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# Factors Affecting Green Purchase Intention for Consumers in the Moderation Effect of Price Sensitivity

Haneen Waleed Arif Arif[1], Assist. Prof. Dr. Müge Örs[2]
[1](*Social Sciences Department/ Istanbul Aydin University, Turkey)*
[2](*Social Sciences Department/ Istanbul Aydin University / Turkey)*

**Abstract** As the world is witnessing a massive development in various fields, this development has caused severe damage to the environment and to the depletion of natural resources. As a result, environmental issues have become one of the most important concerns in the 21st century. Under these changes, companies and organizations around the world have started to call for the preservation of the environment and make the world a more suitable place to live, where a lot of businesses and organizations started to reconsider their social and ethical responsibilities in their marketing practices, by giving the environmental dimension a prominent importance in their marketing strategies. Hence, a new trend in marketing has taken a place, known as green marketing, which is about giving a strong commitment to environmental responsibility in marketing activities. This research aimed at studying factors that influencing the intention for buying green products. For running this process, a questionnaire sample was distributed among 251 people in order to get a response regarding the factors that influence the green purchase intention. According to the findings, it was seen that Green advertising, Environmental Involvement and Subjective Norm influence the Green Purchase intention. The labeling hypothesis was rejected due to the lack of the respondents' perceiving. The moderation effect of price sensitivity could not be applied as it was removed from the model in the factor analysis.

**Keywords:** Environment, Green product, Green purchase intention, Green consumers, Green Marketing, Environmental concern, Green Advertisement, Subjective Norm, Knowledge.

## 1. Introduction

Human consumption of goods and services has been in an enormous increment globally over the last decade, this has caused a serious issue to the environment and damage to the natural resources (Chen & Chai, 2010). Global warming, air and environment pollution, decline of flora and fauna are represented as an environment damaging factors (Chen & Chai, 2010).

Since the early 1960s, the world has been very concerned about environmental issues such as pollution and depletion of energy sources, this concern has especially grown by early 1970s in which new issues took place on the surface such as global climate changing, increased depletion of natural resources, air pollution caused by exhaust gases, damage to the natural environment as a result of industrial waste, forest logging and shrinking of green areas, acid rain, damage to the ozone layer in the atmosphere and leakage of toxic substances, reduced bioactivity, production and marketing of harmful substances to the environment and human, as well as human misuse of the environment and natural resources.

According to these changes, various associations and organizations have been starting calling for preserving the environment and begun working on developing their businesses in a way that reduces the damages and harm to the environment since then.

The serious concern towards the environment has driven the society and enterprises to emerge the sustainable development, that reduces the harmful effect of the normal activities on the environment. Sustainable development as a result, encourages eco innovation and pushing the public to be more concerned about the environment and more responsible towards environmental activities, and therefore, encouraging green consumption. Eco innovation deals with applying environmental sustainability initiation on the whole product manufacturing lifecycle from the beginning till the last step of the production (Veleva&Ellenbecker, 2001). Green consumption occurs as a result of environmentally responsible consumption in which consumers take into consideration their purchases impact on the environment, thus, they will be willing to corporate all together in the aim of keeping a safe environment (Moisander, 2007).

This study is aiming at studying the relationship between green purchase intention and the factors that are affecting green purchase intention such as environmental concern, knowledge, labelling, green advertising and subjective norms in terms of price sensitivity.

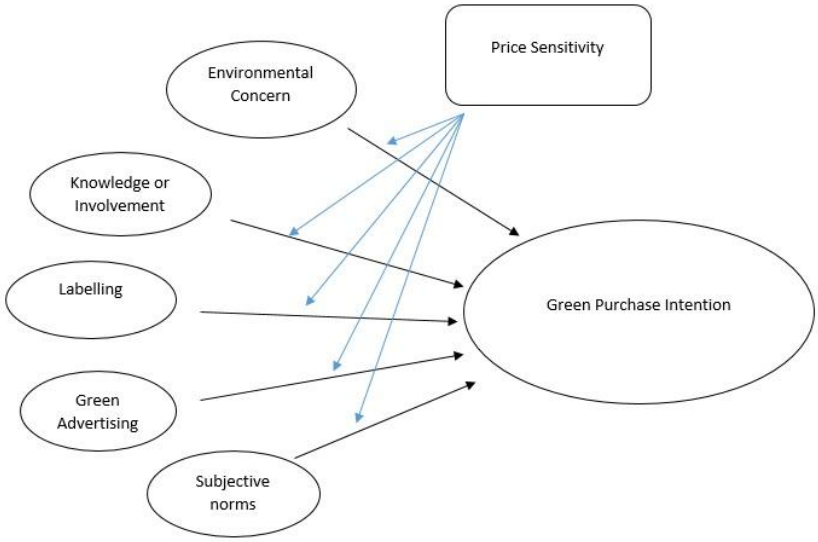


**Figure 1:** The Conceptual Model of the Study

The hypotheses emerging from the literature and the model of the study are presented as below:

