

---

## CONSUMER PERCEPTION OF SUSTAINABLE SHOPPING BAGS AND ITS EFFECT ON THEIR PURCHASE INTENTION: CASE STUDY ON SEOUDI MARKET IN EGYPT

---

**Hazem Tawfik Halim**<sup>1</sup>

Department Of Marketing

The British University in Egypt

Email: [Hazem.halim@bue.edu.eg](mailto:Hazem.halim@bue.edu.eg)

**Yasser Tawfik Halim**<sup>2</sup>

Department Of Marketing

October University for Modern Sciences and Arts, Egypt

Email: [ytawfik@msa.edu.eg](mailto:ytawfik@msa.edu.eg)

**Samia Adly El Sheikh**<sup>3</sup>

Department Of Marketing

October University for Modern Sciences and Arts, Egypt

Email: [selsheikh@msa.edu.eg](mailto:selsheikh@msa.edu.eg)

---


**Abstract** *the paper aims to study the relationship between environmental concerns and subjective norms on consumers' perception towards green product and the factors that influences people's intention towards using them, especially sustainable shopping bag using survey data from 453 respondents. The study uses Chi-square test via Kruskal-Walis test to determine if the hypotheses were accepted or rejected. The existence of the relationship between variables was proven via the measuring of Spearman Correlation. The research indicated that there is a positive relationship between environmental concerns and consumers' perception of green products. Finally, the results show there is a confident relationship between the consumer's perception towards green products and purchase intention of green products. Based on the research findings, policy implications and suggestions to further promote shopping bags are discussed.*


**Keywords:** *Perception, Green Products, Purchase Intention, Sustainability, Shopping Bags*


**JEL Codes:** *M31*

---

---

<sup>1</sup>  0000-0001-7355-0116

<sup>2</sup>  0000-0001-5983-6249

<sup>3</sup>  0000-0002-7970-6326

## **Introduction**

According to Oni, et al. (2022); Mohamed (2015) one of the main issues in Egypt is the wastage of packaging. Throughout the years the problem has been evolving and that was also triggered by problems in politics and the economy. Moreover, deducting the harmful effect towards the environment is related to consumers' awareness towards the environment's issues and their willingness to select green packaging. In addition, firms have a responsibility to begin contributing towards the preservation of the environment by reducing the wastage of packaging. For instance, there are two examples of products that can contribute positively towards the environment, which are bags that are biodegradable and bags that are not single-use.

Furthermore, spreading the awareness among consumers to start shifting towards the usage of bags that are reusable or biodegradable is vital, instead of bags that cause an increase in the packaging wastage in the country. Moreover, the shift towards green products will be effective towards the preservation of the environment's prosperity, because these green products are manufactured via a process that does not have any bad effects towards the environment and are not tested on animals (Nazareth, et al., 2022; Mohamed, 2015).

Through the increase of the technology, there is always an increase in the industrial activities that affect the environment negatively on the long run and now people should get the step of being concerned and aware of choosing the right products to use like recyclable bags and green products that have no bad impact on the environment in all conditions and are called eco-friendly (Alfina, 2022; Makhdoomi & Nazir, 2016).

As Leong (2018) stated, the best definition that calls of attention to changing the source of consumption that affect the society, is to stick to the sustainable consumption which is well-defined as 'The used of goods and services that respond to basic needs and bring a better quality of life, whilst minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations.

Specifically, the problem is that shopping bags have managed to become an important issue to debate with sustainable consumption, and this is because shopping bags are usually manufactured from essential resources wasted and consumed everyday by individuals' lifestyles. In addition, there have been some improvements in the sustainability and environmental performance in the producing process of shopping bags and improving its quality (Castiglione, Pastore, & Alfieri, 2022; Ritch et al., 2009).

Nowadays, supermarkets and shopping bags have become essential to individuals as they cannot go a day without going to the supermarket, as that super and hyper markets are now in every corner of any city which helps individuals make some grocery shopping which will obviously lead them to use plastic shopping bags that the markets offer them, at some places they pay to get grocery shopping bags and there are other places that are offered for free. However, there are many different types of grocery shopping bags worldwide, which are; plastic bags, paper bags and reusable bags that are produced from plastic. Moreover, grocery shopping bags are divided into two types normally reusable and recyclable (Muthu & Li, 2016).

## **Literature review and hypotheses development**

### **Green Product**

Green product can be defined as a product that is manufactured through a process, which is environmentally harmless and contains a low negative impact towards nature. In addition, the manufacturing process utilizes components in the product that are recycled and the product is manufactured domestically (Ho, et al., 2022).

Govender & Govender (2016) suggests based on a marketing research displays that there is a need among consumers for green goods and that need is backed by consumers believe that these green products are beneficial, great quality and contribute positively towards the environment. The features included in green products that are beneficial for the preservation of the environment attract consumers to purchase them, because they perceive that these products have positive results impacting the upcoming generations. Thus, purchasing these products satisfy individuals need to have a role in solving problems that are affecting the environment in their community despite the high prices that may be associated with these green products.

### ***Green marketing***

According to Shuba (2019), it is known as the process of marketing goods, which are environmentally friendly and include features of being recyclable, manufactured in a way that does not harm the environment or tested on animals and includes components of materials that are recyclable. Moreover, According to Govender & Govender (2016), the objective of green marketing is to increase awareness among consumers about the need to shift to products that help in preserving the environments prosperity. In addition, firms

need to initiate a manufacturing process that produces goods that have a positive impact on both consumers and the environment (Limaho, Pramono, & Christiawan, 2022). Furthermore, various firms began implementing sustainable actions, as they perceive that this in an effort to attract consumers to purchase their goods. In addition, this step will allow firms to lower their manufacturing expenses and increase their social responsibility role, which will allow consumers whom are aware of the environmental concerns to become more loyal to the firms goods (Seyrek and Gul, 2017).

### ***Biodegradable plastic bags***

According to Samir, et al. (2022); Mohamed (2015) bags that are biodegradable polymer can be manufactured from elements that come from plants or components that are bio synthesizing. Moreover, the manufacturing of these bags is vital, because they contribute significantly towards the deduction of the plastic wastage and these sorts of bags are still lacking enough awareness from Egyptian consumers. In addition, these biodegradable bags are considered a good option for consumers as are better approach to solve plastic wastage issues and that is backed by the bags ability to dissolve in three years.

### ***Using biodegradable plastic shopping bags when it is convenient***

Convenience has become an essential element in the consumption of using goods and services in the marketplaces. The need to let the goods and services be consumed depends on where and when the integral part for changing the household convenience as the time and effort of the consumer's perceptions related to the buying of the biodegradable plastic shopping bags. Research aspects include cost and time and place, availability. Spencer claims according to the researcher on how often does he use the biodegradable shopping bags, he only said that he uses the bag only when its appropriate (Njomo, 2019).

### ***Reusing plastic shopping bags***

The meaning of Reusability is to get benefit from using the material more than just once instead of throwing it away. It doesn't guarantee the highest usage of the lifespan material, but minimizes

the lifespan to reduce the waste. Reusability is considered an important feature living condition for the market places. Reuse has been an essential part of the social challenges connected to health and well-being, poverty, it always takes along use of plastic bags to hold the purchase of plastic bags, sellers and buyers use paper bags that's contained of cement, by using books and old newspapers to create paper bags. It's an advantage for both buyers and sellers because this saves a lot and a way cheaper than plenty of single products (Mihale-Wilson, et al., 2022).

### ***Sources of Plastic***

The Plastic bags are manufactured from nonrenewable fuel methods, the main focus of the organic matters is natural gas in addition to basic oil. The byproducts of the oil and gas were established and then remade into propylene and ethylene and additives which are added up into the final finished result for the sake of protecting the plastic from any harmful result of the heat and light that is used for bags construction that's probably be 4% of the entire world oil production. Every single plastic shopping bag weights twice, these types of bags can drive a car for one kilometer because it has enough energy equal in millimeters of 13.8 contained of simple oil (Miller, 2012).

### **Types of shopping bags**

Shopping bags now days have become an essential piece of our daily based live. There are lots of shopping bags kinds that are made from different types of ingredients like woven cotton and degradable plastic and high- and low-density polyethylene, Kraft paper. The single-used polyethylene plastic bag is used a lot among other bags although it's very useless because they cause a very bad impact on the environment like for using the inks and chemicals that are inside the components of the bag and the plastic trash of the consumer that is thrown away that are assorted with each waste stream. According to the life cycle assessment which is mostly known as (LCA) has proven that there are bags that are more dangerous than others and for sure will affect the environment negatively using the cotton or plastic bags they both obtain lesser greenhouse gas effects while the Kraft paper are the best environmental effect for its energy that is used. (Singh & Cooper, 2017).

There are some of supermarkets which are located in the United Kingdom and Australia then was established in Stockholm has started to introduce the motivational challenging aspect for them which is “take-back’ recycling system in retail stores”. The business influences the stakeholders who introduced a mechanism for the recycling corporations, retail stores and retail customers for the sake of reducing unwanted usage of shopping plastic bags (Cheng, et al., 2022).

