TALLINN UNIVERSITY OF TECHNOLOGY
School of Business and Governance
Department of Business Administration

Farmind Afrin

# CONSUMER DECISION-MAKING PROCESS OF PLANT-BASED MILK ALTERNATIVE IN WEST BENGAL

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Supervisor: René Arvola, PhD

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I hereby declare that I have compiled the thesis independently and all works, important standpoints and data by other authors have been properly referenced and the same paper has not been previously presented for grading.
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Farmind Afrin ……

(signature, date)

Student code: 194535TVTM

Student e-mail address: fafrin@ttu.ee

Supervisor: René Arvola, PhD:

The paper conforms to requirements in force

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(signature, date)

Chairman of the Defence Committee:

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# ABSTRACT

In recent years, plant-based substitutes for dairy products have gained widespread acceptance around the globe. And the number of individuals who consume it is increasing on a day-to-day basis. People are increasingly turning away from traditional milk in favor of plant-based substitutes, which is a big concern. The issue addressed in this thesis is a lack of understanding of consumer purchasing behavior when it comes to plant-based dairy replacements, as well as insufficient research into market trends and future growth prospects for plant-based alternatives to milk enterprises in West Bengal. Using examples from West Bengal's market, the author shows how buyers make judgments regarding plant-based alternatives to milk. This helps the author fully understand the market trend toward plant-based alternatives. In addition, the author has gone into detail on current consumer decision-making models such as Anderson, Nicosia, Gilbert, and the stimulus-response model, to name a few. The author developed a five-step decision-making model for this thesis that considers the following factors: motives for selecting plant-based milk substitutes, understanding of these products, market availability, buy choice, and post-purchase experience.

Using a quantitative research technique, the author of this thesis collected data from 267 respondents for this study, and then developed 29 questions to measure consumer behavior and its effect on decision-making. To examine the data, simple percentage analysis, descriptive statistics, and correlation analysis were all employed, among other techniques. The survey respondents' suggestions, when combined with the results, would aid in a better understanding of the market trend and consumer decision-making process in West Bengal, as the author is certain the results would improve understanding on how consumers purchase plant-based dairy.



*Keywords: Consumer decision-making process, Plant-based alternatives to dairy products, Consumer behavior.*

# INTRODUCTION

Every aspect of life, from food to technology, has seen significant transformations in the present world. It is possible to understand this quick change through an individual's food choices. As a result of the availability of alternative food items, the food industry is experiencing a transformation. The market is flooded with a range of plant-based milk replacements that are suitable for consumption. Plant-based milk alternatives are becoming increasingly popular across the world. Concurring to market forecasters Stratfor, they have forecasted in 2020 the alternative milk industry is anticipated to be esteemed US $ 20.50 billion at a compound rate of 13 percent (Grand view research, 2021).

Products are made mostly from plant-based components such as soy, pea, and almond. To name a few advantages, these products are gluten-free, sugar-free, lactose-free, GMO-free, and cholesterol-free, to name a few characteristics. Customers who choose plant-based and other dairy substitutes are becoming more numerous, and almond milk is becoming increasingly popular among the general population due to its low-calorie count, high vitamin D content, and capacity to help strengthen bones are all driving the market. Changes in consumer food habits and diet trends are causing the business to develop momentum and see a surge in demand. The beginning of a food revolution has occurred. In this paper, the author attempts to determine why the food industry is migrating away from dairy products and toward plant-based alternatives by examining available statistics and the author's research.

**Research problem. -** As stated in the author's paper, it is an emerging subject because plant-based remedies were rather restricted 20 years ago (Wansink et al. 2005). Today, a growing number of businesses, including traditional dairy producers, are looking for ways to reduce their carbon footprint and are looking at plant-based alternatives to conventional dairy products (Lightowler, Davies 1998). Many studies have been conducted in recent years, particularly in the United States, even though plant-based substitutes are a relatively new concept. This is due to the potential health benefits of plant-based replacements, as well as the world's growing population and food demands;

traditional livestock production also has negative environmental consequences. It is the lack of understanding of plant-based dairy alternatives purchasing behavior, as well as a lack of research into market trends and possible development possibilities for the plant-based dairy replacements company in West Bengal that is the primary flaw in this argument. Every individual takes on the role of a consumer and makes several transactions during the day. Understanding what motivates people to make purchases is critical, whether it is a problem or a need, a well-planned professional marketing effort, or the influence of friends and family. Additionally, knowing the decision-making process of plant-based milk substitutes may help marketers target consumers more effectively, enhance a company's products and services, as well as get a better knowledge of how customers perceive products in comparison to rivals' products. Creating value and customer satisfaction, developing a competitive edge, and increasing the value of the company are all goals that are achieved because of this process.

**The research objective** is to identify the decision-making process of purchasing plant-based alternative milk in West Bengal and to better comprehend why and how consumers are shifting away from traditional milk and toward plant-based milk substitutes, current market trends, and future growth opportunities for plant-based dairy alternatives in West Bengal. This will allow market researchers and entrepreneurs to better understand client behavior and the state of the industry as a result.

**Research question**. - The following research question has been established by the thesis objective: How do consumers go through their decision-making process while eating plant-based alternatives to milk?

This chapter covers a variety of topics, including the theoretical background of plant-based alternative milk, consumer behavior toward plant-based alternatives to milk, the decision-making process, global and West Bengal market research on plant-based alternatives to milk, as well as a systematic portion of the investigation. The second chapter discusses methodology, research design, and data collection, which is accomplished using an online survey. Detailed findings and comments from this study were presented in Chapter 3. Finally, the study came to some conclusions concerning the research it had conducted.

# 1. OVERVIEW AND RELEVANT THEORIES OF PLANT-BASED ALTERNATIVES TO MILK

This chapter discusses the theoretical foundations of plant-based alternatives to milk, the general decision-making process of a customer regarding any product, and various existing consumer decision-making models, a review of consumer behavior based on consumer perceptions of plant-based milk alternatives, their decision-making process, and their willingness to purchase these products, as well as the factors that contribute to the choice of plant-based alternatives to milk.