H1: Environmental concern has a positive effect on green purchase intention
H2: Involvement has a positive effect on green purchase intention
H3: Labeling has a positive effect on green purchase intention
H4: Green Advertising has a positive effect on green purchase intention
H5: Subjective norms have a positive effect on green purchase intention
H6: Price sensitivity has a moderation effect between all independent variables to green purchase intention.

This research hopes to contribute at two levels:First, at a scholarly level, since there are a relatively limited number of research on green products especially in the Middle East, this study will put a spotlight on the green product and its importance and give a new direction for more studies regarding green products to assure a better future and environment for the future and next generations.Second, at a practical level, where the study analyses will help to clarify the most important factors affecting the consumers' attitudes positively towards green products purchasing, and thus, will help the business owners and companies in adopting green products to their production lines, thereby, increasing the efficiency and effectiveness of the organization, that leads to its expansion and directs it to a new path of a cleaner production for a better environment.

## 2. Literature Review

### 2.1 Green Marketing concept

Previous studies utilized more than one term to describe this subject such as Ecological marketing, Greener marketing and environmental marketing, but the most common term that is adopted is Green Marketing (Chamorro et al., 2009).

Green marketing is a philosophy and an integrated marketing philosophy, which aims to create a positive impact on the preferences of customers in a way that leads them to seek environmentally friendly products. Researchers and writers in the management field generally and marketing field particularly have developed several concepts of green marketing as follows:

Pride & Ferrell (1993) mentioned that green marketing is the process of developing, pricing and promotion of products that do not harm the natural environment.

Polonsky (1994) mentioned that green marketing is the activities that aim to meet all human needs, without causing harmful effects to the environment.

Stanton &Futrell (1987) define green or environmental marketing as the actions that are made to meet the current needs of the people, with less harmful effects on the environment.

Green Marketing term has been one of the most used concepts in the marketing field nowadays to promote the green products and green activities of the organizations and companies. Green Marketing has three definitions according to the American Marketing Association (AMA): First definition is: Green marketing is defined as marketing of products which are supposed to be safe to the environment, this is the Retailing Definition. Second, Green Marketing is the marketing and developing products in order to reduce the negative effects of harmful substances used in the manufacturing process of the product on the environment (Social Marketing Definition). Third, Green Marketing is the efforts of the organizations and companies to produce products that respond to the environmental crisis, represented by its way of packaging, promoting and reclaiming (Environmental Definition), (Yadav & Singh, 2014).

It is noted through the given definitions above some joint characteristics including:

- Green marketing is an activity that targets products that are free of any cause of environmental damage.
- Is the continuous process of developing, pricing and promotion of products that are in constant contact with the surrounding environment?
- Creating a positive environment free of harm and pollution to society and the natural environment.

From the mentioned above, it can be said that green marketing is a comprehensive process that aims to business organizations' commitment in providing products, activities, concepts, information and experiences that are not harmful to society and the natural environment.

### 2.2 Green Product Concept

Green products are defined as the products which do not pollute the environment and deplete the natural resources of the earth, and also could be recycled (Shamdasani et al., 1993).The Green Purchasing Affirmative Procurement Program (GPAPP) relate to the US Department of Agriculture (USDA) stated eight components to be considered as green products, these products include recycled content, energy efficient, bio-based, environmentally preferable, Electronic Product Environmental Assessment Tool (EPEAT), water efficient, non-ozone depleting and alternate fuels. The GPAPP had set criteria for each item to be considered as a green product. As concerns for the environment is being risen, markets for environmentally friendly products are being risen too in the united states and other developed countries (Hamilton &Zilberman 2006).

### 2.3 Green Purchase Intention

In accordance with the (TPB) conducted by Ajzen (1991), attitudes, subjective norm and perceived behavioral control will lead to the building of the intention, that this will lead to the actual behavior. A person's intention plays an important factor in the TPB, which leads to performing a specific behavior. Intentions are proof of how people are interested or willing to make an action and how much effort they are giving to perform this behavior. In other words, the stronger a person's intention towards a specific behavior, the stronger to perform that behavior (Ajzen, 1991).