### ***Plastic Shopping Bags***

Plastic bags have engrossed 80 percent in the grocery and convenience markets because of its low-cost of production. However, plastic bags are usually produced out of natural gas and petroleum, which are non-renewable resources. There are some unprocessed materials that are generally used to produce plastic bags, which are; Polyethylene - High Density, Low Density, Linear Low-Density Polyethylene (LLDPE). The most preferably shopping bags for supermarkets are generally made out of LLDPE which reaches the acquired texture and shiny look (Muthu et al., 2012).

### ***Paper Shopping Bags***

According to Muthu et al. (2012), paper bags are manufactured from a renewable source which is out of Pulpwood from trees, which goes through different processes and machines. However, paper bags come out of cutting off trees which obviously defects both plants and animals, also absorbs and waste a huge energy which is created by fossil fuels, natural gas, electricity, machines and other various of chemicals in the process of production to convert pulpwood into paper bags.

### ***Reusability***

Based on Rosenboom, Langer, & Traverso (2022); Li et al. (2010) there is a method that can be used to define reusability, which is to keep using the same product as it is originally projected to be used till it cannot be used anymore which it will probably reach its end of life. Mainly, this is essential to help delay the stage of disposal and it also helps hold up the start of new products while there are products still in the stage of usability. Thus, producers have the responsibility to use proper unprocessed materials, also manufacture technologies that will allow individuals to keep reusing grocery shopping bags till it can be thrown away to waste due to its durability.

### ***Recyclability***

This method is unlike the previous, however, it breaks down used products and starts to produce new products. This way will allow the usage of wasted materials in a way that it can be reused again to avoid waste of energy, cost, fresh raw materials and most importantly pollution. The government plays a role which they motivate people to recycle the products instead of directly disposing them to landfill by requiring policies and public participation which will also help in expanding the proportion of recycling (Li et al., 2010).

### ***Consumer Behavior and the Government Efforts to restrict the usage of plastic bags***

Based on Muthu et al. (2012), both consumers behavior and governmental policies play a significant role in the discarding stage of shopping bags. However, the three most important stages of usage and disposal are; reuse, recycle and disposal to the landfill. Anyhow, it is the consumers' ability to keep using shopping bags until it reaches the disposal stage and throw it in the recycling bins which are proposed by the government instead of throwing it away to waste which will obviously affect the environment.

Furthermore, the charge is also applied on the government to provide more recycling options and set policies on consumers' behaviour to reuse shopping bags till they reach the disposable stage.

Moreover, some countries created policies concerning restrictions or reduction on the pollution that is basically caused by plastic bags which has increased in the last eleven years and became the largest plastic waste all around the world. Although, the government interference through policies did not influence consumers' behavior as regards to the consumers' attitude towards the usage of plastic that end up thrown-away. However, the government tries to manage consumer's behavior throughout the rules and regulations by controlling the usage of plastic, raising taxes, prices, and rising up the price of paid plastic bags, while instead, they should spread environmentally and eco- friendly awareness in the minds of consumers and supermarket retailers (Zulganef, et al., 2019).

## **Consumer environmental concerns**

Many studies have proven that the consumers are affected after the development of the beliefs and attitudes. All of the people that have powerful belief will have a positive reaction in supporting the environment. However, making the purchasing concerns is directly related to all of the green products. These products are very beneficial for the entire environment with no risk at all they are cheaper than the standard products because they can be re manufactured again (Ferraz et al., 2017).

It can be broken down into two aspects, which are; the reducing of consumption of resources that are harmful to the environment, curtail rituals and maintaining environmentally friendly buying's. Moreover, deducting the usage of personal cars, utilizing home appliances that require less energy. For instance, purchasing household appliances that save energy or are eco-friendly along with utilizing cars that efficient in energy. In addition, maintaining curtailing rituals does not always require high expenses as its purpose is modifying the living rituals into rituals that can contribute significantly toward the preservation of the environment. Furthermore, observing the situation from the point of view of the consumer, shifting the purchasing pattern to green is tough, despite being aware of the problems facing the environment and being exposed to green goods regularly (Chaihanchai, & Anantachart, 2022). Moreover, when consumers shift towards environmentally friendly products that can encourage firms to abandon their current manufacturing that could be harmful towards the environment and begin maintaining a process that has the ability to produce various products with green features (Afshar and Jia, 2018).

## **Relationship between environmental concerns and green products**

According to Kirmani and Khan (2016), the purchasing of green products is strongly impacted by environmental concerns as observing many people who have the intention to purchase green products are driven by the environmental concerns they are exposed to and these concerns make consumers shift their purchasing patterns to green purchasing pattern. Moreover, people when shifting to green purchasing behavior tend to maintain green rituals such as decreasing



their consumption of products that are not manufactured via renewable energy.

Khaola, Potiane & Mokhethi (2014) found that there is a positive relationship between the environmental concerns and attitude towards green products, most researchers consider environmental concern as a general attitude, and in which it guides the formation of situation-specific attitudes. However, environmental concern as a multi-dimensional concept is an affective dimension such as general beliefs or values, dispositional dimension as per personal attitudes, and active dimension as pro-environmental attitude behavior. Although, the affective dimension affects the dispositional dimension, in a way that effects the operating factor. As a general attitude, environmental concern debatably influences domain-specific attitudes such as the attitude towards green products, and nearly assumes a role of a value in a value- attitude-behavioral hierarchy. Moreover, researchers suggest that in this new frame, environmental concern only affects specific environmental behaviors such as for example green purchase behavior through the situation- specific attitudes towards green products.

### **Consumer perception towards green products**

It is clarified as how goods and services are perceived by consumers from their own point of view and their anticipations towards the performance of the product if it will satisfy their needs. Moreover, people whom care for the prosperity of the environment are more likely to engage in green purchasing behavior (Wang, et al., 2022; Kabir and Jahan, 2014). Influence of young consumers' perceptions of environment-friendly shopping bags (EFSB) on environmental consciousness and attitudes toward apparel retailer that use (EFSB), this depends on the consumer's motivational ability to understand the information (Smith, Cho & Smith, 2016).

By motivating consumers in taking the central route process which works best when the facts presented are strong, relevant to the individuals, and individuals are motivated to listen, will surround individuals with positive thoughts, behavior, and attitudes in their reactions towards the information, researchers suggest to raise green campaign activities to help individuals to proceed through the central route process. Therefore, customers' observations through the green campaign activities can help change their environmental perception,

in which it will affect their behaviors and attitudes towards green products. Thus, it is reasonable to believe that consumers' beliefs of EFSB might effect changes in their environmental consciousness and also in their attitudes toward markets and retailers that use EFSB (Smith, Cho & Smith, 2016; Kurowski, Rutecka-Góra, & Smaga, 2022).

## **Factors affecting consumer perception towards green products**

### ***Perceived price***

Higher price had made problems for its consumers regarding the price that's not affordable for all consumers, on the other hand the lower prices had a big impact on consumers and giving them the chance to act and go green. However, consumers who were affected because of the lack of economic resources of purchasing green products. The low prices affected the environment positively for the purchase behavior process. On the other hand, the high prices are a negative and bad intention and behavior. The prices of the recyclable products should not be that high, must be affordable to let all the consumers could maintain using the shopping bags in their day live base and spread nature and peace all over the world and this count on not just us humans but animals and plants too (Ncube, et al., 2021; Joshi & Rahman, 2017).

Consumers evaluation of green products is impacted by how they perceive the price of the product. Moreover, to become aware of why consumers choose specific products such as green products one needs to identify the reasons that should be investigated is the value that is provided by such products and the satisfaction that it brings to consumers once purchasing it. In addition, the term "perceived ecological value" is defined as consumers consistent pursue of green products that have features that are beneficial to the environment's status and increases its prosperity, consumers view these products as essential as its worth paying high prices for and they do not perceive them as expensive as others might perceive them due to the beneficial features they have (Chikosha , 2018).

### ***Perceived quality***

The product characteristics have positively affected the consumers in their purchase decision process for buying green products that have met in fulfilling the personal desires and needs, the green products are also affected be its quality because the studies has

proven that consumers tend to choose the high quality green products because this will lead the consumers to positive influence rather than choosing the low type of green products will give a negative influence and consumers will maybe reject idea if getting a green product with a low quality, this could force them from not purchasing so it's an important factor towards the consumers. Social responsibility is important to increase actual buying decision. (Guerreiro, & Pacheco, 2021; Joshi & Rahman, 2017).

Chikosha (2018) stated that consumers evaluate green products features and how will they work out and the products quality is vital when it comes to increasing the chances of conducting a purchase which correspondingly increase the chances for the consumers to become loyal to the product, furthermore, green products could be possibly be less quality and performance than other products. In addition, shifting towards green goods with less quality and performance is something that many consumers neglect to pursue, as they are hesitating to purchase products that might not fulfill the demanded performance along with the product's green features (Fuchs, & Hovemann, 2022).

