

# PROMOTING GREEN PRODUCTS AMONG YOUTH AT SUPERMARKETS FOR CLIMATE CHANGE MITIGATION

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## Abstract

Climate change mitigation is a debatable topic around the world along with environmental education. This study highlights an important point: climate change mitigation can be done by improving the consumption/ usage of green products. Numerous studies have already been conducted in the areas related to climate change mitigation such as the effects of organic farming, consumer behavior regarding the consumption of green products, ecological perspectives regarding the intention to purchase green products, marketing mix, and eco-labeling. However, no comprehensive study has been conducted regarding opportunities to promote green, organic, or eco-friendly products toward climate change mitigation at the national level. Therefore, this study is an attempt to address this knowledge gap and also introduces a novel way to enhance green consumption among youth as a positive step for climate change mitigation. This mixed method study uses both primary and secondary data to familiarize the concept. The semi-structured questionnaires were shared with a convenient sample of young customers of selected multinational supermarkets to understand the perceptions of these products and their purchasing methods while understanding green product promotion practices at those supermarkets through observations as primary data collection instruments. National policies towards green promotions have been identified through published documents. According to the findings, a significant proportion of the sample is willing to purchase these products provided they are reasonably priced. They are aware of the product's benefits for the environment and health. Therefore, it can be recommended that introducing a new and effective financial reward system to encourage consumers to focus on these products in their purchases will increase consumption and demand. As a practical application, it can introduce a green-embedded electronic reward card system similar to existing loyalty cards to leverage green product purchasing behavior. It will open new avenues to mitigate climate change.

**Keywords:** green products, climate change mitigation, supermarkets, youth, consumer behavior, sustainable consumption

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## Introduction

Climate refers to long-term changes in weather. Moreover, the long-term change in the global climate can be referred to as climate change. It can be categorized into two mainly based on the causes such as natural phenomena and anthropogenic activities (Jayaweera, 2019). Among these two, this study focused on human-induced climate change because it is a cause that should be addressed in search of novel ways to mitigate climate change. Climate change has a different impact on each geographic region. Each year, these cause a significant amount of death and property damage around the world (Shafer, 2023).

Economic power is critical in propelling climate change mitigation efforts. Governments, businesses, and individuals can all wield significant power through their economic decisions and actions.

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This study highlights an important point: climate change mitigation can be done by improving the consumption/ usage of green products. Further, the government can impose policies, regulations, and incentives to promote the use of clean energy, reduce emissions, and encourage sustainable practices and there are opportunities to implement certain programs through the private sector.

As a result, the country has the potential to develop significant economic power. Eco-friendly economic policies have the potential to build certain economic stability by creating a healthy community and thus offer positive answers to global climate issues, particularly for a developing country like Sri Lanka, which is facing economic issues with constant inflation fluctuations. Currently, Sri Lanka has introduced policies such as the National Environmental Policy (Ministry of Environment and Natural Resources, 2003), Eco Lodges - Guidelines (Sri Lanka Tourism Development, 2022), National Policy on Sustainable Consumption & Production for Sri Lanka (Ministry of Environment, 2019), Organic Participatory Guarantee System (Good Market Info, 2013), etc. under this requirement.

Carbon pricing mechanisms, renewable energy targets, and stricter emission standards can all help industries transition to more environmentally friendly practices. Furthermore, by introducing new green consumption policies to the market, there are opportunities to lay the groundwork for this. Supporting sustainable brands can shift consumers to greener production methods by increasing consumer demand for organic food and beverages and leading them to choose eco-friendly products. This will undoubtedly be a watershed moment that will influence large corporations to reduce their carbon footprint.

The Paris Agreement highlighted the importance of Climate Technology Development in terms of reducing global temperature and climate change in 2015 (UNFCCC, 2016). Further, the digital behavior among youths in Sri Lanka was higher than 70% in 2019 (DK et al., 2020). Moreover, there is a considerable awareness of climate change among youth (Samarakoon et al., 2021). Therefore, it could be argued that taking steps to prevent climate change is a very effective way of getting the youth, who are heavily influenced by technology, excited about this change.

As a result, the focus of this study is to seek opportunities for green product promotions at supermarkets among the youth.