## 1.1. Consumer decision-making process

In 1910, John Deway established the five-stage decision process, which has been largely acknowledged by researchers. It is defined as the process by which a customer identifies a problem, which initiates an information search with different possibilities and assessments, ultimately leading to a choice and purchase (Bruner, Pomazal 1988). Consumer purchasing decisions are the processes that result in the purchase of products. These choices are impacted by a person's necessicity or wants, or spontaneous buy by merchant’s endeavors, which reularly consolidate computerized advertising, electronic word of mouth, shopping online, and computerized stage persuasion. In terms of purchasing behavior, the decision-making process consists of procedures that appear prior to, during, and after the real purchase decision. The decision-making process is divided into five distinct phases, according to the research. (Blackwell et al. 2006; Engel et al. 1968): in the beginning, the customer perceives a necessity while his or her existing condition does not match the preferred one, that is prompted through particular stimulation (Bruner, Pomazal 1988). Following such a step of acceptance, customers undertake a search both internally and externally, resulting in the elicitation of a selection of suitable product options (Bunn, 1993; Howard, Sheth 1969). Consumers are defined as individuals or businesses that purchase products or services. Consumers are individuals or other economic entities that use but do not resale a product or service. Consumers are the ultimate recipients of products and services across the distribution chain, and they are not always purchasers.

Keller (2007) defines consumer buyer behavior as "a study of how individuals, entities, and institutions possess and distribute goods and services, outlooks, and perspectives to achieve customer satisfaction." The Purchasing behavior of consumers, according to Blackwell et al. (2006), is a sophisticated, dynamic issue that cannot be readily characterized. As a result, scholars have described consumer purchasing behavior in a variety of ways.

On the contrary, consumer purchasing behavior "relates to consumers buying intentions, which includes both individuals and groups who buy goods and services for private use" (Kumar, 2010). According to marketers, particular areas of consumer behavior that need to be examined include consumer buying motivations, specific variables impacting consumer purchase patterns, and the study of changing social issues. Consumer buying behavior, according to Solomon (2009), is the process by which individuals and entities choose, decide to buy, are using, and reject commodities and essential services that meet their demands and preferances. Schiffman and Kanuk (2010) describe consumer purchasing behavior as "the customer's about the items and services they pick and acquire to meet their wants and preferences."

Consumer purchase decisions are influenced by unsatisfied wants or aspirations. Individuals who sense disparities between ideal and real situations on a physical or socio-psychological level, prompting them to seek things or services that would aid them in obtaining the ideal. We cannot address all of our requirements simultaneously due to time and money restrictions. The extent of the gap between our desired and actual states significantly influences the strength of a given demand. According to Blackwell et al. (2006), need recognition is "the viewpoint of a contrast in both expected outcome as well as a current circumstance which is appropriate to awaken and initiate the procedure of decision-making." Recognize a break between the consumer's current condition and the scenario in which the consumer desires to be. When a difference reaches or surpasses a specific level, a need is identified, albeit this does not necessarily need urgent action.


Figure 1. Consumer decision-making process overview

Source: (Bruner, Pomazal 1988).

The process of consumer decision-making is summarized in Figure 1, which consists of five phases: identifying the issue, gathering information, evaluating alternatives, actual purchase, and after-purchase decision assessment. When a customer has an issue or a need that he or she recognizes may be satisfied via the purchase of a product or service, the consumer looks for the information necessary to make a purchase decision. The customer begins this stage by gathering information about the product from several sources. Customers might get data from multiple channels, according to Kotler. Private channels such as relatives, mates, peers, and friends of friends, trading channels such as adverts, marketers, dealers, as well as manufacturers, technology and digital sites, branding, and exhibits, and government channels such as mass communication, consumer ranking institutions, online platforms, digital explorer, expert reviews, and exploratory channels such as inspecting and then using the product are all illustrations of these sources" (Philip Kotler, 2017).

The customer develops a new standard of evaluation. At this step, the consumer evaluates numerous brands/products and system integrations to determine which are capable of resolving the consumption problem and meeting the demands or motives that triggered the purchase process. There has never been a singular approach that all consumers, or even a single consumer, used in all purchase scenarios. Consumer evaluation options are impacted by a range of things, including their perspectives and attitudes, their experience, and their buy volume. Consumers will prioritize features that deliver the best results. According to Schiffman and Kanuk (2010), the consumer foregoes information gathering and comparison shopping in favor of making a purchasing choice. The customer here develops purchasing intentions that result in the purchase of a certain brand. When brand associates desirable qualities or attributes with buying motivations, this is referred to as purchase intents. This process is comprised of several human subprocesses, including motivation, perception, and attitude development. A purchasing choice does not always signal the

completion of the transaction. After choosing a brand, the customer must wait to make the actual purchase. Additional options include when and where to purchase, as well as the amount of money to spend. As a result, a temporal lag is virtually always present.

The last stage of the consumer decision process is postpurchase behavior, during which the customer expresses satisfaction or dissatisfaction with a purchase. The way a customer feels about a purchase affect whether or not the customer would purchase the items again or investigate other products in the brand's portfolio. Because the customer will almost certainly feel forced to convey his or her thoughts on the purchase, the client has the opportunity to influence the purchasing decisions of others. According to Philip Kotler (2017), a marketer's responsibility does not end with the sale, but rather extends to post-purchase satisfaction, activities, and product usage and disposal.

### 1.1.1. Anderson’s model of consumer decision-making

According to Stankevich (2017), behavioral decision theory has been one of the most active academic research disciplines in marketing during the last few decades. Consumers, according to behavioral choice theorists, make erroneous decisions in a variety of contexts. All of these and other studies emphasize consumer behavior and the environment in which decisions are made. Marketers must understand how these effects manifest in the real world. These and other scientists' work has called into doubt the predictions and rationality assumptions of economic theory, culminating in the establishment of the science of behavioral economics. Numerous consumer choice models, including Anderson's decision model, Nicosia's decision process model, Gilbert's decision framework, and the Stimulus-Response Model of Purchasing Behavior, will be examined in this section.