### ***Perceived value***

Perceived value is defined as the expectation that consumers anticipate when purchasing a valuable product and also high expectations when it is perceived that the product will end issues concerning the consumer. In addition, consumers conduct a total evaluation regarding the performance of the product in terms of what they anticipated when purchasing it despite its high cost. Hence perceived value is a vital aspect in triggering a purchase intention for people whom care for the environment, generate high willingness to buy green goods as they satisfy their demand for products with beneficial features toward the environment (Krisdayanti, & Widodo, 2022).

### ***Environmental awareness***

Recognizing the impact of people's wrong actions towards nature is the closest way to define environmental awareness. Being environmentally aware creates a beneficial effect towards the purchase of green goods and maintaining a personal consumption that contributes towards the preservation of the environment, which is known as green consumption (Martinho et al., 2015). Moreover, boycotting all sorts of products that have a high possibility of posing a

threat toward the status of the environment, which is a result of the manufacturing process or the side effects of its disposal in the future (Guan, et al., 2022).

According to Chu, Law & Williams (2022) stated that advocacy for the environment preservation is a result of people's interactions with organizations within their communities that tackle the preservation of the environment subject. In addition, the green purchasing is a result of the consumers gained knowledge about the positive contribution that can be made by a single person towards the preservation of the environment.

The study has found that the resistance to use any biodegradable plastic shopping bags in the society was as an effect of lack of awareness. There are many respondents who did not understand the main purpose of the ban. "People have questioned why the Government should force them to pay for bags which hitherto were provided by retailers at no cost". It's very important that marketers who are in subsistence markets using informal media platforms for the sake of educating the consumers of their products especially when it comes for illiteracy it comes number two for a main challenging after poverty. All of the brands must pay attention to the word-of-mouth marketing, by selecting the local members and partners, get the experience by sharing the product and make offer displays to the members which are included the peer group. The effect of the spokes persons and the members will create an interaction relatively to the way of communication. (Choshaly, 2017).

We can conclude that consumer's perception is exposed to green marketing which is the process of promoting products, services that the consumer may perceive as overrated due to their high price. Moreover, the product's high price tag is due to the incurred manufacturing costs to produce the product and that can be seen evident on the products performance. Furthermore, people perceive green products as low-functioning products when they compare between them and other products, which makes consumers reluctant to think of green products as a solution to their needs (Machová, et al., 2022).

## **Relationship between environmental concerns and consumer's perception**

Environmental concerns relate to an individual's environmental awareness. A person may contribute to the resolution of environmental issues or demonstrate a desire to improve something (Majeed, Ahmed & Rasheed, 2022). The attitude of a person is a powerful predictor of their desire to conduct ecologically friendly. Individual attitude toward environmental problems (such as resource waste, energy conservation, pollution, and population growth) and the impact of hazardous substances on natural ecosystems and the atmosphere influences sustainable consumption patterns (Lavuri, et al., 2022). Individual environmental concerns influence environmentally responsible behaviour positively (Felix, et al., 2022).

Notably, Majeed, Ahmed, and Rashid (2022) evaluated the direct influence of various consumption values on the environmental concerns of Malaysian consumers as indicated by their purchases of green products. Zameer & Yasmeen (2022) also investigated the direct impacts of different consumption values on Pakistani consumers' selection of green goods. However, the current research examined the influence of multidimensional consumption values on consumers' selection of green goods based on environmental concerns. This research explored both direct and indirect routes to expand the current knowledge and give a more in-depth understanding of sustainable consumption behaviour in the setting under consideration. People with a high environmental consciousness are considerably more inclined to purchase green items for their environmental features than for their other characteristics. The increased desire to purchase environmentally friendly products may be mirrored in the growing number of environmentally conscious consumers.

De Bauw, Franssens, and Vranken (2022) highlight the significance of environmental concerns between consumption ideals and consumer selection behaviour toward environmentally friendly items. In the context of this research, consumers who are moderately or highly environmentally concerned are more likely to prefer green items over non-green products due to their multidimensional consumption values. Due to a lack of knowledge about the functions of green goods, customers with low environmental consciousness are less likely to prefer green products over non-green items. They may also believe that saving the environment is the duty of large corporations and governments.

Unfortunately, customers are not well-informed on green product information, which impacts their judgments of its value and motivation to embrace it (Di Giulio, et al., 2022). Informing customers on the importance of adopting and using green goods and its advantages may raise their concerns, knowledge and perceptions of it, hence increasing their concern for and desire to use green products (Hui & Khan, 2022). In addition, the consumer purchasing decision process model divides the purchase decision cycle into five stages: introduction of needs, information gathering, product assessments, purchasing choices, and post-purchase behaviour. The three basic steps among the five include acquiring information about a product, assessing the product based on the received information and generating product perceptions, and ultimately establishing buy intentions and engaging in real purchase action (Kotler et al., 2022). Collecting information is necessary for creating product views and buying intentions. To our knowledge, there has been limited empirical research systematically examining the links between green products-related concerns (such as benefits and attribute information and environmentally friendly information) and consumers' perceptions (such as perceived value and perceived trust) and adoption intentions of green products.

In addition, according to the theory of information overload, adequate information can enhance consumers' understanding and concerns about particular products and improve the quality of their decisions, but it can also lead to information overload problems if the amount of information exceeds a certain threshold, thereby lowering decision quality and causing negative outcomes (Zhang, Ding & Ma, 2022). To lessen its detrimental impact on consumer decision-making, the information's quality must be enhanced (Tsekouras, Li & Benbasat, 2022). In studying the link between concerns, information, perception, and behaviour, past research has identified the impact that information quality plays (Osatuyi, Passerini, & Turel, 2022). From the previous discussion we can develop the first hypothesis:

**H1: Environmental concerns influence consumer's perception toward green products.**

**Subjective norms** :People can be exposed to pressure from their social surroundings to participate in specific behavior or to decline conducting a specific behavior. For instance, people can sustain

pressure from their friends, family, and work colleagues when it comes to having specific expectations from a particular purchasing pattern. Moreover, this purchasing pattern is a result of extrinsic influence the individual sustains from other social groups that are considered to be close to them in their daily lives and therefore could imitate their beliefs when it comes to conducting a certain purchasing pattern (Chen and Deng, 2016).

### *Factors affecting subjective norms*

#### *Social surroundings*

The purchasing behavior of consumers is likely exposed to influence from their social surroundings and people receive more information regarding green goods when they interact with one another, which gives people an insight about how vital their purchasing behavior becomes when it is shifted towards green goods. Furthermore, the information obtained by consumers is used when making purchasing, as consumers compare between products according to the value they can add. Thus, consumers purchasing behavior towards green goods is triggered by the influence of social surroundings and the need to gain social acceptance from others and individuals that are living in a community where the care for environmental preservation is valued (Grokhotova, 2017).

Social influence is named as “change in an individual’s thoughts, feelings, attitudes, or behaviors that results from interaction with another individual or a group. Social influence is distinct from conformity, power, and authority”. Individuals are a result of the way of interaction with others that make a real change according to the attitudes and behaviors under the influence of another person who is at least an expert on the matter at hand.

As to be expected, physical structures, social influences dealing with the environment that will for sure make developments and modify cognitive competencies, beliefs and human expectation. The effect of the green purchasing behavior comes from the social environment, in a matter of fact learning behaviors and attitudes could be through the individuals or print media or an influencer or from a past experience you have been through (Choshaly, 2017).

#### *Self-image*

Individuals are going to recognize that they will have to cope with others viewing them as a person who cares for the environment

and also to be viewed by others as a modern person that is aware of the status of the environment and the need to assure it is always prospering (Afshar and Jia, 2018). For instance, Khare (2015) indicates that citizens from Egypt were affected by concerns regarding the environment and information regarding green goods. In addition, Egyptian consumers were skeptical when companies declared claims regarding their approach towards the preservation of the environment.

The self-concept stands for the perception of the word self for any individual and its behavior that is related to each and single behavior that depends on the behavior, the self- concept method includes the self-image. Much type of people chooses any product because these products are identical or go with their self-concept, they have completely UN similar images of themselves. While people choose to improve the image of their self by buying certain products that are close up to their self-image and keep away from those who aren't self-image (Choshaly, 2017).

There are other studies that prove that self-image is a set of ideas that may help in identifying these factors that are influencing the green purchasing behavior. They found that there is a directly relationship between the individuals' self-image of becoming an eco-friendly person and the intention to use these recycled products. The eco-friendly person could represent a wonderful and motivating image to others. The concern for the self-image has become a major predictor of green buying behavior (Mansoor, & Paul, 2022).

### ***Government intervention***

Each and every government in the world is taking a quick action in reducing the consumption of the plastic bags by raising awareness to protect the environment to improve the level of pollution that surrounds us. Following the policies and tools which varies from regulatory then environmental taxation the moving to non-regulatory, there are barriers that prevent the reduction process: Changing the way of thinking of consumer thinking and behavior about the plastic shopping bags, then apply the conserved policies to give a full control on the plastic shopping bags (Nohd Hasnu, & Muhammad, 2022).