To summarize, economic power is a multifaceted tool that can be used at various levels to make a significant difference in the mitigation of climate change. We can work towards a more resilient and greener future by promoting green products among youth.

### ***The reason for addressing youth***

This study addressed the Youth because they have purchasing power and they will be the future leaders/future creators. Youth can guide society towards a green future. Moreover, there is evidence that the purchasing demand for green products among youth consumers is higher than that of older consumers (Mark et al., 2023a).

According to UNESCO's definition, the community between the ages of 15 and 24 should be seen as youth. Still, according to Sri Lanka's educational system, this age group is often dependent on parents who lack economic independence (Department of Census and Statistics, 2022). Therefore, in this study, a sample with both youth and young adult age groups of 20 to 35 years is generally defined as the youth community.

Target Group: Working youth population - Age between 20-35 years

(Working youth population in Sri Lanka - 20-24 age - 50.8%  
25-29 age - 68.2%  
30-34 age - 68.7%)

(Department of Census and Statistics, 2022)

According to the 2022 Census and Statistics Department report, 50.8% of Sri Lanka's total population aged 20-24 was economically active. Also, 68.2% of the total population between the ages of 25-29 and 68.7% of the total population between the ages of 30-34 represent economically active groups.

Study Area: Multi-national Supermarkets in Colombo Municipal Council, Sri Lanka

### ***Background of the Problem***

Compared to the past, the entire world is experiencing extreme weather changes today (World Meteorological Organization, 2022). Intense sunlight, rising temperatures, and dry weather have had a devastating effect on every human community in this country. The main reasons for this are deforestation, high greenhouse gas emissions, and increased agricultural use of chemical fertilizers and pesticides. Furthermore, increasing consumption of non-biodegradable materials and plastics that are not harmful to the environment has become a serious issue (Mangal, et.al, 2023). It can be stated that this indirectly causes climate change. Furthermore, various snacks created by the restaurant and hotel industries using vegetables and fruits that are practically available in bulk at low prices in the market

also have a high consumer appeal, thus increasing the use of chemicals for high yields without regard to quality for profit. Therefore, even the farmer is not hesitant to engage in cultivation with chemical fertilizers and pesticides rather than using organic methods. As a result, chemical-based food and drink patterns are prevalent and there is a gap in the reach of the consumer due to the lack of interest among producers in the production of healthy organic food.

But, around 93% of Sri Lankans are willing to purchase Green products (Wickremeratne, 2020). Therefore, it can be emphasized that green product consumer demand in Sri Lanka is in a positive stage and there is a huge vacuum to fill this demand in the market. That could be enhanced green product promotion at supermarkets by introducing a customer-friendly purchasing mechanism will be an advantage.

### ***Purpose and significance of the study (Rationale)***

The main purpose of this research is to seek opportunities for green product promotions at supermarkets among the youth because increasing the demand for green product consumption would help mitigate climate change.

### ***Research Question***

What are the opportunities to promote green products at supermarkets among the youth?

### ***Objectives***

The main objective of this research is to identify the opportunities to promote green products at supermarkets among youth.

Sub-objectives are as below,

- To explore the practices to promote green products
- To explain the national policies to promote green products
- To identify the perception of youth toward green purchasing
- To identify the payment methods and promotion opportunities for green products

### ***Literature review***

When considering climate change, greenhouse gas emissions are critical. Further, anthropogenic activities accelerate greenhouse gases in various ways. According to the (The World Bank, 2008),

agriculture accounts for half of worldwide nitrous oxide and methane emissions, mostly from animal manure, nitrogenous fertilizers, and irrigated paddy. These non-carbon greenhouse gasses emit more greenhouse gasses and have a longer lifetime than carbon dioxide (Khanal, 2009). But, in 1999, the Food and Agriculture Organization (FAO) developed the World Food Summit Plan of Action to encourage sustainable agriculture, including organic farming. Organic farming benefits the environment, conserves resources, improves food quality, and reduces surplus output. However, it has problems in developing countries, including delayed uptake and a lack of market statistics. Furthermore, consumer knowledge of health, food safety, technological problems, industrialization, and globalization are important variables in determining market potential (Bhatta et al., 2009). Thus, the influence of the agriculture industry on the greenhouse effect is clear and it is also clear that organic farming provides favorable solutions for that adverse effect. This study focuses more on organic product promotion opportunities and this would help to promote organic farming on the other hand.

