

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research that these reference groups have positive influence on consumers' green buying intention.

Overall, though the referred empirical studies indicate variation of consumers intention is explained by the above said psychometric variables, writers likeBodur and Sarigollu (2005) and Joshi and Rahaman (2015) claim thatthese results may vary depending on culture and context of the study. As a result, before examining the moderating effects of the demographic variables, the study opts to re-examine the effects of these variables. Hence, depending on the above empirical results, the following relationship is constructed.

H1: Personal norm, environmental knowledge, environmental concern, perceived consumer effectiveness, attitude towards environmental behavior, trust in green products and subjective norm are significant predictors of green purchase intention.

2.2.Demographic Factors (Age, Gender, Income and Education)

Debevec et al. (2013) found that young consumers are less involved in pro-environment behavior. Study made by Gordon-Wilson and Modi (2015) also favors that young buyers are less green than their elders. However, Sinnappan and Rahman (2011) are against in that consumers below 20 years old got better perception to environment than the adults. Wang et al. (2020) also found that consumers with age group of 18-30 have higher green buying intention. On contorary to these, Wang et al. (2020), used Han et al. (2009) and Tobler et al (2011)claimed that age plays no role on consumers' perception towards environment.

Likeother personal profiles, many previous studies have shown contradiction on the relationship between gender and green intention. To illustrate,Zeleznyet al. (2000) and Rezai et al. (2011) claims that women are more pro-environmental than men, whereasDiamantopoulos et al. (2003) argue men are more knowledgeable about environment and more likely to develop pro-environmental behavior than women. Opposite to these, Lasuin and Ching (2014) also confirmed that gender don't moderate environmental concern, social influence/subjective norm, and self-image and green purchase intention. As said by Interior (2010), though countless research were made to know the role of gender to segment green market, no consensus was reached on the importance of the variable to distinguish between green consumers and others.

Used in Chekima et al. (2015), different researchers like Schwartz and Miller (1991); Zimmer et al. (1994); Brownstone et al. (1999), and Zsóka and colleagues (2013) found positive relationship between literacy and pro-environmental behavior. However, in the same study Chekima et al. (2015) used Straughan and Roberts (1999) and Wong (2010) findings to evidence that education has nothing to do with pro-environmental behavior.

Fisher et al. (2012) claimed that there is consistency of results on the relationship between income and green buying intention though many others are against this conclusion. A good testament to this could be Laroche et al. (2001) who found that there is no consumer intention difference due to education or training level.

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The above empirical evidences lack consistency on the effect of age, gender, income and education on buying behavior in general and green purchase intention in particular. With the objective of adding value to the existing arguments on the said variables, the researcher aimed at intense analysis of the moderation effects of the above demographic variables. Based on the shown empirical results and the objective of the research, the following hypothesis is made.

H2. Age, Gender, Income and Educations moderates the influence ofpersonal norm, environmental knowledge, environmental concern, perceived consumer effectiveness, attitude towards green behavior, trust on green product and subjective norm on green buying intention.

In specific term, the objective of the study is to examine factors affecting green purchase intention and the interaction effects of age, gender, income and education. As depicted in figure 2, the named psychometric variables are proposed to have significant effect on green purchase intention. The study also hypothesized the demographic variables to moderate the relationship between the psychometric factors and purchase intention.