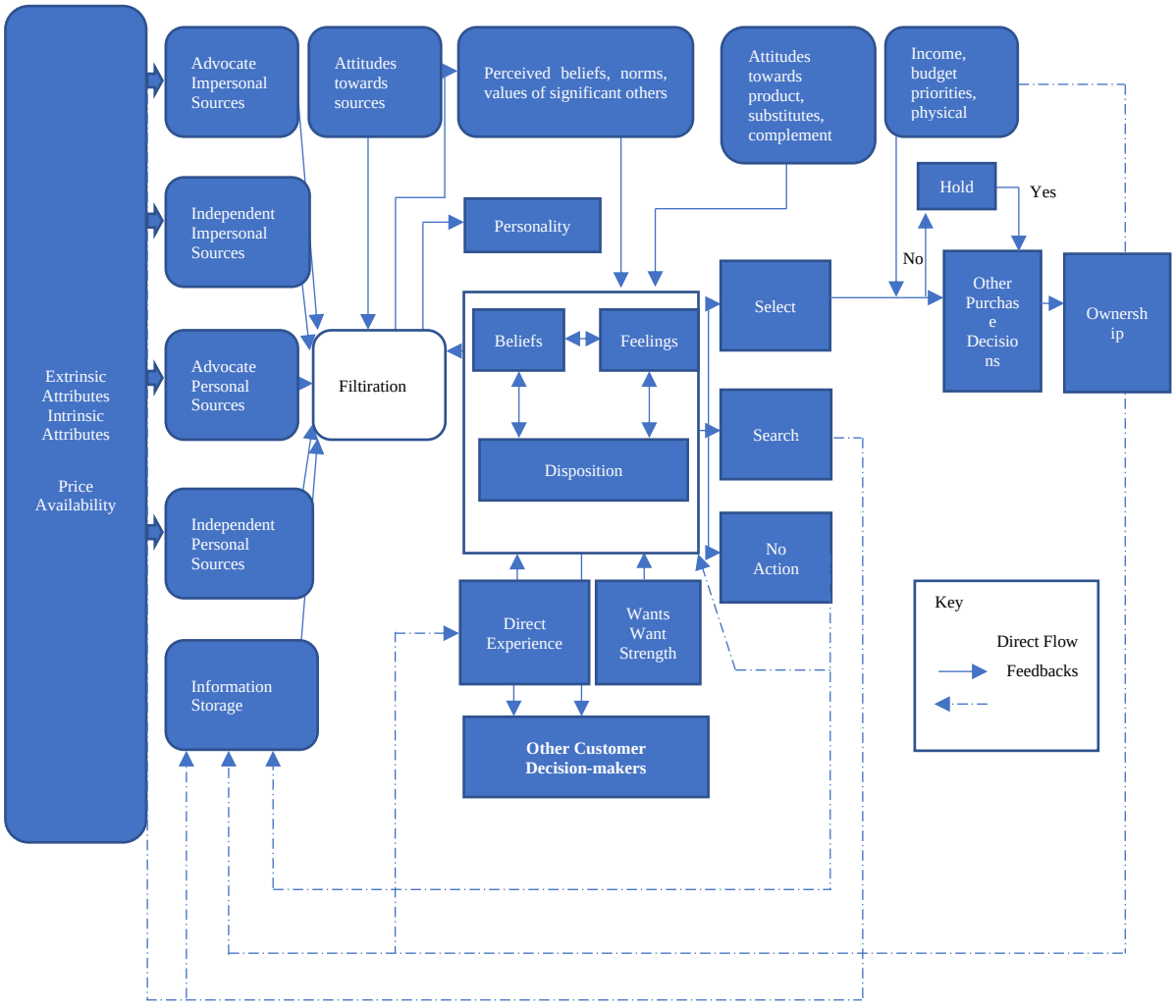


Figure 2. Anderson's model of decision-making

Anderson proposed one of the first concepts of consumer purchasing behaviour in 1965. Figure 2 depicts this principle. This model emphasises the importance of consumer information in the decision-making process. Furthermore, while the model emphasises the importance of customer attitudes and beliefs, it fails to investigate attitudes in terms of repeat buying behaviour.

### 1.1.2. Nicosia's model of consumer decision-making

Nicosia and Mayer (1976) proposed the Nicosia model, which is centered on product procurement. Figure 3 illustrates this concept. This approach is centered on the relationship between the business and its prospective clientele. Customers respond to marketing communications (advertising) through purchases, and the company interacts with them via marketing messaging (advertising). In the paradigm, the company and the customer are inextricably linked, with the firm striving to

persuade the purchaser and the buyer trying to convince the company through their preferences. The strategy emphasizes both the company's efforts to reach out to customers as well as the consumer's proclivity of behaving in a particular manner. Field 1 refers to these two characteristics.

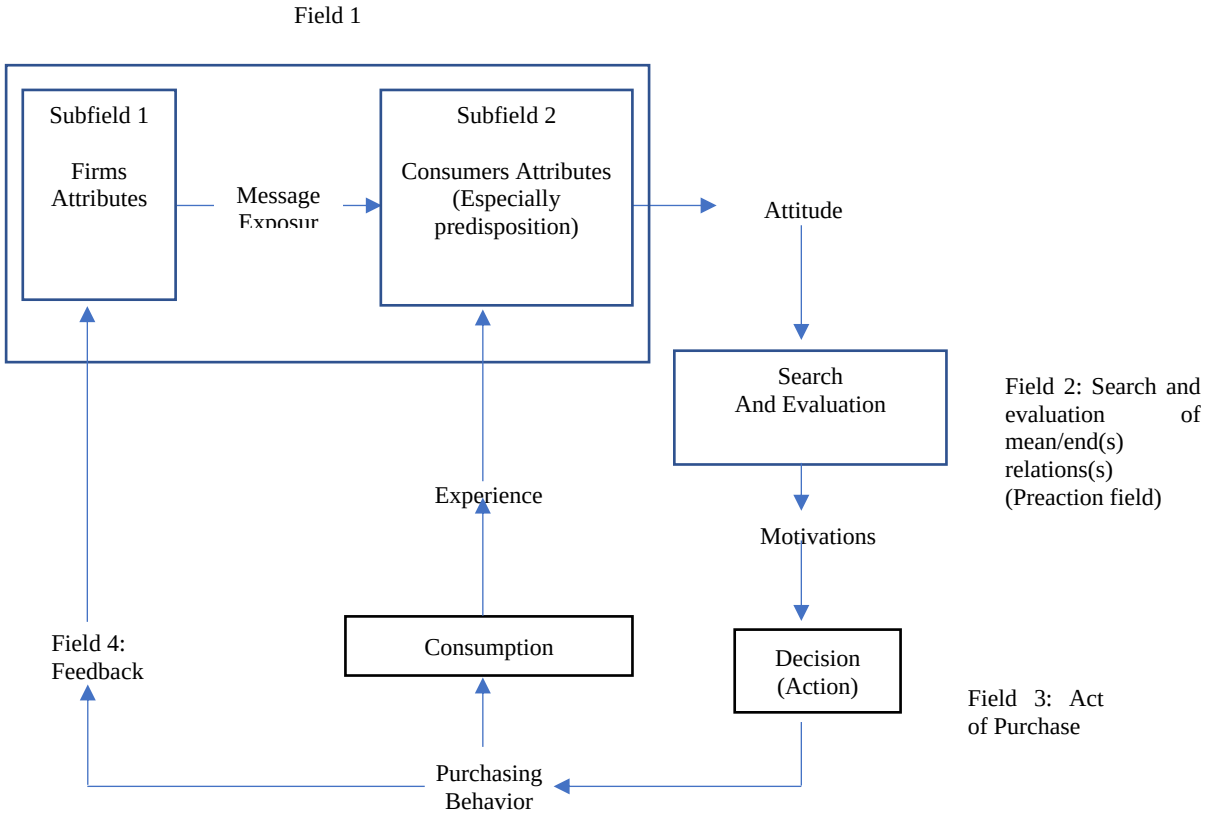


Figure 3. Nicosia's decision process model

The consumer is participating in a selection assessment procedure inspired by the views of the second level. Field 2 is referring to this level. The purchase method is denoted by Field 3, while the post-buy feedback procedure is denoted by Field 4. The Nicosia model does not adequately explain the internal factors that may influence a customer's personality. Such factors must be incorporated into the model, since they provide further insight into the personality qualities that impact decision-making.