Nik Abdul et al. (2009) introduced green purchase intention as a person's aim to go for products which have a positive ecological effect rather than choosing conventional products in their purchasing process.

On the same approach, Chen & Chang (2012) Described GPI as the probability of a person to get a specific product due to his or her environmental needs.

Rashid (2009) mentioned that green purchase intention is that the person inclines to purchase green products over other conventional products.

### 2.4 Factors Affecting Green Purchase intention

#### 2.4.1 Environmental Concern

The environmental concern may be seen as how a person responds to save the environment. Some researchers have presented that EC is linked with the personal behavior of a person and his own perception as what Bamberg (2003) mentioned. Pickett-Baker & Ozaki (2008) say that environmental concern does not have an effect on green purchase intention and green behavior.

Environmental concern is the belief of a customer and the attitude he has towards the environment in his mind. EC can be studied from seven angles: concern for waste, wildlife, biosphere, duties, education, health, awareness of energy & environmental technology (Said et al., 2003).

EC refers to the one's sentimentality to environmental problems. It is also about the realization of the individuals about threats the natural resources and the climate is being exposed to (Ali et al., 2011). EC

influences the consumers to buy green products, that resulted in an increased percentage of demanding environmentally friendly products (Aman, Harun, & Hussein, 2012).

Dunlap & Robert (2002) gave a definition to the environmental concern which stated that admitting problems in the environment is essential and according to that giving the solution for these problems by supporting environmentally friendly programs. Green marketing is resulted from environmental concern and making or selling green products, this leads to an improved living environment and customer contentment. Studies have shown that EC allows achieving a higher willingness to buy and use green products (Uddin & Khan, 2016). EC gives the customers the motivation to contribute to saving the globe due to green products usage are one of the easiest ways to reflect responsibility towards the environment.

### 2.4.2 Knowledge or Involvement

Knowledge is considered an important factor that leverages the consumer's decision. Knowledge organizes consumers' movement in collecting the information and linking all evidence to make the last decision (Alba & Hutchinson 1987; Syahbandi, 2012). knowledge could be defined as the information an individual realizes and saves in his mind to be recalled later (Syahbandi, 2012).

Hines, Hungerford &Tomera (1987) have pointed out that knowledge is considered as the most important factor in predicting environmental action.

In accordance with a study delivered by Gan et al. (2008), it was illustrated that environmental knowledge is improved by two shapes, the first is educating consumers in which makes them realize the effect of a particular product on nature and environment, and secondly, a consumer should know the mechanism of manufacturing the product itself in an eco-friendly technique. Julina (2013) stated that having knowledge about environmental matters has an impact on consumers' attitudes. According to what is mentioned by Barber et al. (2010), having or maintaining a strong environmental attitude is considered as one of the environmental knowledge applications. Referring to Noor et al.'s (2012) research, attitudes are positively being affected by consumers' environmental knowledge. Aman et al. (2012) indicated the opposite in their research, in which they rejected the impact of the environmental knowledge on the one's attitude. Another study conducted by Levine &Strube (2012) indicated that there is no linkage between EK and attitude. On the other hand, it was seen by Aman et al. (2012) that environmental knowledge leads to a positive intention for green products purchasing. With similar results represented by Mei et al., (2012) in their research, it was seen that EK has an impact on green products purchasing intention or willingness.

### 2.4.3 Labelling

Eco-labelling is defined by Tang et al. (2004) as a tool that uses logos to deliver the idea behind using such products to the consumers and the consequences of buying these products to the environment. Eco-label, in Rex & Baumann (2006) point of view, is a source made for the consumers to help them take action and reduce the harmful impact on the environment in their purchasing decision.Sønderskov &Daugbjerg (2011) described eco-label as a product claim that is providing consumers with easy access information about the product and its effective specifications that could be helpful to the environment. In another research conducted by Sammer&Wustenhagen (2006), they defended eco-label by describing it as an important marketing tool in removing the misunderstanding between sellers and buyers regarding information about environmentally friendly products and hence, to overcome market failure. A number of researchers have found a linkage between eco-label and the green purchasing. On the other hand, some studies have examined whether green labels are accepted or rejected as a motivating tool for consumers to make a positive decision towards green products (Wessells et al., 1999).