The term organic product means the products that are produced, processed, and/or managed by organic standards, and organic farming is a farming practice that replenishes and maintains soil fertility without the use of dangerous and long-lasting synthetic pesticides and fertilizers (IFOAM-Organic International, 2014). It promotes techniques that increase biodiversity and prevent negative environmental consequences while promoting animal health and well-being (IFOAM-Organic International, 2014). The term green products can be defined as those that are favorable to the environment and are manufactured from sustainable resources. Companies make them to mitigate their environmental effect. Manufacturers are discovering inventive methods to decrease their environmental footprint as customers grow more aware of sustainability. Green products can be manufactured from recycled, reused, or repurposed materials and renewable resources (Kumar & Ghodeswar, 2015) . An unbiased authority may also certify them as ecologically beneficial. To fulfill these expectations and remain competitive in the market, manufacturers must change their manufacturing methods (Market al., 2023b). In addition, eco-friendly products are those that do not pollute the environment or deplete natural resources, can be recycled or conserved, have natural ingredients, contain organic elements, or contain under-approved chemicals (Zi, 2016). In this study, all these three terms together are considered as green products.

Finding practical solutions to climate change issues revealed information about a successful and very impressive project presented by South Korea. That is, South Korea is undertaking a program to address excessive consumption and climate change, to empower residents via economic power and sustainable spending decisions. The program promotes the global response to climate change and the implementation of the Convention, Kyoto Protocol, and Paris Agreement. Eco-money points are

transformed into money and accumulated in the credit card system, where they can be redeemed for cash or other uses (Climateaction.org., 2011).

Though there are studies have been done throughout Sri Lanka based on consumer behaviors and purchasing demand for green products (Wickremeratne, 2020) and how eco-labeling & and green packaging influence the buying behavior of green products (Hossain, 2018), impacts of organic farming in terms of climate change mitigation , finding out if consumers' ecological views influence the link between green purchase intention and green marketing mix (Karunaratna et al., 2020), we were unable to find a proper study done for seeking opportunities to promote green products towards climate change mitigation in national level. Therefore, it can be mentioned as the research gap and to fill this knowledge gap this study has been conducted in selected multinational supermarkets in the Colombo municipal council area along with a convenient sample of youth customers.

## Materials and Methods

### Research Overview

The research 'onion' can be used to discuss the research methodology overview for this study. The various choices that have been made when creating a research methodology will be better understood with the aid of this research onion.

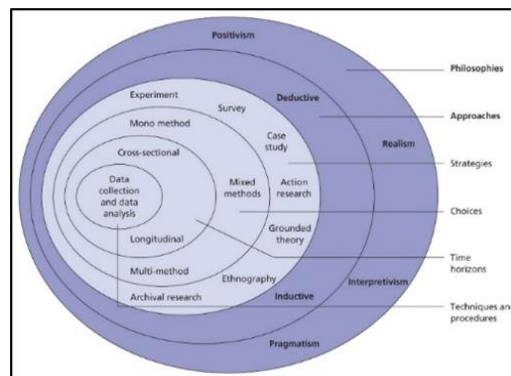


Figure 1: Research onion ( Melnikovas, A. 2018) for explaining the research methods graphically.

The outermost layer of the research methodology onion, or research philosophy, is a description of a set of assumptions and belief systems about how knowledge is created (Saunders, 2009). The interpretivism philosophy's focus area will be the subject of this study. The naturalistic method of data collection, which includes questionnaires, observations, and secondary data, is the foundation of interpretivism philosophy, which incorporates human interest into a study.

The inductive approach, which focuses on reasoning and moves from specific observations to broad generalizations, is one strategy for theory development. Promoting green products to young people at supermarkets is a research topic of interest.

The data needed for the research and the goal of the study are taken into consideration when choosing the research strategy. The research methodology that was employed for this study was ethnography. This research conducted as mixed method research.

The term "time horizon" describes the duration of the study. Since this is a short-term study and data is being collected at a particular time (the present), the cross-sectional time frame will be used in this investigation.