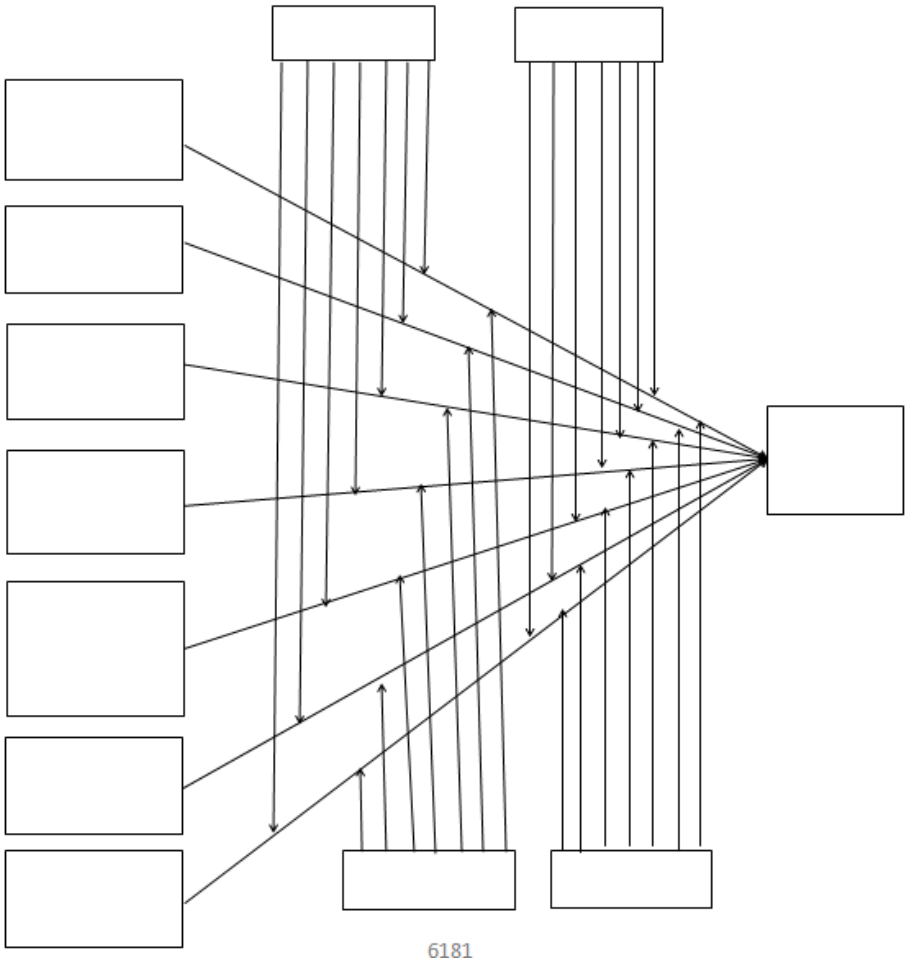

Figure.-2. Hypothesized Relationship

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3. Methodology and Data

3.1.Sample Design

Data was collected from academic staffs of eight institutes at university level in Addis Ababa, Ethiopia. The universities are stratified as private and public and 402 academic staffs were randomly approachedfor the study purpose. Academic staffs are chosen as the phenomenon is new to Ethiopia and academicians are believed to have better awareness about the issue under study.

3.2.Instrument Development

Previously tested and validated studies were consulted to find measurement scales for each constructs. Measurement model fit tests including convergent and discriminant validity of each scales were well examined before using the items. Scales for trust in green products weretaken from Chen (2010). Measuring items for attitude and environmental concern were taken from Lee (2009). Perceived consumers effectiveness was assessed using items adapted from Kim and Choi (2005). Nguyen et al.(2018) was used to adapt measurement items for personal and subjective norm. Scales to measure environmental knowledge are also taken from Jaiswal and Kant (2018). And green purchase intention was examined using measurement scales developed by Chan & Lau (2000) and Kumar et al. (2017).

3.3.Data Analysis Methods

Primarily, data was cleaned for outliers, missing values,and unengaged responses. After the raw data is cleaned for the said issues,multivariate normality, multi-collinarity, and reliability scrutiny was made. Besides,convergent validity, discriminant validity, and measurement model fits were also examined against thresholds recommended by different scholars. Demographic variables including age, income and education were dummy coded. SPSS version 24 was used to run multiple regressionand test the hypothesized relationships. The moderation tests are triangulated using different statistical tools including F-ratio, standardized beta, t-value and P-values.

4. Results and Discussions

4.1.Descriptive Analysis

Academic staffs of 341(84.8%) male and 61(15.2%) female were randomly approached from the selecteduniversities. Age of the respondents ranged from early working age to elderly age (19-24=18(4.5%); 25-54=334(83.1%); 55-64=41(10.2%); and 65+=9(2.2%)). The income of the staffs ranges from 3000 Birr to 23,000+ Birr per month. 185(46%) of the approached respondents earns 8001-13000 Birr while 128(31.8) earns 13,001-18,000 Birr per month. Of those who participated in the study, 24(6%) get the maximum income (23,000+Birr). The 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,staffs of diverse gender, age, income, and education background contributed to the study.