## **The relationship between subjective norms and green products**

Individuals sustain pressure from social surroundings towards taking a green purchase pattern based on the information received. Moreover, there is a strong impact created by subjective norms towards purchasing green products as individuals view themselves as person without a positive role towards society and the preservation of the environment and that they have to cope with the others people approach towards sustainable products in order to view by others as civilized person (Grokhotova, 2017).

## **The relationship between subjective norms and consumer's perception**

Subjective norm is the appraisal and sentiments of a consumer's view of what the people who are significant to them may think of a proposed activity. Reference groups serve as a frame of reference for individuals' green consumption decisions because they are perceived as credible sources, and informal sources, such as friends, neighbours, relatives, and others that consumers meet on social networking sites can have a significant impact on an individual's green intention (Gupta, 2018). Genta et al. (2022) argued that the family remains a key or dominating reference group in terms of providing for its members and is the primary household consumption unit. The subjective norm substantially impacts an individual's propensity to purchase environmentally friendly items (Patwary, et al., 2022).

Multiple research, such as the study on organic food by Gungaphul, Seewoo, and Kasseean (2022), reveal a substantial and positive association between subjective norm and a consumer's inclination to participate in that behaviour. Perceived behavioural control relates to the degree of control a person feels they have over executing the behaviour (Liu, et al., 2022). Thus, persons who sense a greater degree of personal control are more likely to want to participate in certain behaviours, such as purchasing green products.

Perceived behavioural control consists of elements such as the availability of time and money, the presence of necessary skills, and the individual's self-confidence in his or her ability to do the act (Mbeteh & Pellegrini, 2022). Cognitive factors refer to consumers' perception of green products, which is likely to have an important impact on green purchase intention. Consumers are driven by value. Perceived value is an attribute related to product value perception, so it can establish a positive word-of-mouth effect and increase purchase intentions.

Perceived value is crucial to marketing performance, because companies can cultivate consumers' purchasing intentions through consumers' perceived value (Zhuang, Luo & Riaz, 2021).

Due to information asymmetries, it is difficult for customers to completely comprehend the green product prior to purchase; hence, they may see acquiring the green product as risky. If customers perceive there is a substantial danger associated with buying a green product, they may not purchase it. Therefore, green purchasing intentions are adversely correlated with customer perceptions of product dangers. Green risk perception has been demonstrated to have a detrimental effect on green buying intentions and behaviour (Adrita, 2020). The perception of risk has a detrimental effect on the purchase choices of customers and will influence their behaviour. Consequently, when perceived green risk decreases, customers' propensity to buy green products is likely to grow (Firdiansyah, et al., 2021).

Perceived consumer effectiveness is the extent to which consumers believe their own activities contribute to issue resolution; it is a subjective assessment of the significance of one's own efforts (Rahman, et al., 2020). Perceived consumer effectiveness is an individual's conviction that they can contribute to solutions and decrease negative environmental consequences (Nguyen & Dekhili, 2019). Understanding customer behaviour has accorded a significant deal of attention to perceived consumer efficacy. Researchers have highlighted perceived consumer effectiveness as a key component in understanding customers' environmentally conscious buying behaviour in prior study (Firdiansyah, et al., 2021).

In the environmental age, firms must enhance green perceived value as the most influential element on green buy intention to increase customers' green purchase intention. Therefore, marketers should develop marketing tactics that enhance customers' perceptions of green value. In addition, perceived risk plays a role in understanding consumer behaviour, since customers are often driven to minimise risk rather than maximise purchase effects. Because green perceived risk diminishes green buy intent, marketers must remove and lessen consumers' perceptions of green purchasing risks (Zhuang, Luo & Riaz, 2021).

## **Green purchase intention**

According to Chen and Deng (2016), Purchase intention is defined as an internal feeling from a consumer towards a product after comparing it with other products based on features price and quality. In addition, after this process the consumer becomes fully aware of his purchasing behavior will be conducted and that is why purchase intention is an accurate approach to identify a consumer's buying behavior. Moreover, it is defined as taking environmental problems into consideration when implementing a green purchasing behavior. In addition, it can be also defined as a possibility of a green goods purchasing done by consumers, as their purpose to purchase the product is that it contains features that are not harmful to the environment and helps in preserving the status of the environment. The intention to buy green goods can be assessed via three elements; the consideration of purchasing green goods, seeking other products that have eco-friendly features and shifting to brands that use sustainable material.

Consumers get affected by the environment that is surrounding them and the mentality of thinking correctly on choosing a well stabilized thing to use for them and for the others that surround them. Buying a product that's not harmful for the environment and also for others like using the green products through a level of accepting an eco-friendly tool it's for sure caused by an attitude and then knowing the value of it and the importance of using it, because these products can used more than once without throwing them of each time using it could last with you for a quite some time and the main advantage of it that when it's useless it can be recycled again. In fact, it will reduce the pollution and always a sign to use an eco-friendly tool like this (Suki, 2016).

## **Factors affecting green purchase intention of green products**

Now days in our world, heading for moving to recycle bags are like go green products which is a must and should be put into consideration, all people around the world are encouraging each other to use recyclable bags many stores sell bags that are specifically for the purpose of shopping to go green. They are a kind of replacement for the plastic bags that are available in the market. Plastic bags are very

toxic and harmful to the environment and also, it's much cheaper to make the recycling process than to produce a plastic bag. There are different types of bags that are available in the market for customers in the recent time and world widely; designers who keep making efforts to produce trendy and nice, stylish bags from different types of materials to minimize the pollution and waste potential (Choshaly, 2017).

### ***Green labeling***

According to Chekima et al. (2015), People whom consider implementing green purchasing focus on the information on the back of products in order to obtain information regarding the products capability of having the positive impact on the status of the environment. Moreover, green products are hard to view and find by consumers is an obstacle that consumers face when trying to purchase green products. For instance, the labeling allows consumers to compare products with each other to identify which products is the best solution based on its impact on the environment and these green labels have been found to be vital when it comes to consumers purchase intention of green products, especially for consumers whom care for the environment.

### ***Environmental Attitude***

People whom maintain a mindset of associating the environmental issues are those whom are more likely to have a high purchase intention towards green products. Moreover, consumer whom adopt a green mentality are regularly seeking products that contain green labeling that defines their impact towards the environment, hence consumers are willing to seek these specific kind of products despite the high price that they may cost. In addition, that is backed by the consumers internal feeling that they have a social responsibility towards the preservation of the environment which is considered as a personal norm where they feel obligated to do such purchasing. Thus, the more the person's attitude is adopting a green mindset the high the chance for him to conduct a purchasing of a green product (Chekima et al., 2015).

### ***Product appearance***

According to Arifani & Haryanto (2018), product appearance is based on all things that are seen from the products that be able to cause perceptions to inevitable the products' qualities. However, the operational meaning of product appearance is measured due to the consumers' valuation of aesthetically, symbolically, and physical impression that attracts consumers towards certain products based on the picture, color and shape of it, also physically such as if it's easy to carry, recyclable, or reusable.

### ***Perceived price***

According to Arifani & Haryanto (2018), perceived price provides consumers with information to acknowledge and understand completely which will allow the consumer to open up their minds and evaluate. However, an operational meaning of perceived price is when the consumer starts to evaluate and compare whether it is suitable for him or not by the product attributes, which there are three measurements of perceived price; economically, logically and affordability.

### ***Perceived value***

As Arifani & Haryanto (2018), stated that perceived value is a type of consumer's evaluation through the benefit of the product that is offered because of the useful products and services stated from perceptions. However, the operational meaning of value perception makes the consumer start an evaluation through the profit and cost attracted on the product or service. Based on the product value specifications, quality, and budget money, is how the perceived value is measured.

### ***Reusable of Plastic Bags***

The idea behind going green went to all facilities like the individuals, governments, industries; communities are acting in a more advanced way. According to the purpose of the survey the reusable bags were meant to be for clothes, canvas, and washable fabric. Also, the whole food companies banned the using of plastic bags even it's not an option. And for SKYROCKET the sales of reusable bags have increased by 300 % although the grocery stores gave promotion and made a nice trendy thing making new designing's for the bags and makes giveaways. Home Depot gave for free 500,000 reusable shopping bags that will last till April on Earth Day, and Wal-Mart distributed away one million. One of line that is written on the bags

skin texture tags that says, “Saving the World One Bag at a Time” (Dunn, 2012).