### 1.1.3. Gilbert's consumer decision-making model

Figure 5 from Gilbert (1991) depicts a model for consumer decision-making. According to this paradigm, there are two layers of factors that affect the client. At the most fundamental level, personal elements include psychological components for example viewpoint and knowledge. The

second layer of effects contains others who formed throughout the cultural transmission, such as recommendations from friends and peers as well as social factors. The majority of tourism-specific models provide insight into consumer decision-making during the buying and after-purchase phases.

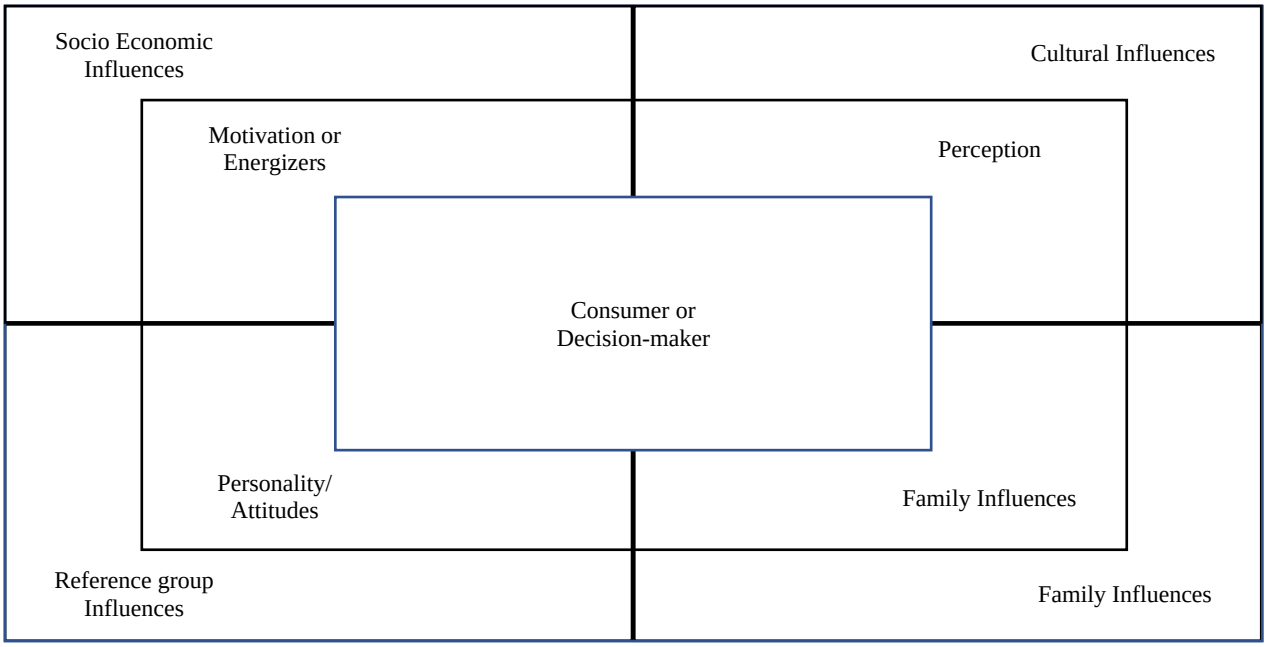


Figure 4. Gilbert's model of decision framework

### 1.1.4. Stimulus-response model of buying behavior

Kanagal (2016) developed a stimulus-response model of buyer behavior for the service business. Figure 5 depicts the model. The stimulus reaction to purchase behavior is composed of four interaction components, the most significant of which are the customer traits and decision process.