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4.2.Missing Values, Outliers, Normality and Multicollinearity

Microsoft excel 2010 was used to check for missing values before running the regression analysisand found no missing values. Outliers were checked using Mahalanobis (d^2) square distance values. Observations with a ratio of d^2 and degree of freedom (d^2/df) exceeding 2.5 in small samples and 3 or 4 in a large sample are possible outliers (Hair et al. 2014). In line with this, no outlying values are observed. skewenes and kurtosis were used to check for data normality and all observations are between +2 and -2 (Garson, 2012) implyingnokurtotic and skewed data. Multicollinearitywas examined using Tolerance (T) and variance inflation factor (VIF). As said by Garson (2012), Tolerance (T) value less than 0.20 and variance inflation factor (VIF) greater than 5 demonstrates presence of multicollinearity. Against these criterions the data is free of multicollinearity problem (See table 4).

4.3.Measurement Model

Internal consistency was checked againstCronbach's α 0.70 and above cut off point proposed by Hair et al. (2014). Cronbach's α value ranged from 0.762 to 0.906 evidencing strong internal consistency (See table 1). Factor loadings, Composite reliability (CR) and average variance extracted (AVE) were used to test convergent validity. Items loading shall be at least 0.50 (Hair et al. 2014).The recommended threshold for average variance extracted is 0.50 and above and 0.70 and greater for composite reliability (Hair et al., 2014). Statistics shown in table 1 imply well-established internal consistence and validity.

Table 1: Convergent Validity

Item	Construct	Factor loading	CR	AVE	Cronbach's α
SN1	Subjective norm	.865	.908	.711	.906
SN2		.874			
SN3		.863			
SN4		.767			
GPI1	Green purchase intention	.756	.853	.595	.849
GPI2		.655			
GPI3		.856			
GPI4		.803			
TIGP1	Trust in green products	.797	.903	.651	.902
TIGP2		.813			
TIGP3		.849			
TIGP4		.792			
TIGP5		.781			
ATEB1	Attitude towards environmental	.550	.846	.591	.835

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ATEB2	behavior	.928			
ATEB3		.911			
ATEB4		.609			
PCE1	Perceived consumers effectiveness	.575	.835	.563	.824
PCE2		.752			
PCE3		.838			
PCE4		.808			
EC1	Environmental concern	.692	.765	.522	.762
EC2		.779			
EC3		.692			
EK1	Environmental knowledge	.617	.812	.521	.810
EK2		.770			
EK3		.801			
EK4		.686			
PN1	Personal norm	.677	.871	.697	.861
PN2		.884			
PN3		.922			

(Note: CR= Composite reliability, AVE= Average variance extracted)

According to Fornell and Larcker(1981) for discriminant validity to exist, the square root of average variance extracted shall be greater than the correlation of the particular construct and the other construct. In line with this, the summary of discriminant results showed in table 2 goes with the recommended criteria.

Table 2: Discriminant validity results

EK	SN	GPI	TIGP	ATEB	PCE	EC	PN
0.722							
0.369	**0.843**						
0.240	0.290	**0.771**					
0.477	0.523	0.175					
0.249	0.406	0.452	**0.807**				
0.060	-0.020	0.257	0.102	**0.769**			
0.334	0.422	0.617	0.461	0.210	**0.750**		
0.417	0.308	0.398	0.379	0.262	0.409	**0.722**	
0.359	0.396	0.414	0.381	0.163	0.436	0.482	**0.835**

4.4.Hypothesis Testing

Mixes of statistical tools are used to triangulate the overall fitness of the model and the predictive power of the independent variables. T-Statistics is used as an indicator of individual variables effect on the criterion variable and F-ratio is also used to check for the overall effects of the

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independent variables. Durbin-Watson statistics is used as reference to check for the absence of residual correlation of predictive variables. As echoed by Andy (2009) Durbin-Watson value may vary between 0 and 4but a value closer to 2 implies the residuals are uncorrelated. Standardized coefficient Beta is used as reference to interpret the strength of relationship between variables. Model summary is also examined using R, R-square, and adjusted R-square to analyze the strength of the relationship, proportion of variations explained by the dependent variable and the model predictive accuracy.