### ***Plastic Bag Consumption method***

The durable business model is well represented in Sweden to control and maintain the stakeholders from getting rid of using plastic bags. The support tool is not only used by customers but also by plastic waste recycling business and participating trade supplies. The idea of focusing on post shopper waste assortment and organization system and recreating the existing consumption system, the stores that are in Sweden suggest for the customers to use free plastic shopping bags and there is no separate group system for 1 Gabi is a life sequence evaluation tool developed by PE worldwide unneeded bags There will be a small payment of using plastic bags; there will be first level stay away from the principle by giving confidence to the customers by avoiding the use of plastic bags the whole entire fee will be restored to the customers by returning back the bought bag to the store. The second level decrease the principle is to push the customers from using the bags and allow the regaining of the plastic wastes (Singh & Cooper, 2017).

### **Relationship between green purchase intention and green products**

ople whom have concerns regarding the environment and its prosperity are more likely to buy green products as they contain the features that they are seeking when buying products that are not harmful to environment. Thus, acquiring more information about green products by costumers is an indicator that it exists in their evoked set when having the intention to buy eco-friendly products even if they cost too much money, because they perceive the positive benefits they contain. Moreover, purchase intention towards green products can be triggered via green marketing and environmentally friendly packaging (Wu and Chen, 2014).

As Khaola, Potiane & Mokhethi (2014) stated that there is a strong and positive relationship between consumers’ purchase intention and green products. This is the main intention of the value-attitude-behavior toward green products which conceptualizes attitudes as the adjacent factors of behavior. This is one of the guiding Theory of Planned Behavior in which attitudes toward behavior straightforwardly effects the purchase intentions toward green products to implement the behavior. However, the situation specifies consumers’ attitudes with convincing factors of both purchase

intentions and actually seeking for the information about green products. Researchers, found related conclusions that specify theories and attitudes regarding to recyclable and avoiding waste consumption were connected to significant behaviors. Therefore we can assume the second and third hypotheses:

**H2: Subjective norms influence the consumer's perception towards green products.**

**H3: There is a relationship between the consumer's perception and purchase intention of green products.**

## **Methodology**

Throughout the research methodology, many types of research approaches have been gathered, compared, inspected and interpreted, which will assist the researchers in the process of measuring the environmental concerns and subjective norms on consumer's perception towards green products and the consumer's perception on purchase intention of green products.

## **Research approaches**

### *Quantitative methods*

Gathering, inspecting, interpreting and writing results of a study are the key elements that are included in the quantitative methods. Both survey and experimental research are located in specific methods, whereby they are able to establish a link between pinpointing a sample and population, defining the type of design, gathering and inspecting data, providing the outcomes, implementing an interpretation, and writing the research in an approach corresponding with a survey or experimental study (Creswell,2017).

### *Qualitative methods*

Qualitative methods focus on gathering of data, inspecting, interpreting, and conducting of a report vary from the default, quantitative approaches. Purposeful sampling, collection of open-ended data, studying of phrases or images, presentation of information via figures and tables, and personal interpretation of the findings all inform qualitative methods (Creswell,2017).

## **Research Techniques**

### **Questionnaire**

Questionnaire is a research tool that contains a sequence of questions by gathering the needed information from the respondents, questionnaire is basically on paper interview it can be also made by computer or telephone or even a post and face to face. These tools are efficient and fast and also cheap. Achieving the large amount of the needed information from the sample that is given for people, the major aim of the questionnaire is minimizing the error of the responses and translating the needed information into certain questions that can be easily answered by the respondents (Krosnick, 2018).

### **Population & sampling**

#### **Research population**

The research population comprises individuals that are using sustainable shopping bags.

#### **Sample type**

The researchers have used the methodology of non-probability convenience sampling. Researchers used the convenience sampling methodology as the online questionnaires were filled by people who are aware of sustainable shopping bags and care about the environment for instance university students, post-graduate students, unemployed people, an employee at private and public sectors, and businesses owners which they were all interested to fill the online questionnaire.



### **Sample size**

The sample size was around 453 respondents who have filled the online questionnaire using Google forms

### **Data collection process**

The researchers collected a total of 453 online questionnaires. The questionnaires were gathered via online platforms, due to the corona virus pandemic and were answered by people who utilize Seoudi market's Sustainable Shopping Bags. In addition, the online questionnaires were gathered via groups, pages related to sustainability on social media platforms (Facebook, Instagram).

### **Data analysis**

The researchers utilized the SPSS in order to test the relation between the variables and know what sort of status that exists if it is positive or negative, weak or strong and that was guaranteed by the SPSS ability to analyze data by using different tables. In addition, various statistical techniques including such as; frequencies, valid percentages, mean, and standard deviation were utilized. A quantitative research was used to gather research data as respondents answered the online questionnaire and in order to generate the research findings statistical analysis was used by the researchers.

The online questionnaire was utilized the online questionnaire included Likert scale. A pre-test was initiated at the beginning of the data collection process, to see if any modifications are needed to be implemented on the questionnaire before initiating the gathering of the actual data and a non-probability convenience sampling technique was used. We gathered 453 online questionnaires and the answers of the 453 respondents were analyzed via SPSS as it provides many different statistical analyses including such as: frequencies, valid percentages, mean, standard deviation and also the usage of reliability test, Kruskal-Wallis test and correlation throughout the analysis process.

Furthermore, in order to view the consistency of all the questionnaire, the researchers utilized the reliability test to confirm the existence of that aspect and to make sure if the hypotheses are accepted or rejected, the researchers used Kruskal-Wallis test. In closing, the researchers utilized the Kruskal-Wallis Spearman correlation tests to measure the relationship between the environmental concerns and consumer's perception toward green products, the relationship between the consumer's perception and subjective norms towards green products and purchase intention and the relationship between the consumer's perception towards green products and purchase intention of green products.

## Results and Discussion

### Demographic characteristics

**Table 1: Demographics of the sample unit**

	Demographic elements	Frequenc	Percentage
<b>Gender</b>	Male	192	42.4%
	Female	261	57.6%
<b>Total</b>		453	100%
<b>Age</b>	Less than 20 years old	62	13.7%
	From 20 to less than 30 years old	278	61.7%
	From 30 to less than 40 years old	28	6.2%
	From 40 to less than 50 years old	52	11.5%
	50 years and above	33	7.3%
<b>Total</b>	<b>Mean:29 years</b>	453	100%
<b>Occupation</b>	Unemployed		26.9%
	Public sector employee	29	6.4%
	Private sector employee	233	51.4%
	Business owner	34	7.5%
	Other (specify).....	35	7.7%
<b>Total</b>		453	100%
<b>Education level</b>	High school student	24	5.3%
	University student	176	38.9%
	Bachelor Degree	200	44.2%
	Postgraduate studies	48	10.6%
	Other (specify).....		1.1%
<b>Total</b>		453	100%
<b>Monthly income?</b>	Less than L.E. 3,000	151	33.3%
	From L.E. 3,000 to less than L.E. 6,000	143	31.6%
	From L.E. 6,000 to less than L.E. 9,000	58	12.8%
	From L.E. 9,000 to less than L.E. 12,000	36	7.9%
	L.E. 12,000 and above	66	14.3%
<b>Total</b>		453	100%
<b>Mean</b>		5964 L. E	

According to the above table, the sample unit consists of 453 respondents, which 261 females. The majority of respondents mean age was 29 years old. The majority of respondents are bachelor degree holders and the mean income was 5964 L.E and the majority are private sector employees.

## 4.2 Testing hypothesis 1

H1: Environmental concerns influence consumer's perception toward green products

**Table 2: Consumer's perception towards green products**

Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard deviation
1-I think green media campaigns	11 (2.4%)	18 (4.0%)	83 (18.3%)	132 (29.1%)	209 (46.1%)	4.13	0.1004
2-I believe seoudi's recyclable	4 (0.9%)	5 (1.1%)	50 (11.0%)	100 (22.1%)	294 (64.9%)	4.49	0.803
3-I assume that green labelling information on seoudi's recyclable bag	5 (1.1%)	24 (5.3%)	89 (19.6%)	152 (33.6%)	183 (40.4%)	4.07	0.953
4-I believe that seoudi's reusable bags are durable	2 (0.4%)	15 (3.3%)	102 (22.5%)	139 (30.7%)	195 (43.0%)	4.13	0.902
5-I perceive Soudi's recyclable bags are spacious and cope with my personal	6 (1.3%)	31 (6.8%)	126 (27.8%)	154 (34.0%)	136 (30.0%)	3.85	0.974
6-I think seoudi's Recyclable bag allows me to contribute	2 (0.4%)	7 (1.5%)	42 (9.3%)	97 (21.4%)	305 (67.3%)	4.54	0.762

According to the above table, the majority of the respondents agreed on the statements in the table regarding consumer's perception towards green products, which is interpreted that they have a positive point of view regarding seoudi's recyclable bag. The highest mean is 4.54, which indicates that the respondents agree that they think that seoudi's recyclable bag allows them to contribute to the protection of the environment and the standard deviation is low which refers that the sample is representative and homogenous.

**Table 3: Reliability statistics of consumer's perception towards green products**

Cronbach's Alpha	N of Items
<b>0.789</b>	6

According to the above table, the 6 statements of consumer's perception towards green products have a Cronbach's Alpha result of (0.789), which indicates high level of reliability and consistency of all the statements.