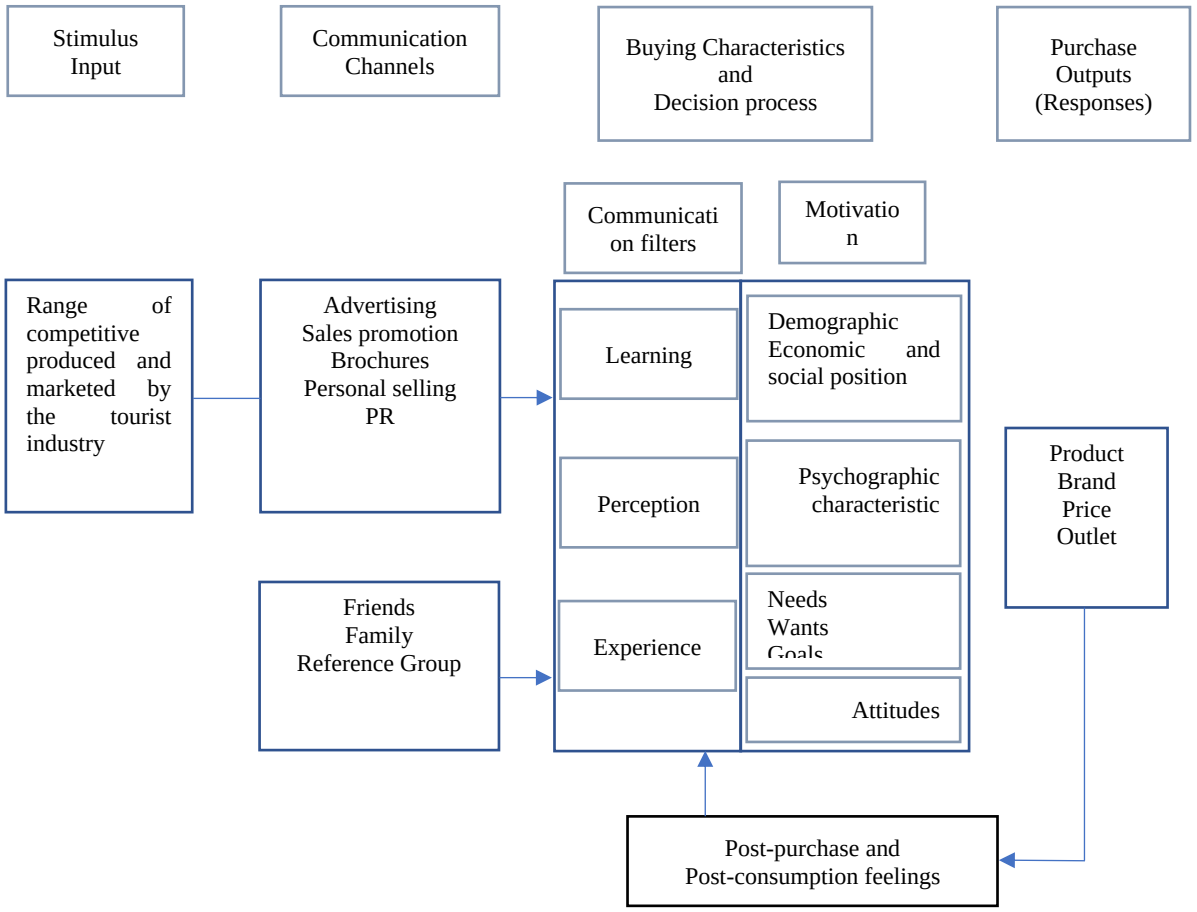


Figure 5. Stimulus-response model of purchasing behavior

### 1.1.5. Proposed decision-making model

Based on all of the preceding models, the author of this thesis proposed a model in which West Bengal consumers go through a five-stage decision-making process when purchasing plant-based alternatives to milk. Figure 6 illustrates the five-stage decision-making paradigm (proposed model). Consider the following: the first stage is to ascertain why a client needs or prefers plant-based milk replacements. Are people aware that plant-based substitutes for milk exist? Consumers must next confirm market accessibility to determine whether these things are available. Finally, they must select whether or not to obtain these items; but, what factors will impact their decision? For instance, some customers prefer labeling, branding, or packaging. The thesis's primary objective is to investigate the traits and characteristics that impact customer decision-making. Finally, get customer feedback following the transaction. Consumers make judgments about whether they are satisfied or dissatisfied with products based on their experiences. Using the

information included in the following sections of this chapter, the author sought to grasp and assess the proposed model.

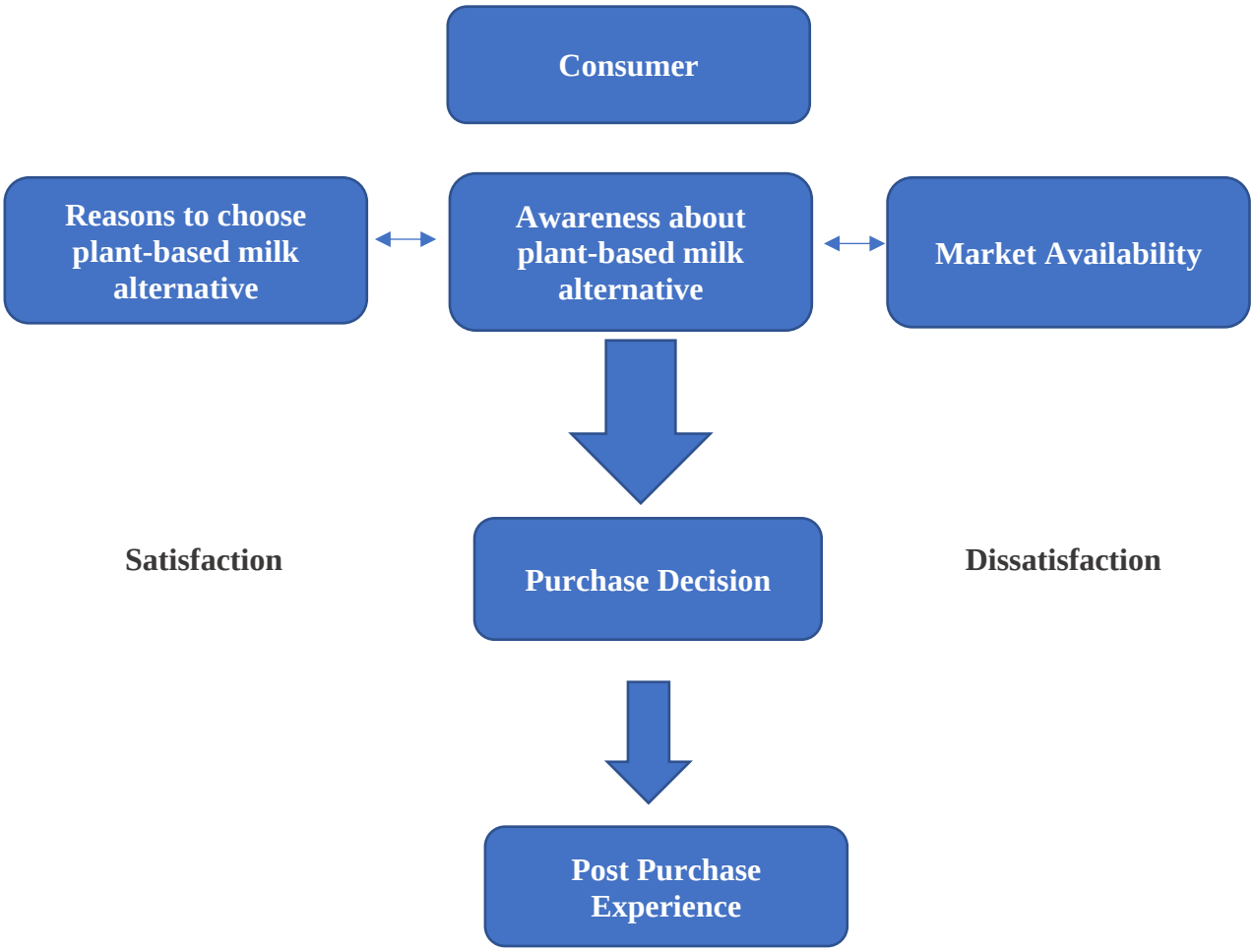


Figure 6. Five stage decision-making model (proposed model)