Durbin-Watson value of 1.833 is so close to 2 implying absence of autocorrelation and F-ratio is also very significant showing the overall effect of independent variable meaningful. R^2 values of 0.537 shows undeniable portion of the outcome variable is explained by the predictive variables (See table 3).As per the recommendation of Garson (2012) on tolerance and variance inflation cutoff points,multicollinearity is also at acceptable level. Therefore, all statistical tools indicate the model is fit and multiple regression assumptions are met and values can be used for further generalization.

With reference to P-vale mentioned in table 3, personal norm, perceived consumers effectiveness, attitude towards green behavior, and trust in green products are found to have significant effect on green intention. Of these factors, perceived consumers effectiveness explains large proportion of variation in the outcome variable followed by trust in green product. To the knowledge of the researchers, trust in green product is the most overlooked variable but it is the second significant factor to explain intention.

Table 3: Regression Results of Psychometric Variables

	Statistical Test Results			Collinearity Statistics		Decision
Independent Variable	**β***	**t**	**Sig.**	**T****	**VIF*****	
Personal Norm	.105	2.365	0.019	0.591	1.691	Accept
Environmental Knowledge	-.045	-1.076	0.283	0.668	1.497	Reject
Environmental Concern	.093	1.946	0.052	0.520	1.925	Reject
Perceived consumer effectiveness	.526	11.553	0.000	0.567	1.765	Accept
Attitude Towards Environmental Behavior	.096	2.599	0.010	0.857	1.167	Accept
Trust in Green Products	.174	4.074	0.000	0.643	1.555	Accept
Subjective Norm	-.058	-1.356	0.176	0.635	1.575	Reject
F-Ratio		65.332	.000			
Durbin-Watson Statistics						1.833
Model Summary	**R**		.733			
	R^2		.537			
	Adjusted R^2		.529			

*Standardized Coefficient Beta, **Tolerance, ***Variance Inflation Factor

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As shownin figure 1, age, gender, income and education are the proposed moderating variables. These variables are of multi-categorical nature. Except gender, the remaining moderators are dummy coded before running the multiple regression analysis. As said by Andy (2009), enter regression methods is appropriate for theory testing. As the study mainly emphasize on re-evaluating existing theory and established relationship, forced entry approach is used to estimate the regression equations. Primarily the relationship between intention antecedents and green purchase intention was tested. Next, the original relationship is estimated along with the moderating variables. As shown in table 4, statistical results are grouped to two categories as with and without moderator. Moderation test was made against the statistical results indicated under each category. For sake of triangulation, standardized coefficient beta, P- value, and R-square are mainly used to check for the moderating effect.

In line with this, when age moderates, the proportion of the dependent variable explained by the exogenous variables increased from R^2**=** .537 to R^2= .541. This tells adding age to the model improved the statistical significance of the independent variables. In this regard, all variables tested significant without the moderator remain significant with age as a moderator except environmental concern. To be specific, standardized coefficient Beta moved from **.**105 to .110, t-value from 2.365 to 2.440, P-value from .019 to .015 all indicating the moderation effects of age between personal norm and intention. Data in table 4 also show significant moderation effect of age between environmental concern and intention. To this end, standardized coefficient Beta increased from **.**093 to .096, t-value from 1.946 to 2.017, P-value from .052 to .044. Besides, age also significantly moderates attitude towards environmental behavior and intention as there is significant shift in statistical indicators when attitude is moderated by age. Specifically, standardized Beta moved from .096 to .099, t-statistic increased from 2.599 to 2.666 and P-value is moved from 0.010 to .008.

In conclusion, R^2evidenced that addition of age as a moderator significantly improved the predicting capacity of the independent variables. Among the proposed antecedents, age specifically moderates attitude towards environmental behavior, personal norm and environmental concern.Statistical tests including standardized coefficient beta and t-values also tells the younger the consumers are, the more the moderating effect is.

When we look at the moderating effects of gender, inclusion of gender to the model has no effect on the proportion of variations explained by the predicting variable (R^2=.537). Nevertheless, though R^2 remains same,includinggender improved the effect of personal norm on intention. Statistical results evidencing this include shift in standardized coefficient from .105 to .106, a move of t-value from 2.365 to 2.375 and change in P-value from .019 to .018.Therefore, except personal norm,gender doesn't moderates the proposed antecedents. Standardized beta and t-value also showed that males are greener than the females.