**Table 4: Environmental concerns**

Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard deviation
<b>1-I am keen to know the news about the environmental changes</b>	<b>10</b> (2.2%)	<b>15</b> (3.3%)	<b>89</b> (19.6%)	<b>132</b> (29.1%)	<b>207</b> (45.7%)	<b>4.13</b>	<b>0.985</b>
<b>2-I care about the environment as my religion commands me to</b>	<b>7</b> (1.5%)	<b>12</b> (2.6%)	<b>63</b> (13.9%)	<b>105</b> (23.2%)	<b>266</b> (58.7%)	<b>4.35</b>	<b>0.923</b>
<b>3-I support the new environmental trends in Egypt</b>	<b>3</b> (0.7%)	<b>8</b> (1.8%)	<b>49</b> (10.8%)	<b>113</b> (24.9%)	<b>280</b> (61.8%)	<b>4.45</b>	<b>0.807</b>

<b>4-I care about the environment in order to increase the tourism rate</b>	<b>15</b> (3.3%)	<b>21</b> (4.6%)	<b>74</b> (16.3%)	<b>79</b> (17.4%)	<b>264</b> (58.3%)	<b>4.23</b>	<b>1.087</b>
<b>5-I care about the environment to minimize the damage of underwater</b>	<b>4</b> (0.9%)	<b>4</b> (0.9%)	<b>33</b> (7.3%)	<b>65</b> (14.3%)	<b>347</b> (76.6%)	<b>4.65</b>	<b>0.730</b>

According to the table above, the majority of the sample agreed on the statements above concerning Environmental concerns. And the highest mean is 4.65 as respondents really care about minimizing the damage of underwater creatures.

**Table 5: Reliability statistics of environmental concerns**

Cronbach's Alpha	N of Items
<b>0.787</b>	<b>5</b>

According to the above table, the 5 statements of Environmental concerns that influence the consumer's perception towards green products have Cronbach's Alpha of 0.787 which indicates high level of consistency and reliability of all the statements.

**Table 6: Chi-square test between environmental concerns influence and consumer's perception toward green products**

Environmental concerns	
<b>P Value</b>	<b>0.000</b>

The above table shows the Chi-square test that's calculated from kruskal Wallis test. The p-value equals 0.000 which is less than 0.05 so there is a significance relationship between the independent variable which is environmental concerns and the dependent variable is consumer's perception toward green products.

**Table 7: Spearman correlation test between environmental concerns influence and consumer's perception toward green products**

Elements	Environmental concerns
Correlation Coefficient	0.541
P Value	0.000
N	5

Spearman correlation test shows a 0.541 result in the correlation coefficient, which indicates that there is a moderate and positive relationship between environmental concerns influence and consumer's perception toward green products

### Results of testing hypothesis 1

There is a relationship between environmental concerns and consumer's perception of green products, therefore **H1 is accepted**.

### Testing Hypothesis 2

H2: Subjective norms influence the consumer's perception towards green products.

**Table 8: Subjective norms**

Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard deviation
1-I feel that the increase in the environmental supporters influences me	9 (2.0%)	24 (5.3%)	108 (23.8%)	103 (22.7%)	209 (46.1%)	4.06	1.044
2-I value influencers endorsement to the environment protection	31 (6.8%)	18 (4.0%)	102 (22.5%)	97 (21.4%)	205 (45.3%)	3.94	1.205

3-I believe being an eco- friendly individual will affect my personality	<b>3</b> (0.7%)	<b>10</b> (2.2%)	<b>70</b> (15.5%)	<b>116</b> (25.6%)	<b>254</b> (56.1%)	<b>4.34</b>	<b>0.865</b>
4-I value the governmental policies that will reduce the	<b>4</b> (0.9%)	<b>11</b> (2.4%)	<b>43</b> (9.5%)	<b>105</b> (23.2%)	<b>290</b> (64.0%)	<b>4.47</b>	<b>0.832</b>
5-I agree with the imposed taxes on the usage of plastic bags	<b>25</b> (5.5%)	<b>41</b> (9.1%)	<b>80</b> (17.7%)	<b>116</b> (25.6%)	<b>191</b> (42.2%)	<b>3.90</b>	<b>1.204</b>

According to the table above, the majority of the sample agreed on the statements above concerning the subjective norms, the lowest mean is 3.90 as the majority of respondents slightly agree on the imposed taxes on usage of plastic bags, and the highest mean is 4.47 as respondents agree that they value the governmental policies that will reduce the usage of plastic bags. The standard deviation is low which means that the sample is representative and homogenous.

**Table 9: Reliability statistics of subjective norms**

Cronbach's Alpha	N of Items
<b>0.691</b>	<b>5</b>

According to the above table, the 5 statements of subjective norms have a Cronbach's Alpha result of 0.691 which indicates a high level of reliability statistics of all the statements.

**Table 10: Chi-square test between subjective norms influence and the consumer's perception towards green products**

Subjective norms	
<b>P Value</b>	<b>0.000</b>

The above table shows the Chi-square test calculated from Kruskal Wallis test (non- parametric test). The P value = 0.000, which is less than 0.05, so there is a significance between the independent variable which is subjective norms and the dependent variable which

is consumer's perception towards green products and purchase intention of green products. Therefore, this hypothesis is acceptable.

**Table 11: Spearman correlation test between subjective norms influence and the consumer's perception towards green products**

Elements	Subjective norms
Correlation Coefficient	0.534
P Value	0.000
N	5

The above table shows Spearman correlation test shows a 0.534 result in the correlation coefficient, which indicates that there is moderate and positive relationship between subjective norms influence and the consumer's perception towards green products.

### **Results of testing hypothesis 2**

There is a relationship between subjective norms and the consumer's perception towards green products, therefore, **H2 is acceptable.**

### **Testing Hypothesis 3**

H3: There is a relationship between the consumer's perception towards green products and purchase intention of green products.



**Table 12: Purchase intention**

Statements	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean	Standard deviation
1-I am willing to purchase seoudi's recyclable bag because it	5 (1.1%)	7 (1.5%)	45 (9.9%)	136 (30.0%)	260 (57.4%)	4.41	0.817
2-I am willing to buy seoudi's recvclable bag as it is	6 (1.3%)	15 (3.3%)	93 (20.5%)	125 (27.6%)	214 (47.2%)	4.16	0.952
3-I am willing to buy seoudi's recvclable bag as it is	4 (0.9%)	18 (4.0%)	119 (26.3%)	155 (34.2%)	157 (34.7%)	3.98	0.921
4-I would buy seoudi's recyclable bag due to its durability	4 (0.9%)	16 (3.5%)	100 (22.1%)	119 (26.3%)	214 (47.2%)	4.15	0.944
5-I would purchase seoudi's recyclable bag because of the wide variety of bags	21 (4.6%)	31 (6.8%)	142 (31.3%)	111 (24.5%)	148 (32.7%)	3.74	1.125
6-I am willing to buy seoudi's recyclable bag due to its reasonable	9 (2.0%)	21 (4.6%)	133 (29.4%)	134 (29.6%)	156 (34.4%)	3.90	0.997

According to the above table, the majority of the respondents agreed on the statements in the table regarding consumer's perception towards green products and purchase intention of green products, which is interpreted that they have a positive point of view regarding seoudi's recyclable bag. The highest mean is 4.41, which indicates that the respondents agree that they are willing to purchase seoudi's recyclable bag because it contributes in protecting the environment. The lowest mean is 3.74, which indicates that the respondents slightly agree that they would purchase seoudi's recyclable bag because of the wide variety of bags and the standard deviation is low which refers that the sample is representative and homogenous.

**Table 13: Reliability statistics of purchase intention**

Cronbach's Alpha	N of Items
0.869	6

According to the above table, the 6 statements of consumer's perception towards green products and purchase intention of green products have a Cronbach's Alpha result of (0.869), which indicates high level of reliability and consistency of all the statements.

**Table 14: Chi-square test between consumer's perception towards green products and purchase intention of green products**

Consumer's perception towards green products and purchase intention of green products	
P Value	0.000

The above table shows the Chi-square test calculated from Kruskal Wallis test (non-parametric test). The p-value result is 0.000, which is less than 0.05, so there is a significant relationship between the independent variable consumer's perception towards green products and purchase intention. Hence, this hypothesis is approved.