A study was conducted by D'Souza (2000) about the consumers' choice of "Dolphin-Safe" eco-label on some canned tuna brands in Australia, it was found that consumers prefer tuna cans with the "Dolphin-Safe" eco-label than other brands that do not have it on their cans. Sammer&Wustenhagen (2006) made an analysis regarding consumers' buying decision of washing machines and the effectiveness of the EU energy-labeled products in comparison with other specifications of the products such as the price, brand name, water consumption level. It was found that the energy label had a positive effect on consumers' buying decision of washing machines.

According to Loureiro&Lotade (2005), it was recorded that the population of the developed countries have a positive attitude towards paying a premium for eco-labeled products.

### 2.4.4 Green Advertising

In accordance with Davis (1994), environmental advertisement given by a firm should include three aspects, First, the green advertisement must show the firm's concern to the environment. Second, the

advertisement should include how the firm is innovating activities to bring an actual picture of its environmental improvement work. Third, the advertisement identifies the specific environmental activities of the firm and its effect on saving the environment.

Chan (2004) described the green advertisement as that the given assumptions of the product that is being advertised has a positive contribution to protecting the environment, whether through the manufacturing process or through the final product outcome. Hence, the description given for the green advertisement in this study tries to affect the consumers' behaviors, which by giving an action and buying these products could contribute to the environment and reduce the harmful effect of using traditional products.

Davis (1994) indicated that consumers' reaction to the green advertisements was influenced by the previous fears or concerns perceived by a corporate regarding the environment. if consumers were positively interacting with the concerns of a firm towards the environment, then they would be positively interacting with the green advertisement and hence, with the firm itself and its products.

In a study conducted in two large cities of China; Beijing and Guangzhou about the consumers' reaction to green advertisements given by Chan (2004), it was shown that the credibility of the green advertisement and its effectiveness in saving the environment and the importance of the green product that is being advertised are the most important factors of GPI in China.

#### 2.4.5 Subjective Norm

Subjective norm is defined as the social pressure on the individual to carry out certain behavior. This social pressure is carried out by people who are close to the person such as family members, friends and relatives, as this pressure has an impact on the behavior of the individual (Ajzen, 1991). This norm will show how the consumer is morally responsible for other people by performing green buying decision (Barber et al., 2014).

Subjective norm plays an active role in affecting the consumers' perception by the effect of the close people's opinions and how this opinion influences an individual buying decision (Noble et al., 2009). Subjective norm also gives the individuals an idea about whether their selected behavior is preferred or not by society (Jager, 2000). This explains that the preferences of individuals are affected for the product has a negative feedback, then they will get negative feelings about that particular product. In the same way, if the product has positive feedback, then the customer's purchase intention will rise also (Kotler & Keller, 2006). SN has an important influence on an individual's final decision of purchasing and also, in consumer's attitude towards certain types of behavior (Han & Chung 2014). SN has direct, significant linkage with attitude, perceived behavioral control, and purchase intention of artificial apparel (Kim &Karpova, 2010). SN has a big influence on the environmental linked behaviors (Zheng & Chi 2015), also on getting or using second-hand clothes (Xu et al. 2014) and also, on using green products (Paul et al. 2016). Moreover, purchasing green sportswear may happen due to increased environmental awareness about the claims of the benefits that might be obtained by making eco-friendly apparel purchasing (Nam et al. 2017).

#### 2.4.6 Price Sensitivity

Green products generally have higher prices than traditional products due to more costs occur in the manufacturing procedure (Ramirez & Goldsmith, 2009). D'Souza et al. (2006) showed that green consumers who considered the price as a modest element in their purchasing decision have a higher intention to pay a premium for green products.

These results have been consistent with several other researches in which consumers who are classified as concerned in the environment are willing to pay more for having less damage to the environment (Laroche et al., 2001). Aman et al. (2012) showed that green consumers are less sensitive to prices in their green purchasing procedure, due to the fact that they need safe products for paying that higher price.

However, not all green consumers are willing to pay extra prices for green products, and the price factor may affect their buying decision for green products (Anderson & Hansen, 2004). consumers may be concerned in the environment and in being green, yet they might hesitate to spend more money amounts for green products. D'Souza et al. (2006) indicate that as green products' prices increase as purchasing of these products decreases.

## 3. Research Methodology and Findings

### 3.1 Questionnaire Design

Scales forming the questionnaire were developed during the literature review and were selected from valid and reliable scales from the literature. Participants were completed 251 questioned survey with a five-point Likert scale (1= Strongly disagree, 2= disagree, 3= Neither agree nor disagree, 4= Agree, 5= Strongly agree) in

order to evaluate their opinion related to "Environmental concern", "Involvement", "Labeling", "Green Advertising", "Subjective Norms", "Price Sensitivity" scales are examined in details at below in Table 3.1.