The innermost layer of the research onion is data gathering and analysis. This includes the research's methods and process. The following subsection sessions will explain this section.

### ***Data Collection***

Data was collected as primary and secondary methods. Observation and semi-structured questionnaires were used to collect primary data, and scholarly articles and other relevant published documents were used under the secondary data collection method.

Observations explored the possibility of promoting green products and offering various economic rewards for eco-friendly purchases. The judgmental sampling method was used here.

The semi-structured questionnaire was used to collect data to identify the perception of youth towards eco-friendly purchasing and check their payment methods as well. A convenient sampling method was used to select youths at the supermarket to get the data through the questionnaire. Age was the key element of the sample selection process. Customers under the selected age limit were included in the sample based on their consent. The sample comprised 34 participants.

The secondary data collection method was the next method used. Published papers, documents, and relevant websites were used as sources to collect secondary data to identify national policies to promote green products.

### ***Supermarket selection***

Supermarkets in the Colombo Municipal Council area, Sri Lanka which has a root connection of multinational company background are the main target group in the data collection process. According to the definition of Neil H. Jacoby, an economic policy expert, multinational companies (MNCs) can be defined as companies that own and manage businesses in two or more countries around the world. Owing to the large number of multinational supermarkets in Sri Lanka, the study was narrowed down to collect samples only in the Colombo municipal council area due to the high density of population and high density of supermarkets (Central Bank of Sri Lanka, 2022)(Fitch Ratings Report, 2017).

Further, it has been narrowed down to four main multi-national supermarket chains in Sri Lanka and data had been collected from one outlet per company located in Colombo Municipal Council Area.

### ***Data Analysis***

Data collected by observations were analyzed using the thematic analysis method. The descriptive analysis method was employed with semi-structured questionnaire data analysis. Secondary data analyzed by content analysis method.

### ***Conceptual framework***



Figure 2: Conceptual framework

### ***Limitations***

It is important to acknowledge that this study has limitations. Due to the obligation to respect corporate discretion while collecting data, it was not possible to mention in detail the names of the supermarkets selected for the study and their special policies. Because of this, it may be caused to block space for generalizing the findings all over the country. To gain a more comprehensive idea of green product promotion strategies around the country future research can be carried out.

### **Results and Discussion**

This section reveals the national policies regarding green products and their promotion behaviors, various practices that can be observed in selected multinational supermarkets in the Colombo municipal council area, youth perception regarding green product consumption, and their common payment methods based on field data collected for this study.

#### ***National Policies***

Sri Lanka has many national policies under various sectors regarding green products and the value of consumption of those products. Those policies will affect the sustainable promotion of the above product categories. Those policies can be brief as follows.

Sri Lanka has created National Organic Standards that take into account our environment, cropping patents, traditional agricultural expertise, and modern farming techniques. With professional advice



from the public and private parties involved in organic farming techniques, the National Organic Control Unit (NOCU) assisted the Sri Lanka Standards Institution (SLSI) in developing and publishing the Sri Lanka Organic Standard SLS 1324:2018. Following Sri Lanka Organic Standard SLS 1324, the National Organic Certification Mark (NOCM) was awarded. The objective of the NOCM is to increase consumer knowledge and promote authentic organic goods in local marketplaces. NOCU monitors the market and attempts to stop fake goods. To ensure the legitimacy of their products, farmers and processors licensed under SLS 1324:2018 can show the NOCM on their packaging (Sri Lanka Export Development Board, 2022).

The National Climate Change Policy of Sri Lanka seeks to direct relevant parties toward effective mitigation of the negative effects of climate change. Under the headings of knowledge, management, sustainable consumption and production, adaptation, mitigation, and vulnerability, it has a vision, mission, objective, and guiding principles in addition to policy declarations (The Climate Change Secretariat of Sri Lanka, 2014).

In addition, the Sri Lankan government has decided to encourage organic farming as a means of advancing the nation's transition to a sustainable and eco-friendly agricultural system. In anticipation of this decision, the government on May 6, 2021, published extraordinary gazette number 2226/48, which restricts imports of chemical pesticides and fertilizers with immediate effect (Government Notifications, 2021).