## 1.2. Consumer behavior review towards plant-based alternatives to milk

Global protein demand growth, poor protein intake among some people, and the health and environmental benefits of plant-based protein have fuelled the development of innovative plant-based protein products and fueled the consumer trend toward more plant-based items and diets. Although the market for plant proteins has grown over the last couple of decades, both producers and consumers have developed an interest in plant proteins over the last decade (Lonnie et al., 2018). Springmann et al. This is demonstrated by research projects that finance sustainable, alternative proteins, growing regulations, and consumer support (Euromonitor International, 2017). Plant proteins have gained the label "freedom foods" because they may be consumed

without posing the same environmental or health risks associated with animal protein consumption. Consumers have begun to shift toward more plant-based diets in recent years as a result of the rising costs of health care connected with the consumption and overconsumption of animal-sourced protein. However, environmental and sustainability issues, as well as worries about animal care, have gained popularity in recent years, particularly among the young. Another pertinent word is "Clean label" foods, which are defined as those that are free of 'chemicals' additions, have straightforward ingredient lists, and are prepared using traditional methods with little processing" (Edward, 2013). In essence, clean label products include only one ingredient and are made with "popular components" (Ingredion, 2014). Consumers believe products to be "clean" if they are expected to be clean because the category is considered "clean," if a manufacturer claim specifies that they are, or if they are judged to be clean upon inspection, even if one of the ingredients seems to be dirty (Asioli et al., 2017). As a result of this perception, consumers favor plant proteins. However, it increases the risk that processed plant-based items, such as milk and meat substitutes, would develop a poor image if the components are deemed filthy.

## 1.3. Driving factors to choose plant-based alternatives to milk

The preceding section 1.2 examines consumer behavior. Numerous researchers hold varying opinions about the use of plant-based milk replacements. A healthy diet consists of regularly consuming a high proportion of plant-based foods, limiting, or eliminating animal-based meals, and severely limiting or eliminating processed foods whether of plant or animal origin (IARC, 2014). Epidemiological research spanning more than three decades reveals that a plant-based diet is a very effective way to avoid chronic non-transmissible disorders from a health viewpoint. Indeed, a growing body of research supports the favorable effects of plant based (PB) foods and diets on cardiovascular health (Satija & Hu, 2018), type 2 diabetes risk reduction (Eguaras et al., 2017), body mass index (BMI), and blood pressure control, among other benefits. Despite their nutritional density, animal-based meals have been associated with adverse health impacts. The author briefly examines the benefits of plant-based alternatives in this section, including nutritional benefits, health consequences, hurdles to milk intake, environmental awareness, and animal cruelty.

### 1.3.1. Barrier to milk consumption

Organic food consumers have a higher percentage of health when making food choices than non-organic food consumers. As a result of these factors, many people in the organic food and reduced milk consumption segments are likely to be interested in or already use a 'plant-based alternative to milk.' (Lockie et al. 2002). Consumers are frequently discouraged from trying new protein sources due to cultural and traditional barriers, as well as an anticipated sensory experience. Some approaches to changing consumer behavior include working with consumers to raise awareness through communications, education, and designing new products to fit into relevant instances and lifestyles. Consumer acceptance of these alternative protein products will ultimately determine their global market success or failure. There are numerous perceived and real barriers to consumers transitioning to a vegan diet. The first challenge for anyone considering a new diet is likely to be disruption to the rest of the household, as different meals must be purchased and prepared. Consumers refuse a vegan diet for a variety of reasons, including a lack of interest and willingness, expected unsatisfactory taste, a higher price, and overall convenience factors such as anticipated preparation complications, a lack of appropriate cooking skills, and difficulty obtaining information about types of food suitable for replacing meat. Furthermore, when customers dine out or order takeout, they frequently find a lack of vegan options on restaurant menus (Mullee et al. 2017).

Previous research has identified a range of challenges and facilitators to dairy consumption. Ethnic origin, low socioeconomic status, obesity, and advanced age have all been identified as demographic variables associated with lower dairy intake in the study (Elwood et al., 2010). Additional factors influencing dairy consumption in children and adolescents have been documented in qualitative and quantitative studies. Males and females are affected differently by weight-related behaviors or concerns since boys want to impress girls and seem powerful, whilst ladies seem to be more anxious because dairy is a calorie-dense diet. Because parents or family situations may encourage or discourage milk consumption, the home environment and parental involvement can have a positive or negative impact on dairy intake. Having made dairy products a significant portion of children's routines and incorporating dairy into meal preparation may encourage them to eat more dairy. Lastly, gender differences in particular tastes, lactose sensitivity, and carbonated beverage consumption were discovered to be predictors of milk consumption.

### 1.3.2. Environmental awareness and aversion to animal cruelty

Livestock farming has a significant impact on the environment. Each year, the United States breeds and slaughters about nine billion animals for human consumption, placing a great burden on agricultural resources, energy sources as well as water. Globally, people are feeling the effects of global climate disaster than ever before. Livestock farming, which contributes 14.5 percent of the world's carbon pollutants, is just one of numerous factors contributing to human-induced climate change. According to the United Nations, animal husbandry "increases the stress on the planet's resources," leading to soil erosion, extinction of species, water, and air pollution, and disposal (Farm Sanctuary, 2019). Choosing plant-based dairy milk over cow milk promotes the efficient use of land and resources for human use rather than yields for animal consumption, which feeds humans. Vegan Action (2020) asserts that plant-based dairy milk does not contribute to livestock production or deforestation. Because they do not contribute to the costly energy required to grow, kill, ship, and prepare animals for food, both wreak havoc on nutritious soil preserves and reduce energy use. Additionally, it may help reduce air pollution by avoiding intensive pollution during animal raising.

Consuming more plant-based meals results in fewer animals being slaughtered, resulting in a considerable decrease in the world's suffering. Factory farm animals are subjected to systematic agony. According to Shepherd and Jackson (2013), dairy cows are intensively confined, regularly fertilized, and bred for maximum milk output with little regard for their welfare. Fearful calves must be taken from their mothers within hours or days after birth, according to the dairy industry. Additionally, a mother cow does not supply milk indefinitely. The industry repeatedly impregnates her until her body is depleted to perpetuate the cycle. She is then assassinated. In a word, the milk industry is the meat industry. The dairy business has harsh realities, and the cycle will continue if consumers consume dairy products. According to Farm Sanctuary's study, billions of farm animals suffer on factory farms, where they are imprisoned in cages that are too tiny for them to move. HSI works in partnership with governments, businesses, farmers, and institutions to effect change, put an end to intensive confinement farming, and promote humane agricultural techniques (Farm Sanctuary, 2021). As per the Food and Agricultural Organization (FAO), global adoption of sustainable diets is crucial. Sustainable diets should include high proportion of ecologically based, locally grown, and minimally processed foods, as well as a low proportion of animal products. Sustainable diets are both nutritious and sanitary (Fischer, Garnett 2016). In terms of the impact on the environment of healthy diet, it appears that a change away from existing eating practices or to an eco-friendly lifestyle is necessary. Reduced intake of meat and increased intake of plant-