**Table 3.1:** Scales- Measurement items

| Construct | Measurement | Reference |
|---|---|---|
| Environmental Concern | I am very knowledgeable about environmental issues<br>I know more about recycling than the average person<br>I know how to select products and packages that reduce the amount of landfill waste<br>I understand the environmental phrases and symbols on product package<br>I know that I buy products and packages that are environmentally safe | Mostafa, 2006 |
| Knowledge /Information | I am concerned about environmental issues<br>I pay close attention to green appeal information<br>I keep a watchful eye on new and popular green products | Wang et al., 2017 |
| Green labels | I believe that the green labels are generally reliable<br>I think that green labels are generally dependable<br>Overall, I believe that the green labels are trustworthy<br>I believe that the green labels are delivered by renowned experts and institutions<br>I believe that the green labels go through a systematic inspection before being labeled | Issock et al., 2018 |
| Green Advertising | I am often exposed to green advertisements<br>Green advertisements are necessary for environmental awareness<br>Green advertisements accurately reflect a brand's environmental efforts | Richards, 2013 |
| Subjective Norm | Most people who are important to me think I should buy green products<br>The trend of buying green products among people around me is increasing<br>People around me generally believe that it is better for environment to use green products<br>My close friends and family members would appreciate if I buy green products | Minbashrazgah et al., 2017 |
| Price Sensitivity | Price information should be understandable and comprehensible<br>I know what I pay for a green product and what I get<br>Green product price information is complete, correct, and frank<br>I am properly informed about the prices of green products | Minbashrazgah et al., 2017 |
| Green Purchase Intention | I would consider buying products because they are less polluting<br>I would consider switching to other brands for ecological reasons | Jaiswal& Singh, 2018 |

I intend to switch to a green version of a product

### 3.2 Sampling and data collection

Data were assembling from 251 respondents. Convenient sampling is implemented to data and accumulated all through April and May 2019. A total of 251 questionnaires have been collected via Google online survey. Consequently, a complete of 251 responses have been used for further analyses. First 50 questionnaires were pre-tested in order to correct the mistakes of the draft questionnaire and control the reliability of the related scales.

To calculate the size of sample formula proposed by Tabachnick&Fidell (2007) was used in the study. The formula is N> 50 + 8m. Where N refers sample size, m refers number of independent variables. Based on this formula required sample size for current research is defined as 98 (as the number of independent variables equals to six). Sample size is defined as 251 to exceed the minimum threshold.

## 4. Analysis

IBM SPSS 24.0 (Statistical Package for the Social Sciences) program was used for the analyses of the primary data collected. With demographic data, descriptive statistical analysis was conducted. Additionally, factor analysis and multiple regression analysis were conducted to test the research model respectively.

### 4.1 Descriptive statistics

42.6% of the respondents (107 people) are male and 57.4% (144 people) are female. The majority of the participants (46.2%) are in the age group of 25-34 and 33.1% (83 people) are in the 18-24. 10.8% of the participants (27 people) belonged to the age group of 45 years and older. Therefore, it can be said that the people reached were predominantly a young mass.

56.6% of the respondents (142 people) are single and 43.4% of them are married (109 people). 68.5% (172 people) of the university graduates and 15.5% (39 people) has a master degree. It is also observed that almost 50% of the participants (121 people) have income distribution in the range of 250 USD-1000 USD and 9.2% (23 people) have an income of 2000 USD and more. 33.5% of the respondents (84 people) are working for private sector while 25.5% are student (64 persons) and 21.5% are working for public sector. A summary of demographic characteristics of respondents is provided in Table 4.1.

**Table 4.1:** Descriptive statistics for demographics

| | Frequency | Percent (%) | | Frequency | Percent (%) |
|---|---|---|---|---|---|
| **Gender** | | | **Income** | | |
| Male | 107 | 42.6 | Less than 250 USD | 63 | 25,1 |
| Female | 144 | 57.4 | 250 USD-500 USD | 60 | 23,9 |
| **Age** | | | 500 USD- 1000 USD | 61 | 24,9 |
| less than 18 | 3 | 1,2 | 1000-2000 USD | 44 | 17,5 |
| 18-24 | 83 | 33.1 | More than 2000 USD | 23 | 9,2 |
| 25-34 | 116 | 46,2 | **Income** | | |
| 35-44 | 22 | 8,8 | Student | 64 | 25,5 |
| more than 45 | 27 | 10,8 | Public sector employee | 54 | 21,5 |
| **Marital Status** | | | Private sector employee | 84 | 33,5 |
| Single | 142 | 56.6 | Housewife | 14 | 5,6 |
| Married | 109 | 43.4 | Retired | 4 | 1,6 |
| **Education** | | | Not working/ Unemployee | 31 | 12,4 |