According to the above, there is a policy background at national level to promote green products in Sri Lanka.

### ***Identify the practices to promote green products at supermarkets***

All these supermarkets had their ways of categorizing green products especially fresh vegetables and fresh fruits. Most of the outlets have placed their organic products stalls near to entrance under a special green theme. While some of them allowed customers to select vegetables and fruits according to their choice and they did not pack or wrap them separately, some are nicely wrapped according to weight and customers can easily purchase those packs. Both methods were convenient to customers. Moreover, there were eco-friendly takeaway food packaging utensils such as wooden plates, cups, forks, spoons, etc. Another specialty that was observed was reusable bags. They all introduced reusable, eco-friendly bags to customers to carry their shopping items from supermarkets to their homes under their names. Customers receive discounts when they bring those bags at their next shopping circles. When it comes to the internal interior, there were green walls comprised of some plants. In addition, there were various economic rewards such as discounts and offers for selected green products for the loyalty cardholders.

**Identify the payment methods and promotion opportunities for green products**

Customer behaviors

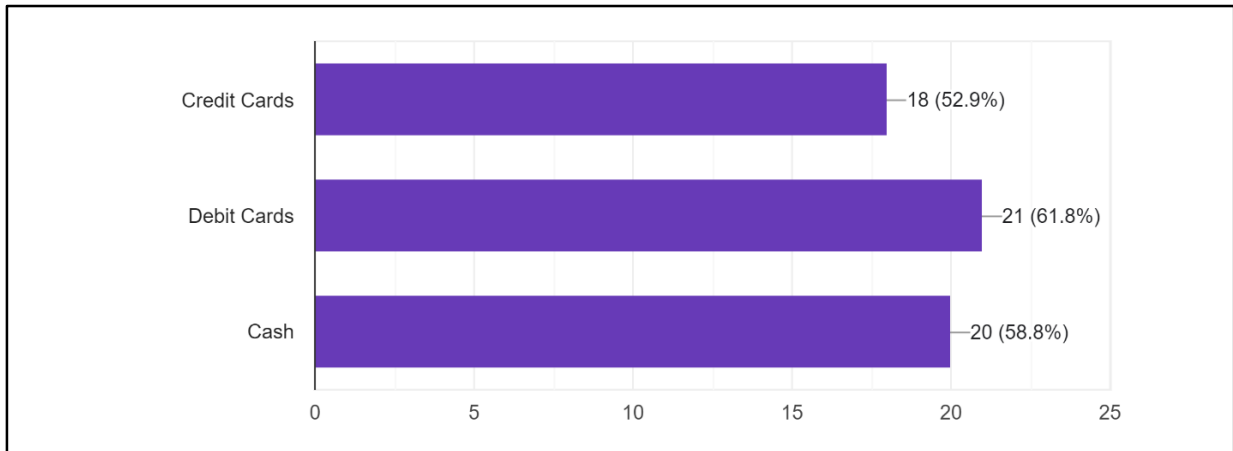


Figure 3: Payment Methods - Generated by Semi-Structured Questionnaire

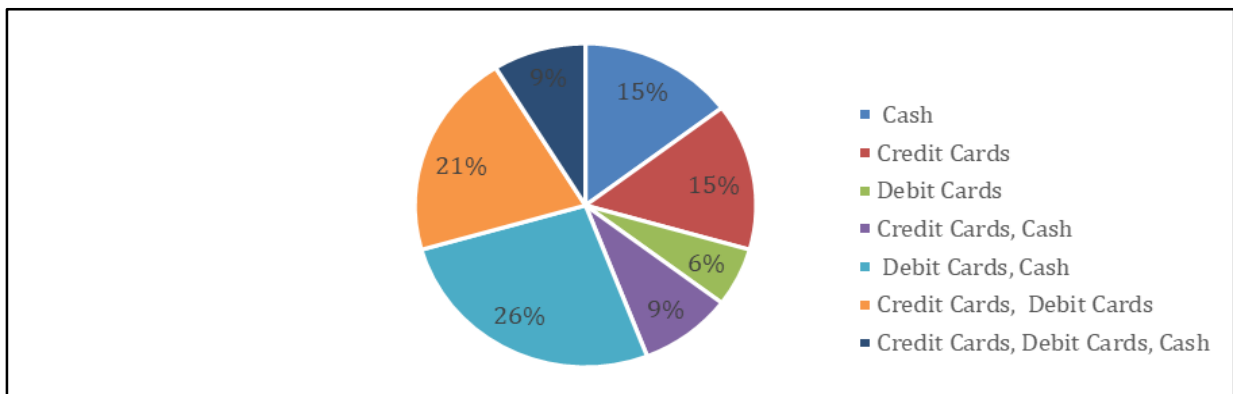


Figure 4: Payment Methods Breakdown According to Each Indicator

**Interpretation**

According to the analysis of payment methods used by the sample of supermarkets, only 9% do not use any electronic card system either credit card or debit card for their payments. They were only familiar with cash payments. However, the remaining 91% used at least one electronic card method when purchasing goods. Among them 15% use credit cards only and 6% use debit cards only. 26% used both credit cards and debit cards for their payments. This is interpreted as young people under 20-35 years are more interested in electronic card payments than cash payments.

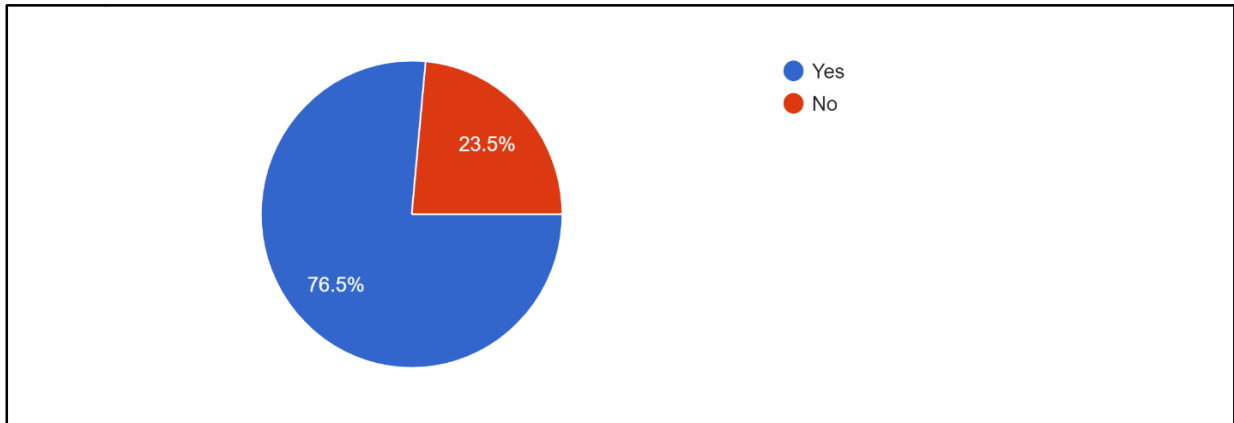


Figure 5: Preference of Green Products Among the Sample

*Interpretation*

According to the results generated by the questionnaire while 23.5% did not consider green products when they purchased goods, 76.5% considered them.