based foods are examples of environmentally friendly practices (Birt et al. 2017). Farm animals are identified as a risk factor for 18 percent of total human-caused greenhouse emissions. In contrast, extensive livestock farming is thought to benefit biodiversity. Several studies have found that reducing our consumption of animal products has a significant positive impact on the environment (Garnett, 2011). According to the FAO, alternative modes of production could play an important role in the promotion and development of healthy food options. Agriculture is a method that focuses on environmental resources rather than outer inputs such as fertilizer (Organic Agriculture, 2017). It became widely regarded as an eco-friendlier method of production because it improves soil quality, resulting in greater plant and fauna diversity and lower nitrate leaching. Nonetheless, there are differences in agro-ecological practices (Scialabba, Hattam 2002). Lower crop yields have frequently called into question the sustainable development of natural foods practices and their ability to support the world's growing population. Organic agriculture reduces energy consumption more than traditional farming, but the benefits in terms of greenhouse gas emissions reduction are difficult to quantify (Lee et al. 2015). The functional unit also moderates firm conclusions about conventional and organic systems. According to Aleksandrowicz et al. (2016), switching from a western cultural meal to a substitute diet plan typically benefits both personal ecosystems. The intensity of the meat food restriction should be proportional to the reduction in carbon dioxide emission.

### 1.3.3. Family's and friends' recommendation

Significantly, a person's purchasing selections are impacted by his or her relationships with family, friends, relatives, and acquaintances. Whether it is fashion, food, or electronics, family and friends will always affect our decisions. Families exert a significant effect on purchases in a variety of ways. Initially, parents exert a significant influence since they assist their children in developing political and religious ideas, lifestyle choices, and shopping preferences. Most people are who they are because of their parents (Clay et al., 2020). On the other hand, a consumer's spouse and children may exert a stronger influence over their purchase decisions. The number and ages of children, as well as the interaction between spouses, all have a significant impact on purchasing decisions. These hereditary variables have a higher influence on how customers perceive products than most other social impacts on expenditure. Family members share a lot of resources, including food, shelter, entertainment, and a variety of other goods and services.

Additionally, many things and services that we presume are consumed independently are regularly affected by family members. As a result, the families in which individuals grew up influenced their spending and saving behaviors, as well as the brands and items they purchased. Friends and acquaintances influence a person's purchasing decisions, and individuals appreciate their friends' recommendations on anything from vehicles to holidays to life-changing expenditures such as acquiring a new house. Businesses typically promote to and advertise to their family and colleagues. This is especially true for topics that require input from the entire family. Additionally, other factors, especially preferences, vary from family to family. In a home with a high level of homogeneity and communication, purchasing decisions are made with the preferences of other family members in mind. Group preferences have less influence on purchasing decisions in households with fewer emotional ties between family members.

In recent years, the family structure has shifted dramatically. As a result of the decline in the number of traditional big families, marketers' targeting tactics have evolved. Family and friends continue to affect our purchasing selections throughout our lives. The significance of family and friends cannot be overstated.

# 2. METHODOLOGY AND RESEARCH DESIGN

This chapter discusses the market for plant-based alternatives to milk and presents a comprehensive taxonomy of plant-based alternatives to milk. This chapter will discuss and analyze the procedures and instruments used to attain the aim and disclose what was done. By employing a genuine and transparent approach, the researchers can establish the validity and trustworthiness of the thesis. This chapter will discuss the research strategy, the study design, the population, the sampling techniques, and the sample size, in addition to the research approach used. Defines the procedures for data collection and the tools for data analysis. Additionally, the author discusses the difficulties encountered while conducting this research.

## 2.1. General classification of plant-based alternatives to milk

Plant-based milk substitutes seem to be liquids derived from the deformation of compounds collected in water which includes different grains, soybeans, pseudo-cereals, nuts as well as legumes and homogenization, resulting in some kind of a particle size distribution in the 5–20 m range and consistency and appearance similar to cow's milk. Despite the lack of a specific description or classification for these plant-based milk substitutes in the publications, a basic categorization into five types of plant-based or vegetable milk substitutes is attempted, as shown in figure 7:

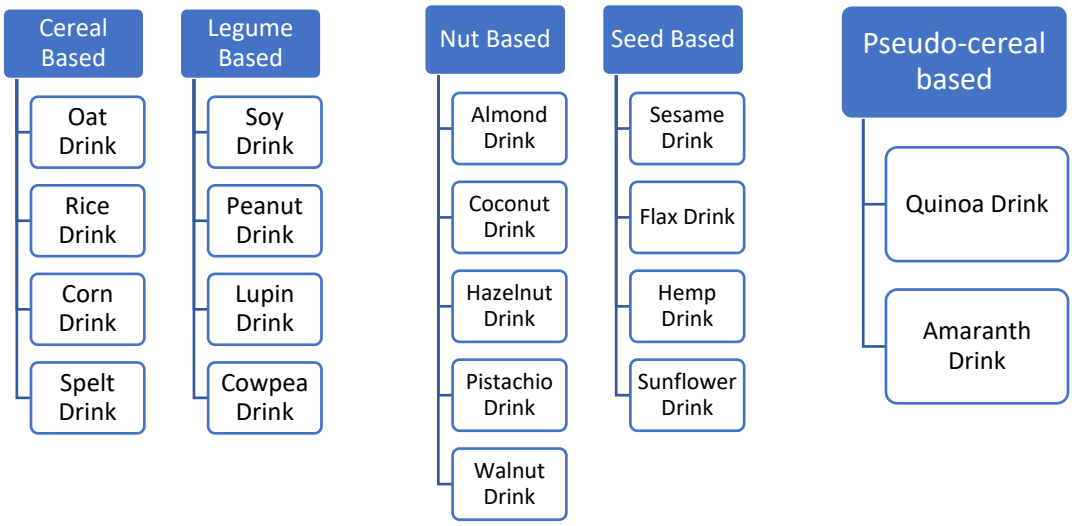


Figure 7. Classification of plant-based milk alternatives

Source: Afrin (2022), author's drawings

To begin, let us define vegans, vegetarians, and flexitarians. Veganism is a philosophy and way of life that advocates for the advancement and the use of meat-free selections that affect people, wildlife, and the atmosphere."