| | | | | | |
|---|---|---|---|---|---|
| primary school | 1 | 0,4 | | | |
| intermediate school | 21 | 8,4 | | | |
| Institute | 18 | 7,2 | | | |
| University degree | 172 | 68.5 | | | |
| Masters/Phd degree | 39 | 15,5 | | | |
| TOTAL | 251 | 100 | TOTAL | 251 | 100 |

**4.2 Factor Analysis (Exploratory Factor Analysis)**

Factor analysis is generally used to group the highly related variables, to extracted new components called factors (Hair et al., 2006). The main objective of this analysis is reveal the hidden structure of the data set and reduce the dimension of the data. For this reason, factor analysis was conducted to find out the number of different dimensions that the respondents of this study perceived comparing to the original data of the scale. Besides, other aim of conducting this analysis is confirming the theoretical content groups.

There are three main assumptions of factor analysis to be satisfied before interpreting the results. Keiser-Meyer-Olkin Sampling Adequacy (KMO) checks whether the data is available for factor analysis, the threshold level for KMO is stated as 0.50 (Durmuş, et al., 2011). Bartlett's test of spherecity is a hypothesis testing that claims the correlation matrix is an identity matrix which implies there is no inter-correlation between variables. Consequently. Bartlett's test hypothesis should be rejected to continue factor analysis. In social sciences generally 95% confidence interval is adequate for the analyses, and corresponding p-value is stated as 0.05. The third assumption checks the suitability of the variables separately, Anti-Image Correlation matrix diagonal values should be at least 0.50. In addition, for checking the instrument reliability, Cronbach's alpha measurement is needed to be examined and it should be over 0.70 (Nunnally, 1978).

In this research, factor analysis for all independent variables such as environmental concern, knowledge, labeling, green advertising, subjective norms and price sensitivity were performed. The results are shown in Table 4.2, 4.3 and 4.4.

To determine the dimensions of all independent variables in the research an exploratory factor analysis (EFA) was conducted. Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett test of sphericity tests were performed to test the appropriateness of data for conducting factor analysis (Sharma, 1996). Result of the tests (KMO=0.905, $\chi 2$ Bartlett test (190) = 2793,830, p=0.000) were satisfactory.

**Table 4.2:** KMO and Bartlett's Test Results

KMO and Bartlett's Test

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | 0,905 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2793,83 |
| | Df | 190 |
| | Sig. | 0,00 |

The diagonals of the anti-image correlation matrix were all over 0.50, supporting the inclusion of each item in the factor analysis. Items with factor loadings below 0.50 (Price 2, 3, Green Ad 1, Subjective Norm2) and items with high cross loadings were excluded (Hair et al., 1998). As a result of the analysis, four dimensions were found. Four dimensions' total variance is 62,31%.

By conducting exploratory factor analysis, it is found that environmental concern and involvement scales gathered together and occur a new factor named as "environmental involvement". The other factors are named as it is original in the literature as "labelling, subjective norm and green advertising". On the other hand, items of price sensitivity were spread into other factor loadings (Price 1) and some of them were valued under 0,50 (Price 2,3) and removed from the analysis. This situation highlights that one scale is totally out of analysis and removed from the model.

To test reliability of each construct, after factor analysis, reliability analysis was conducted. Cronbach Alpha values of each construct are presented in Table 4.3. Due to the analysis all findings are above 0,70 which means all constructs were quite reliable (Cronbach alpha > 0,70).