Table 4 also evidences the moderating role of income between personal norm, perceived consumers effectiveness and attitude towards green behavior. Including income as a moderator significantly changed R^2 from.537 to 548indicating an improvement on overall regression

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model. The moderation effect of income between personal norm and intention is manifested by change in standardized coefficient from .105 to .124, t-value from 2.365 to 2.725 and P- value from .019 to .007. Though P- value(.000) remains same in both case, the effects of perceived consumer effectiveness is changed as stipulated by move of standardized coefficient Beta from .526 to .534 and t- value from 11.553 to 11.781. Standardized coefficient is also improved from .096 to .114, t- value from 2.599 to 3.053 and P-value from .010 to .002 due to the interaction effect of income and attitude towards environmental behavior.

Hence, it can be said that including income as a moderator in the model improves the strength of relationship between personal norm, perceived consumer effectiveness, attitude towards environmental behavior and green intention. With regard to the category, tests like t-value and standardized beta coefficient shows the lower the income the better the concern is.

Attempt was made to check for the moderating effect of education and found significant effect on some variables. To name, personal norm and attitude towards environmental behavior are significantly moderated by education level. There is a slight improvement of R^2 from .537 to 538 due to the interaction effect of education. Including education in the model improved statistical indicators of personal nom including standardized coefficient from .105 to 111, t- value from 2.365 to 2.435 and significance level from .019 to .015. Change is observed on attitude due to said interaction effect among which coefficient Beta changed from .096 to .099, t-value from 2.599 to 2.645 and P-value from .010 to .008.

To this end, education is proved to have significant moderation effect between personal norm, attitude towards environmental behavior and green intention. Both t-value and standardized beta coefficient tellsthe higher the education the better the concern for responsible consumption is.

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Moderating Variable: Age

	With Out Moderator			**With Moderator**			**Collinearity Statistics**	
Independent Variable	β*	t	Sig.	β*	t	Sig.	T**	VIF***
Personal Norm	.105	2.365	0.019	0.110	2.440	0.015	0.580	1.723
Environmental Knowledge	-.045	-1.076	0.283	-0.043	-1.034	0.302	0.666	1.502
Environmental Concern	.093	1.946	0.052	0.096	2.017	0.044	0.513	1.950
Perceived consumer effectiveness	.526	11.553	0.000	0.523	11.472	0.000	0.565	1.770
Attitude Towards Environmental Behavior	.096	2.599	0.010	0.099	2.666	0.008	0.854	1.170
Trust in Green Products	.174	4.074	0.000	0.172	3.983	0.000	0.632	1.582
Subjective Norm	-.058	-1.356	0.176	-0.058	-1.333	0.183	0.631	1.585
F-Ratio		65.332	.000		46.064	.000		
Durbin-Watson Statistics	1.833			1.824				
Model Summary								
R	.733			.735				
R2	.537			.541				
Adjusted R2	.529			.529				

Moderating Variable: Gender

	With Out Moderator			**With Moderator**			**Collinearity Statistics**	
Independent Variable	β*	t	Sig.	β*	t	Sig.	T**	VIF***
Personal Norm	.105	2.365	0.019	0.106	2.375	0.018	0.587	1.704
Environmental Knowledge	-.045	-1.076	0.283	-0.045	-1.066	0.287	0.667	1.499
Environmental Concern	.093	1.946	0.052	0.093	1.945	0.053	0.520	1.925
Perceived consumer effectiveness	.526	11.553	0.000	0.525	11.461	0.000	0.561	1.781
Attitude Towards Environmental Behavior	.096	2.599	0.010	0.096	2.594	0.010	0.857	1.167
Trust in Green Products	.174	4.074	0.000	0.174	4.060	0.000	0.642	1.557
Subjective Norm	-.058	-1.356	0.176	-0.059	-1.365	0.173	0.633	1.579
F-Ratio		65.332	.000		57.039	.000		
Durbin-Watson	1.833			1.832				