**Table 15: Spearman correlation test between consumer's perception towards green products and purchase intention of green products**

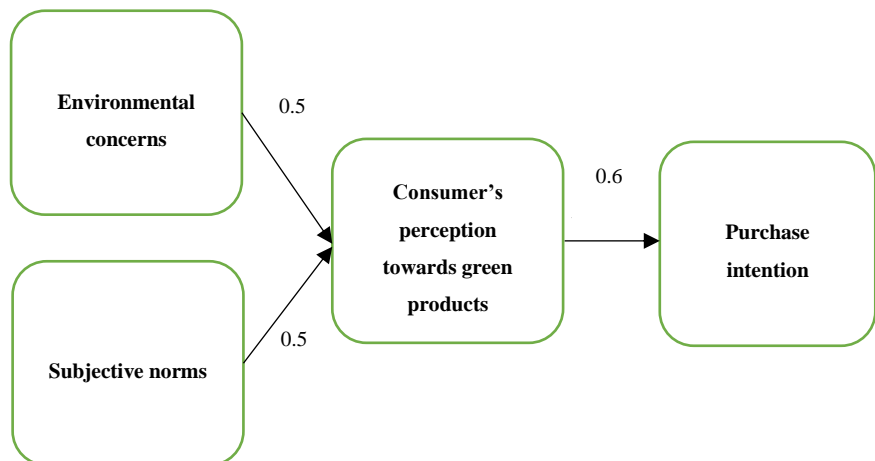
Elements	Consumer's perception towards green products and purchase intention of green products
Correlation Coefficient	0.692
P Value	0.000
N	453

The above table shows Spearman correlation test shows a 0.692 result in the correlation coefficient, which indicates that there is a strong and positive relationship between the consumer's perception towards green products and purchase intention.

#### 4.4.1 Results of testing hypothesis 3

**H3 is accepted**, as here is a relationship between the consumer's perception towards green products and purchase intention of green products.

#### The conceptual model



## **Conclusion**

In closing, the results were analyzed by the researchers via descriptive analysis and determined that the majority of respondents age are from 20 to less than 30 years old and the majority of respondents are bachelor's degree holders and unemployed. All the statements were found to be credible and compatible, also the standard deviation was found to be low. In addition, Chi-square test via Kruskal-Walis test was implemented to determine if the hypotheses were accepted or rejected.

The outcomes found that there is a relationship between the environmental concerns and consumer's perception toward green products. In addition, a relationship existed between the subjective norms and consumer's perception toward green products, Finally, there was also a relationship founded between the consumer's perception towards green products and purchase intention of green products.

The existence of the relationship between variables was proven via the measuring of Spearman correlation. The correlation coefficient between environmental concerns influences consumer's perception toward green products was 0.541 which pinpoints that there is a moderate relationship, while the correlation test between subjective norms influences and the consumer's perception towards green products was 0.534 which proves that there is an existing moderate relationship. Finally, the correlation test proved that there is a strong relationship between consumer's perception towards green products and purchase intention of green products, as the test pinpointed a 0.692.

## References

- Adrita, U. W. (2020). Consumers' actual purchase behaviour towards green product: a study on Bangladesh. *International Journal of Business Innovation and Research*, 21(3), 311-323.
- Afshar Jahanshahi, A., & Jia, J. (2018). Purchasing green products as a means of expressing consumers' uniqueness: Empirical evidence from Peru and Bangladesh. *Sustainability*, 10(11), 4062.
- Alfina, P. P. (2022). An Analysis of Housewives Awareness and Readiness as Potential Customers of Eco-friendly Household Goods Company in Indonesia. *Asian Journal of Research in Business and Management*, 4(3), 1-12.
- Arifani, V. M., & Haryanto, H. (2018, November). Purchase intention: implementation theory of planned behavior (Study on reusable shopping bags in Solo City, Indonesia). In IOP Conference Series: Earth and Environmental Science (Vol. 200, No. 1, p. 012019). IOP Publishing.
- Castiglione, C., Pastore, E., & Alfieri, A. (2022). Technical, economic, and environmental performance assessment of manufacturing systems: the multi-layer enterprise input-output formalization method. *Production Planning & Control*, 1-18.
- Chaihanchai, P., & Anantachart, S. (2022). Encouraging green product purchase: Green value and environmental knowledge as moderators of attitude and behavior relationship. *Business Strategy and the Environment*.
- Chekima, B., Wafa, S. A. W. S. K., Igau, O. A., & Chekima, S. (2015). Determinant factors of consumers' green purchase intention: The moderating role of environmental advertising. *Asian Social Science*, 11(10), 318.
- Chen, K., & Deng, T. (2016). Research on the green purchase intentions from the perspective of product knowledge. *Sustainability*, 8(9), 943.
- Cheng, K. M., Tan, J. Y., Wong, S. Y., Koo, A. C., & Amir Sharji, E. (2022). A Review of Future Household Waste Management for Sustainable Environment in Malaysian Cities. *Sustainability*, 14(11), 6517.
- Choshaly, S. H. (2017). Consumer perception of green issues and intention to purchase green products. *International Journal of Management, Accounting and Economics*, 4(1), 66-79.

- Chu, V. H., Law, W. W., & Williams, J. M. (2022). Advocacy coalitions in rural revitalisation: The roles of policy brokers and policy learning. *Environmental Science & Policy*, *136*, 9-18.
- De Bauw, M., Franssens, S., & Vranken, L. (2022). Trading off environmental attributes in food consumption choices. *Food Policy*, *112*, 102338.
- Di Giulio, M., Maina, M. A., Mureithi, K., Canepa, L., & Gai, S. (2022). The Relationship between Marketing and Consumer Choices. In *Products for Conscious Consumers* (pp. 67-87). Emerald Publishing Limited.
- Dunn, J. (2012). Estimating willingness to pay for continued use of plastic grocery bags and willingness to accept for switching completely to reusable bags
- Felix, R., González, E. M., Castaño, R., Carrete, L., & Gretz, R. T. (2022). When the green in green packaging backfires: Gender effects and perceived masculinity of environmentally friendly products. *International Journal of Consumer Studies*, *46*(3), 925-943.
- Ferraz, S. B., Buhamra, C., Laroche, M., & Veloso, A. R. (2017). Green products: a cross-cultural study of attitude, intention and purchase behavior. *RAM. Revista de Administração Mackenzie*, *18*(5), 12-38.
- Firdiansyah, R., Mohamed, M., Yusoff Yusliza, M., Saputra, J., & Muhammad, Z. (2021). A Review of Green Marketing Strategy Literature: Mini Review Approach. In *Proceedings of the 11th Annual International Conference on Industrial Engineering and Operations Management Singapore: IEOM Society International* (Vol. 21030).
- Fuchs, M., & Hovemann, G. (2022). The Circular Economy Concept in the Outdoor Sporting Goods Industry: Challenges and Enablers of Current Practices among Brands and Retailers. *Sustainability*, *14*(13), 7771.
- Genta, C., Sanyé-Mengual, E., Sala, S., & Lombardi, P. (2022). The Consumption Footprint as possible indicator for environmental impact evaluation at city level. The case study of Turin (Italy). *Sustainable Cities and Society*, *79*, 103679.
- Govender, J. P., & Govender, T. L. (2016). The influence of green marketing on consumer purchase behavior. *Environmental Economics*, *7*(2), 77-85.
- Grokhotova, E. (2017). Advertisement techniques for sustainable products and its impact in consumer-buying behaviour: case study of WWW Wohnwagon.

- Guan, M., Jennings, F. J., Villanueva, I. I., & Jackson, D. B. (2022). Delineating Antecedents and Outcomes of Information Seeking Upon Exposure to an Environmental Video Opposing Single-Use Plastics. *Environmental Communication*, 1-13.
- Guerreiro, J., & Pacheco, M. (2021). How green trust, consumer brand engagement and green word-of-mouth mediate purchasing intentions. *Sustainability*, 13(14), 7877.
- Gungaphul, M., Seewoo, Y. D., & Kasseean, H. K. (2022). The Purchase Intention of Organic Food in Mauritius: Extending the TPB Model. *African Journal of Business & Economic Research*, 17(2).
- Gupta, V. (2018). Antecedents of Youth Green Intention: An Examination of Subjective Norms and Perceived Behavioural Controls. *International Journal of Marketing & Business Communication*, 7(3), 19.
- Ho, J. C., Shalishali, M. K., Tseng, T. L. B., & Ang, D. S. (2022). Opportunities in green supply chain management. *The Coastal Business Journal*, 8(1), 2.
- Hui, Z., & Khan, A. N. (2022). Beyond pro-environmental consumerism: role of social exclusion and green self-identity in green product consumption intentions. *Environmental Science and Pollution Research*, 1-13.
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International*
- Kabir, M. A., & Jahan, K. (2014). Factors of Consumers Perceptions & Purchase Intentions towards Green Products. *Journal of Business*, 35(3). p. 241
- Khaola, P. P., Potiane, B., & Mokhethi, M. (2014). Environmental concern, attitude towards green products and green purchase intentions of consumers in
- Khare, A. (2015). Antecedents to green buying behaviour: a study on consumers in an emerging economy. *Marketing Intelligence & Planning*.
- Kotler, Philip; Keller, Kevin Lane; ANG, Swee Hoon; TAN, Chin Tiong; and Leong, Siew Meng. Marketing Management: An Asian Perspective. (2022). Research Collection Lee Kong Chian School Of Business.
- Krisdayanti, K., & Widodo, A. (2022). Green marketing and purchase intention of green product: The role of environmental awareness. *Jurnal Manajemen Strategi dan Aplikasi Bisnis*, 5(2), 205-216.
- Krosnick, J. A. (2018). Questionnaire design. In *The Palgrave handbook*