**Table 4.3:** Factor Loadings of Factor Analysis

| Factor Name | Labels | Factor Items | Factor Loadings | % of variance | Cumulative % | Reliability |
|---|---|---|---|---|---|---|
| ENVIRONMENTAL INVOLVEMENT | envconcern3 | I know how to select products and packages that reduce the amount of landfill waste | 0,717 | 17.505 | 17.505 | 0,864 |
| | envinvolve1 | I am concerned about environmental issues | 0,691 | | | |
| | envconcern4 | I understand the environmental phrases and symbols on product package | 0,675 | | | |
| | envconcern2 | I know more about recycling than the average person | 0,666 | | | |
| | envconcern5 | I know that I buy products and packages that are environmentally safe | 0,644 | | | |
| | envinvolve3 | I keep a watchful eye on new and popular green products | 0,636 | | | |
| | envconcern1 | I am very knowledgeable about environmental issues. | 0,605 | | | |
| | encinvolve2 | I pay close attention too green appeal information | 0,601 | | | |
| LABELING | label2 | I think that green labels are generally dependable | 0,849 | 17.221 | 34.726 | 0,900 |
| | label1 | I believe that the green labels are generally reliable | 0,833 | | | |
| | label3 | Overall, I believe that the green labels are trustworthy | 0,759 | | | |
| | label5 | I believe that the green labels go through a systematic inspection before being labeled | 0,669 | | | |
| | label4 | I believe that the green labels are delivered by renowned experts and institutions | 0,65 | | | |
| SUBJECTIVE NORMS | subjective1 | Most people who are important to me think I should buy green products | 0,778 | 16.017 | 50.743 | 0,842 |
| | subjective3 | People around me generally believe that it is better for environment to use green products | 0,753 | | | |
| | subjective4 | My close friends and family members would appreciate if I buy green products. | 0,709 | | | |
| NADVERTI | price1 | Price information should be understandable and | 0,771 | 11.576 | 62.319 | 0,823 |

| | | | | | |
|---|---|---|---|---|---|
| | comprehensible | | | | |
| greenad2 | Green advertisements are necessary for environmental efforts | 0,75 | | | |
| greenad3 | Green advertisements accurately reflect a brand's environment to use green products. | 0,667 | | | |

With the exclusion of the price sensitivity variable from the analysis, the hypotheses about the moderator variable were also removed from the list and the hypotheses were renewed as shown below.

H1: Environmental involvement has a positive effect on green purchase intention
H2: Green Labeling has a positive effect on green purchase intention
H3: Green Advertising has a positive effect on green purchase intention
H4: Subjective norms have a positive effect on green purchase intention

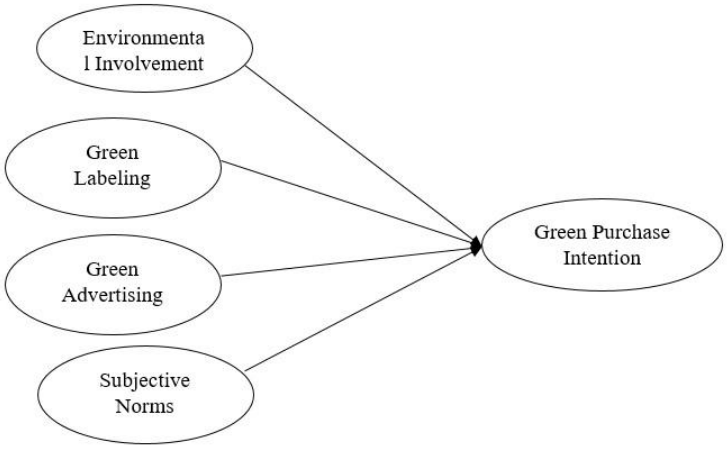


**Figure 4.1:** The New Research Model

### 4.3 Multiple Regression Analysis

Regression analysis is defined as a reliable method followed in statistics for identifying the relationship between independent variables and dependent variables. By regression analysis, which variables have an impact on the research topic of interest and also the degree of that impact can be observed.

According to the Anova table that was performed in Multiple regression analysis, the whole model of green purchase intention is statically significant (t= 1,918, p=0.05). In addition, according to the Coefficient table, green advertising (t=5,249, p=0.00), subjective norms (t= 2,984, p=0.000) and environmental involvement (t= 4,880, p=0.003) have an effect on green purchase intention in the 95% confidence interval. while green labeling (t= 1,555, p=0.121) has no effect on green purchase intention statistically (p>0,05).

Independent variables of green advertising, subjective norms and environmental involvement explain the dependent variable green purchase intention by 69% (R=0,694; R2 =0,481, F= 57,026, p=0,00). In this relationship, the highest explanatory rate is owned by green advertising (β=0,310), respectively subjective norms (β=0,116) and environmental involvement (β=0,107). However, the tolerance value of all variables is above 0.10 and the VIF value is less than 10 means that there is no multicollinearity between the independent variables (Pallant, 2010).