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Statistics								
Model Summary								
R	.733			.733				
R2	.537			.537				
Adjusted R2	.529			.528				
Moderating Variable: Income								
	With Out Moderator			**With Moderator**			**Collinearity Statistics**	
Independent Variable	β*	t	Sig.	β*	t	Sig.	T**	VIF***
Personal Norm	.105	2.365	0.019	0.124	2.725	0.007	0.562	1.779
Environmental Knowledge	-.045	-1.076	0.283	-0.042	-1.013	0.312	0.662	1.510
Environmental Concern	.093	1.946	0.052	0.082	1.710	0.088	0.508	1.970
Perceived consumer effectiveness	.526	11.553	0.000	0.534	11.781	0.000	0.564	1.772
Attitude Towards Environmental Behavior	.096	2.599	0.010	0.114	3.053	0.002	0.823	1.215
Trust in Green Products	.174	4.074	0.000	0.163	3.796	0.000	0.631	1.585
Subjective Norm	-.058	-1.356	0.176	-0.067	-1.549	0.122	0.625	1.601
F-Ratio		65.332	.000		43.060	.000		
Durbin-Watson		1.833		1.843				
Statistics								
Model Summary								
R	.733			.741				
R2	.537			.548				
Adjusted R2	.529			.536				
Moderating Variable: Education								
	With Out Moderator			**With Moderator**			**Collinearity Statistics**	
Independent Variable	β*	t	Sig.	β*	t	Sig.	T**	VIF***
Personal Norm	.105	2.365	0.019	0.111	2.435	0.015	0.569	1.757
Environmental Knowledge	-.045	-1.076	0.283	-0.037	-0.872	0.384	0.646	1.548
Environmental Concern	.093	1.946	0.052	0.093	1.951	0.052	0.515	1.942
Perceived consumer effectiveness	.526	11.553	0.000	0.524	11.468	0.000	0.565	1.769
Attitude Towards	.096	2.599	0.010	0.099	2.645	0.008	0.847	1.181

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Environmental Behavior								
Trust in Green Products	.174	4.074	0.000	0.167	3.825	0.000	0.622	1.609
Subjective Norm	-.058	-1.356	0.176	-0.063	-1.460	0.145	0.624	1.602
F-Ratio		65.332	.000		45.619	.000		
Durbin-Watson Statistics		1.833		1.840				
Model Summary								
R	.733			.734				
R2	.537			.538				
Adjusted R2	.529			.527				

*Standardized Coefficient Beta,**Tolerance,***Variance Inflation Factor

Table 4: Moderation Analysis

Table 5:Moderation summary

Psychometric Factors	**Demographic Factors**			
	Age	Gender	Income	Education
Personal norm	✓	✓	✓	✓
Environmental knowledge	x	x	x	x
Environmental concern	✓	x	x	x
Perceived consumers effectiveness	x	x	✓	x
Attitude towards environmental behavior	✓	x	✓	✓
Trust in green product	x	x	x	x
Subjective norm	x	x	x	x

✓ = the demographic variable moderates the respective psychometric variable; **x**= the demographic variable don't moderates the respective psychometric variable

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4.5.Results and Discussions

The very basic relationship of theory of planned behavior is in use in the study. The fact that attitude, perceived effectiveness and subjective norm determines intention were taken in to account but as supported by many writers minor extension is made by including additional psychometric variables to the model. Personal consumers' profiles are also proposed to moderate the predicting variables and same is examined. The researcher opted to examine an extended theory of planed behavior along with different personal profiles. The study claims that many previous research works gave emphasis to bivariate analysis and that fail to give in-depth insight about the fact under study. This study elaborated the conceptual relationships so as to give better general insight about detailed interaction between the selected psychometric and demographic variables. Using enter regression approach,original data (data without the moderator) were entered first and then the moderating variables are allowed to join the equation. Then the change in R^2, standardized beta, t-value and P-valueare deeply scrutinized to check for the moderating effects of the proposed variables.