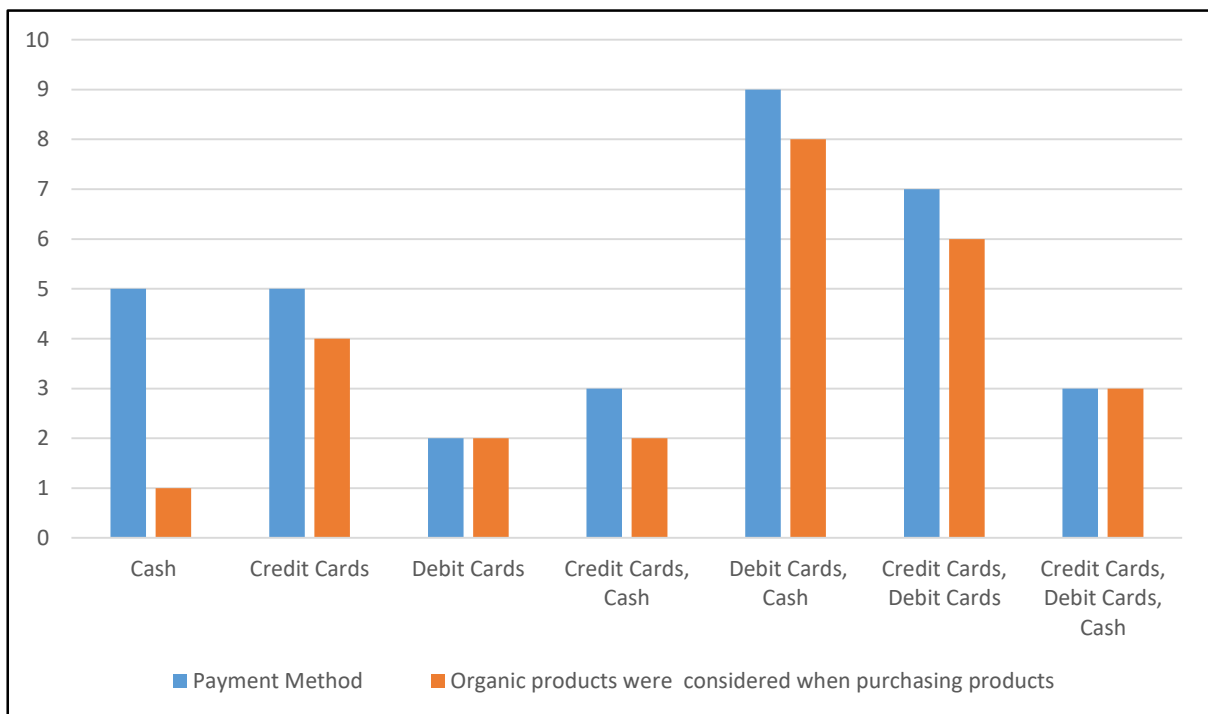


Figure 6: Payment Method Vs Consideration of Green Products

*Comparison*

Comparing these two outputs (Diagram 2 and Diagram 3) all the debit card users and customers who used all three payment methods such as cash, credit cards, and debit cards were considered green

products when they purchased. Even though, only 20% of the cash-paying customers considered green products while purchasing the products, 80% of consumers who used only credit cards as their payment method paid attention to buying green products in their daily lives. Furthermore, according to the results, not only 67% of consumers who used both cash and credit cards and 86% of consumers who used both credit cards and debit cards as payment methods, but also 89% of debit card and cash users were considered green products when they shop products. In the big picture, among consumers who have used at least one electronic card option as their payment method, only 23.5% have not considered green products in their purchases, while the remaining 76.5% have considered them.

### ***Identify the perception of youth toward green purchasing***

Analyzing the data collected from the semi-structured questionnaire regarding the perception of the young consumers of the selected supermarkets in the Colombo Municipal Council area about green products, people are interested in consuming green products to avoid non-communicable diseases and live healthily. Besides being healthy, a fewer proportion from the entire sample considered environmental health and pollution prevention. However, it must be emphasized that people who struggle with rising commodity prices and can buy green products at affordable prices will increase their purchasing behavior. Consumers have expectations of affordable price scales

Moreover, according to the opinions on green product promotions, the study sample had a positive view. They emphasized that would be one of the major requirements in present society due to the dramatic increase in non-communicable diseases and environmental pollution. In addition, semi-structured questionnaire results show that awareness of green product consumption also should be promoted simultaneously. It is good to start awareness campaigns at the school level and it will be beneficial for shaping the future generation's attitudes regarding the environment and health. The negative point observed from the results is the unaffordable price of green products. People worried about the prices of products even though they have a considerable salary compared to each other in the sample.

### **Conclusion**

The impact of plastic pollution on climate change is a complex issue. Plastic pollution doesn't directly cause climate change but does contribute indirectly through its lifecycle. Reducing plastic use, promoting recycling, and transitioning to more sustainable materials are essential steps to mitigate these impacts and address both plastic pollution and climate change. By recognizing the link between plastic pollution and climate change, policymakers, industries, and individuals can work together to develop effective strategies and take concrete steps towards a more sustainable future. It is essential to address the problem of plastic pollution holistically, considering its environmental, social, and economic impacts, while striving to mitigate its contribution to climate change.

### **Declaration of Interest Statement**

The authors declare that they have no conflict of interests

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