**Table 4.4:** Results of Regression Analysis

| | β | t value | *p* | F value | *p* | R | R2 | Tolerans | VIF |
|---|---|---|---|---|---|---|---|---|---|
| (Constant) | 0,962 | 1,918 | .056 | 57,026 | ,000[b] | ,694[a] | 0,481 | | |
| Green labeling | 0,057 | 1,555 | .121 | | | | | 0,552 | 1,812 |
| Environmental Involvement | 0,107 | 4,880 | .003 | | | | | 0,641 | 1,560 |

| | | | | | |
|---|---|---|---|---|---|
| Subjective Norms | 0,116 | 2,984 | .000 | 0,679 | 1,472 |
| Green Advertising | 0,310 | 5,249 | .000 | 0,566 | 1,768 |

According to the multiple regression analysis results, H1, H3, H4 were accepted ($p < 0,05$), while H2 is rejected ($p > 0,05$). Summary table of hypothesis tests are shown below (Table 4.5).

**Table 4.5:** Summary Table of Hypothesis Tests

| **Hypotheses** | **Path** | **Accepted/Rejected** |
|---|---|---|
| $H_1$ | Envinvolvement ⟶ GreenPurInt | Accepted |
| $H_2$ | Greenlabel ⟶ GreenPurInt | Rejected |
| $H_3$ | GreenAdvertising ⟶ GreenPurInt | Accepted |
| $H_4$ | Subjective Norms ⟶ GreenPurInt | Accepted |

## 5. Conclusion

### 5.1 Discussion of Research Findings

The relationship between green production and marketing is reflected in a production pattern that keeps in mind the conservation of the environment and natural resources in the production operations. This has led to the emergence of the concept of "Green Marketing", that is considered a new phenomenon in marketing.

People are getting more aware of the environmental issues due to the changing lifestyle, enhanced education levels, emerging new means of communication, the development of media, and conducting awareness campaigns, this explains the results of the research that the intention to buy green products depends mainly on green advertising, as consumers are affected by the advertising as these advertisements are widely spread in almost everywhere starting with the TV ads to ads on social media, magazines, reaching the streets and many other places. This development influences consumers to contribute to the environment once they see these advertisements and try to make a difference and get benefited for themselves and for the environment and the whole world also. And as to what was seen in the literature also, green advertisement has a big effect on the green purchase intention.

As the education levels are getting higher, people are being more aware of the crises related to the environment, trying to conserve the natural resources and make an action in the aim of saving the environment, the research results also support the literature in means of and environmental involvement, that people are willing to buy green products for the sake of saving the environment and being aware of their important role and its impact on the environment.

In terms of subjective norm, people are getting influenced by what they hear and see from their close circle people, that will affect their final decision. In the case of green purchasing, according to the analysis results of this research, people are influenced to buy green products according to the recommendations and opinions of their close friends and family members,

On the other hand, despite research numbers that have been supporting green labels as an effective factor in green purchasing, some other researchers had doubts about it. some studies have examined whether green labels are accepted or rejected as a motivating tool for consumers to make a positive decision towards green products (Wessells et al., 1999). This may explain that people might need to be more involved in these labels and their meanings. A lot of the respondents weren't aware of these labels also, this indicated a rejection in the implemented hypothesis for this factor.

Price sensitivity effect couldn't be examined as it was removed from the model, this could be due to wrong perceiving by the respondents or it could have been measured as an independent value not as a moderator so the effect could be seen directly of people's intention.

**5.2 Research Limitation and Contribution**

Green marketing is a new phenomenon that needs to be highlighted more in order to achieve a positive goal in the interest of all. The lack of researches and literature on this subject was one of the biggest obstacles faced by the researcher. Moreover, the results of the research represent a specific sample of the population, that these results might get a difference in the case of applying on another sample in another place. In addition, the sample has been published in Iraq, a large number of respondents have questioned what green products and what they do, so some of them had no idea about the green products. For this reason, this research hopes to form a definition of green products and their role in achieving a better environment and what is green marketing and how to know green products in the hoping that this research will be instrumental in the development of future researches on this subject.

**5.3 Suggestion for Future Researches**

In terms of suggestions for future research on this topic, the next researcher can include qualitative data besides the quantitative one in order to achieve more understanding of people's choices and behavior towards the green products. The future researcher can select a larger sample so the results can be more generalized. Also, a comparison between two areas could be included so as to understand the behavior of different cultures in means of being green and the percentage of awareness on environmental issues and green products in both cultures. Also, the future researcher can expand the factors that affect the green purchase intention such as perceived benefits and risks.

Lastly, the future researcher can study how the different generations (Baby blooms, Generation X, Y and Z) perceive the intention to buy green products. The difference to buy green products between men and women also could be studied.

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