- of survey research (pp. 440). Palgrave Macmillan, Cham
- Kurowski, Ł., Rutecka-Góra, J., & Smaga, P. (2022). Is knowledge on climate change a driver of consumer purchase decisions in Poland? The case of grocery goods and green banking. *Journal of Cleaner Production*, 369, 133444.
- Lavuri, R., Jabbour, C. J. C., Grebinevych, O., & Roubaud, D. (2022). Green factors stimulating the purchase intention of innovative luxury organic beauty products: implications for sustainable development. *Journal of Environmental Management*, 301, 113899.
- Leong, S. S. K. (2018). Reconfiguring sustainable grocery retailing- a study on consumers' resonance to sustainable retail approach. Lesotho. *Ethiopian Journal of Environmental Studies and Management*, 7(4), 361-70.
- Limaho, H., Pramono, R., & Christiawan, R. (2022). The Need for Global Green Marketing for the Palm Oil Industry in Indonesia. *Sustainability*, 14(14), 8621.
- Liu, Z., Yang, J. Z., Clark, S. S., & Shelly, M. A. (2022). Recycling as a planned behavior: the moderating role of perceived behavioral control. *Environment, Development and Sustainability*, 24(9), 11011-11026.
- Machová, R., Ambrus, R., Zsigmond, T., & Bakó, F. (2022). The Impact of Green Marketing on Consumer Behavior in the Market of Palm Oil Products. *Sustainability*, 14(3), 1364.
- Majeed, A., Ahmed, I., & Rasheed, A. (2022). Investigating influencing factors on consumers' choice behavior and their environmental concerns while purchasing green products in Pakistan. *Journal of Environmental Planning and Management*, 65(6), 1110-1134.
- Makhdoomi, U., & Nazir, U. (2016). Consumers Purchase Behavior towards Green Products. *Journal of management*, 4(3), 45-51
- Mansoor, M., & Paul, J. (2022). Consumers' choice behavior: An interactive effect of expected eudaimonic well-being and green altruism. *Business Strategy and the Environment*, 31(1), 94-109.
- Martinho, G., Pires, A., Portela, G., & Fonseca, M. (2015). Factors affecting consumers' choices concerning sustainable packaging during product purchase and recycling. *Resources, Conservation and Recycling*, 103, 58-68.
- Mbeteh, A., & Pellegrini, M. M. (2022). A Contextualised Framework of Entrepreneurial Competencies in Sierra Leone. In *Entrepreneurship Education in Africa: A Contextual Model for Competencies and Pedagogies in Developing Countries* (pp. 63-87). Emerald Publishing Limited.



- Mihale-Wilson, C., Felka, P., Hinz, O., & Spann, M. (2022). The Impact of Strategic Core-Component Reuse on Product Life Cycles. *Business & Information Systems Engineering*, 64(2), 223-237.
- Miller, R. (2012). *Plastic shopping bags: An analysis of policy instruments for plastic bag reduction* (Master's thesis).
- Mohamed, N. A. (2015). Promoting of Environment Friendly Packaging Utilizing in the Egyptian Market" Study on Grocery Bags by Carrefour Egypt. *Civil and Environmental Research*, 7(4), 54-61.
- Muthu, S. S., & Li, Y. (2016). Assessment of environmental impact by grocery shopping bags. Springer Verlag, Singapor.
- Muthu, S. S., Li, Y., Hu, J. Y., Mok, P. Y., & Ding, X. (2012). Eco-impact of plastic and paper shopping bags. *Journal of Engineered Fibers and Fabrics*, 7(1), 155892501200700103.
- Nazareth, M. C., Marques, M. R., Pinheiro, L. M., & Castro, Í. B. (2022). Key issues for bio-based, biodegradable and compostable plastics governance. *Journal of Environmental Management*, 322, 116074.
- Ncube, L. K., Ude, A. U., Ogunmuyiwa, E. N., Zulkifli, R., & Beas, I. N. (2021). An overview of plastic waste generation and management in food packaging industries. *Recycling*, 6(1), 12.
- Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the Mindful self-compassion program. *Journal of clinical psychology*, 69(1), p.(39).
- Nguyen, T. P., & Dekhili, S. (2019). Sustainable development in Vietnam: An examination of consumers' perceptions of green products. *Business Strategy & Development*, 2(2), 127-136.
- Njomo, L. M. (2019). The Ban on Plastic Shopping Bags in Cameroon An Exploratory Study of Resilience Strategies of Subsistence Marketplaces.
- Nohd Hasnu, N. N., & Muhammad, I. (2022). Environmental issues in Malaysia: suggestion to impose carbon tax/Norfakhirah Nazihah Mohd Hasnu and Izlawanie Muhammad. *Asian-Pacific Management Accounting Journal*, 17(1), 65-95.
- Oni, O. O., Nevo, C. M., Hampo, C. C., Ozobodo, K. O., Olajide, I. O., Ibidokun, A. O., & Ikpeama, C. C. (2022). Current Status, Emerging Challenges, and Future Prospects of Industrial Symbiosis in Africa. *International Journal of Environmental Research*, 16(4), 1-15.
- Osatuyi, B., Passerini, K., & Turel, O. (2022). Diminishing returns of information quality: Untangling the determinants of best answer

- selection. *Computers in Human Behavior*, 126, 107009.
- Patwary, A. K., Mohamed, M., Rabiul, M. K., Mehmood, W., Ashraf, M. U., & Adamu, A. A. (2022). Green purchasing behaviour of international tourists in Malaysia using green marketing tools: theory of planned behaviour perspective. *Nankai Business Review International*.
- Rahman, M. S. (2017). The Advantages and Disadvantages of Using Qualitative and Quantitative Approaches and Methods in Language "Testing and Assessment" Research: A Literature Review. *Journal of Education and Learning*, 6(1), 102-112.
- Rahman, M. S., Ara, M. A., Alim, M. A., Jee, T. W., & Lim, R. T. H. (2020). Consumers' Actual Purchase Behaviour towards Green Products in Bangladesh. *Malaysian Journal of Consumer and Family Economics*, 25, 92-120.
- Ritch, E., Brennan, C., & MacLeod, C. (2009). Plastic bag politics: modifying consumer behaviour for sustainable development. *International Journal of Consumer Studies*, 33(2), 168-174.
- Rosenboom, J. G., Langer, R., & Traverso, G. (2022). Bioplastics for a circular economy. *Nature Reviews Materials*, 7(2), 117-137.
- Samir, A., Ashour, F. H., Hakim, A. A., & Bassyouni, M. (2022). Recent advances in biodegradable polymers for sustainable applications. *npj Materials Degradation*, 6(1), 1-28.
- Seyrek, I. H., & Gul, M. (2017). Factors Affecting Green Purchasing Behavior: A Study of Turkish Consumers. *International Journal of Academic Research in Business and Social Sciences*, 7(1), 306-319.
- Singh, J., & Cooper, T. (2017). Towards a sustainable business model for plastic shopping bag management in Sweden. *Procedia CIRP*, 61, 679-684 P.1
- Smith, M., Cho, E., & Smith, K. R. (2016). The effects of young consumers' perceptions of environment-friendly shopping bags and environmental consciousness on attitudes and purchase intentions. *복식문화연구*, 24(5), 687-696.
- Suki, N. M. (2016). Green product purchase intention: impact of green brands, attitude, and knowledge. *British Food Journal*
- Tsekouras, D., Li, T., & Benbasat, I. (2022). Scratch my back and I'll scratch yours: The impact of user effort and recommendation agent effort on perceived recommendation agent quality. *Information & Management*, 59(1), 103571.
- Wang, D., Weisstein, F. L., Duan, S., & Choi, P. (2022). Impact of ambivalent attitudes on green purchase intentions: The role of

- negative moods. *International Journal of Consumer Studies*, 46(1), 182-199.
- Wu, S. I., & Chen, Y. J. (2014). The impact of green marketing and perceived innovation on purchase intention for green products. *International Journal of Marketing Studies*, 6(5), 81.
- Zameer, H., & Yasmeen, H. (2022). Green innovation and environmental awareness driven green purchase intentions. *Marketing Intelligence & Planning*, (ahead-of-print).
- Zhang, X., Ding, X., & Ma, L. (2022). The influences of information overload and social overload on intention to switch in social media. *Behaviour & Information Technology*, 41(2), 228-241.
- Zhuang, W., Luo, X., & Riaz, M. U. (2021). On the factors influencing green purchase intention: A meta-analysis approach. *Frontiers in Psychology*, 12, 644020.
- Zulganef, Z., Wijaya, A., & Astuti, P. S. (2019). Government Efforts in Managing Plastic Bags Usage. *Вопросы государственного и муниципального управления*, (6).