As claimed above, primarily effects of the proposed psychometric variables over intention was examined and the results showed that personal norm, perceived consumers effectiveness, attitude and trust are significant predictors of intention. But subjective norm, environmental concern and knowledge fail to explain consumers' intention. To mention few studies in favor of these findings, Chen and Chang (2013)supports the positive relationship between green intention and trust. Zhao et al. (2013) and Nguyen et al. (2018) support the claimed relationship between attitude and intention. Gupta & Ogden (2009); Gleim et al. (2013) and Jaiswal, and Kant (2018) also favor the relationship between perceived consumer effectiveness and intention. Arvola et al. (2008) and Gleim et al. (2013) also proofed the direct effect of personal norm on buying intention.On the other hand, Chaudhary and Bisai (2018); Setyawan et al. (2018) and Qomariah&Prabawani (2020) claims low effect of environmental concern on intention. Chan & Lau (2000); Wolsink (2007), Chekima et al. (2015) and Ramayah&Rahbar (2013) cited in Joshi and Rahman (2015) believe that environmental knowledge and intention has no significant interaction. Connell (2010) used in Joshi and Rahman, (2015) and Kumar et al. (2017) are an evidence for the low effect of subjective norm on intention.

Data also shows that addition of age to the model improved R^2, standardized beta, t-value and P-value of attitude, personal norm, and environmental concern. This tells that the variation explained by the said predicting variables is far more along with age as a moderator. Age was grouped in to different categories;and the standardized beta value indicates that the younger the consumer, the more the moderation effect is. Though there are controversies among previous empirical results, writers like Chan (1996); Diamantopoulos et al. (2003);Zhao et al. (2013) and Wee et al. (2015) are in favor of this finding.

The same statistical procedures are used and the result tells that gender affects only personal norm and the standardized beta value is found more with male consumers than women. Ling-yee

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(1997); Diamantopoulos et al. (2003); Jain and Kaur (2006); Lee (2008) and Chekima et al. (2015) claimed the same results.

The moderating effect of income is significant on personal norm, attitude and perceived consumer effectiveness. The variation of the outcome variable is significantly explained when personal norm, attitude and perceived consumer effectiveness interacts with income.Moreover, the standard beta statistics indicated lower income group is more sensitive to green consumption. In this regard, it shall be noted that the study targeted academic staffs of higher institutions and these people are relatively less paid in Ethiopian context but with better insight about the issue under the study. Scholarssupporting this finding are Roberts(1996); Straughan and Roberts (1999); Diamantopoulos et al. (2003); Wee et al. (2014) and Zhao et al. (2013) are few.

On the other hand, the predicting ability of personal norm and attitude towards green behavior increased when education moderates. Furthermore, statistical result also showed that the higher the education level of the consumer is, the more the effect size of the independent variable is. Roberts(1996), Straughan and Roberts (1999);Diamantopoulos et al. (2003);Wee et al. (2014);Chekima et al. (2015) and Zhao et al.(2013) are example of previous writers supporting the claimed relationship.

5. Theoretical and Managerial Implications

Lack of consistency and integrative results on demographic variables have been common problem to scholars in marketing field. In addition to the contradicting results, the issue was also overlooked. As evidenced by many writers psychometric factors affecting intention also need reconfirmation in different marketing settings and culture.

Hence, the objective of this study is to provide additional views and findings from different context, culture and market settings to the existing pots of contradicting results in the area. Most previous studies looked at few demographic variables and psychometric variables but this study tried to comprehensivelyexamine extended theory of planned behavior and more demographic variables at a time. Moreover, previous studies were examined using bivariate regression analysis which fails to give complete insight about the issue. Under this study, seven selected intention antecedents along with four demographic variables are tested in-depth with multiple regression analysis triangulating different statistical results.

The researcher thinks that the outcome of the finding serves as a go between the pervious inconsistent findings. And this contributes more to a move towards theoretical conclusion on green consumer profiling.

Marketing strategyis advised to begin from knowing the target customers and the study plays vital roles to industry sectors to exactly know the specific market segment and direct appropriate marketing mixes to the sector accordingly. Therefore,the findingscan be used as a criterion of market segmentation and this easies the choice of marketing philosophies and approaches fitting the market segment. As a stakeholder, the study also plays significant role to government bodies as it simplifies thedevelopment of guidelines and polices tailoring to the specific targets. In

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general, this finding helps all in stake including theoreticians, policy makers, business sectors and environmental campaigners to exactly know the specific market segment to work with or work on for the betterment of the environment.

6. Limitations and Future Research Directions

The study is limited in its area coverage and type of participants as only higher institutions at university level in Addis Ababa,Ethiopia took part in the process. And this may limits the generalization of the findings to the country in general. Hence, future researchers are advised to consider other regions and parts of the society with different demographic mix and psychological set up.

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

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Additional Information

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