A principle is a lifestyle that aims to eliminate all forms of animal exploitation and cruelty as far as possible and practicable for food, clothing, and other purposes, and as a result, it encourages the formulation and deployment of meat-free choices for the welfare of humanity, wildlife, and the surroundings are called **Veganism**."

Someone who avoids all animal-based food is known as a **vegan**. Meal includes baked goods made with eggs and dairy, as well as dairy-derived products such as yogurt and cheese. Vegan alcoholic beverages will appeal to vegans who follow a strictly vegan diet (Appleby et al., 1999).

**A vegetarian** diet foregoes all animal products, or more precisely, all meat. A vegetarian diet consists entirely of vegetables, fruits, grains, and nuts, except for eggs and dairy products. Vegetarian diets have many types. Semi-vegetarians often abstain from meat, poultry, and fish. Pasco-vegetarians eat fish rather than meat or poultry. Lacto-Ovo vegetarians consume milk, cheese, yogurt, and other dairy products, as well as eggs, but abstain from eating meat, fish, and poultry (Appleby et al., 1999; Hoek et al., 2004).

**Flexitarians** consume everything but animal products for a variety of reasons, including dietary, environmental, and ethical concerns (Freeland-Graves et al., 1982). "Flexitarianism" is a neoteric notion that has recently acquired traction in the scientific and political communities.

In Figure 7, a flow chart displays the classification of plant-based alternatives to milk. The author discusses many popular milk alternatives, including soy, almond, coconut, sunflower, and corn drinks.

**Soy drink:** The first plant-based replacement, soy drink is a non-dairy beverage derived from soybeans that are commonly used in place of cow milk. It is made from soaked and ground soybeans, and many businesses add vitamins and minerals to their soy beverage. Soy beverages are an excellent choice for individuals who are allergic to dairy or nuts or who have lactose intolerance (Mridul, 2020).

**Oat drink:** Steel-cut oats or whole groats are soaked in water, mixed, and then filtered through cheesecloth or a special nut drink bag to make an oat drink. According to Krishi Vidyapeeth et al. (2020), oat drink contains 35% of the recommended dietary allowances (RDA) for calcium and 25% of the RDA for vitamin D. It provides less protein than cow's milk and soy beverages, but more than almond, cashew, coconut, and rice-based beverages. Homemade oat drinks have a lesser nutritional value than store-bought varieties, which are typically fortified with vitamins and minerals. While oat drink is healthy for babies and children, it is not a suitable alternative for breast milk or cow's milk due to their nutritional deficiencies.

**Almond drink:** Almond drink is a creamy, nutty plant-based milk substitute made from almonds. It has no saturated fat, no cholesterol, and no lactose (Kundu et al., 2018). Lactose intolerant individuals and others who avoid dairy products, such as vegans, eat large amounts of almond drinks. Commercial almond beverages are available in a range of tastes, including sweetened, unsweetened, vanilla, and chocolate, and are often vitamin enhanced.

**Coconut drink:** Coconut drink is created from the mature brown coconuts' white flesh. Subtypes of coconut drinks are categorized according to their fat content. Coconut water has several of health benefits. It benefits the heart, aids in weight loss, and speeds up your metabolism. It is high in saturated fat (Rincon et al., 2020). It, like other plant-based choices, is supplemented with important vitamins and minerals. It is available in a variety of packaging options, including cans, bottles, and cartons. Numerous canned goods contain bisphenol A (BPA), a chemical that can seep

into food when can linings are broken down. In both animal and human research, BPA has been associated with reproductive issues and cancer.

**Sunflower drink:** Sunflower drink is made from sunflower seeds. To create milk, the seeds are soaked in water, blended, and then filtered. It contains no nuts and has no gelatinous textures. It is high in vitamin E, magnesium, and selenium. It enhances the immune system and overall energy levels (Bonos et al., 2011).

**Corn drink:** Corn drink is prepared by scraping the bare cob with the back of a knife to obtain the milk. By nature, it has a sweet and starchy flavor. Vitamins A, B1, B2, B6, choline which aids in the prevention of dementia, and beta carotene which aids in the prevention of sunburn and cancer are all included (Supavititpatana et al., 2010).

Consider the significance of plant-based milk substitutes in a broader context. As an illustration, consider almonds. Almonds include necessary amino acids, vital fatty acids, fiber, phytoestrogens, phytosterols, and phenolic substances. In general, the process incorporates both established and emerging manufacturing technology. Both have a beneficial and detrimental influence on one's health. Phenolic compounds, phytoestrogens, and fatty acids all have beneficial effects on the body, but protein content, bioavailability, and oral health all have detrimental effects on the body. Due to novel production technology, the almond drink has a beneficial effect on cardiovascular diseases, Alzheimer's disease, neurodegenerative disorders, cholesterol reduction, dermal changes, and various types of cancer. However, the almond drink has a beneficial effect on cardiovascular diseases, Alzheimer's disease, neurodegenerative disorders, cholesterol reduction, dermal changes, and various types of cancer in general (Aydar et al. 2020).

## 2.2. Overview of plant-based alternatives to the milk market

There is a constant growth in plant-based alternatives to milk on the global market, and demand for plant-based alternatives to milk is one of the most frequent food trends in the dairy industry (Euromonitor International 2009). The market for plant-based alternatives to milk was valued at over $17 billion in 2018, and it is predicted to increase at an annual rate of 11.5 percent on average through 2023 (Markets and Markets, 2019). Plant-based dairy alternatives are not a new product category; they have long been ingrained in many food cultures, such as soy milk in China and horchata (tiger nut milk) in Spain (Makinen et al. 2016). According to research, increased

adherence to a plant-based diet is often driven by health, sustainability, and ethical considerations (Graca et al. 2019).

Producers want to capitalize on this trend as millennials and Generation Z seeks sustainable, healthful plant-based alternatives to classic staples such as milk. The need for plant-based protein sources has increased significantly, resulting in a substantial preference for plant-based alternatives to milk. Veganism is gaining popularity, particularly among millennials, who are increasingly making healthier choices. This has created an opportunity for plant-based alternatives to milk to thrive on the market.

### 2.2.1. The global market

Between 2020 and 2024 the market for plant-based milk substitutes is estimated to exceed USD 21.52 billion, steadily increasing at a 10.18 percent average annual rate. The market is projected to be driven by factors such as the development of the beverage industry, an increase in the obese population, an increase in the diabetic population, rapid urbanization, and an increase in disposable income. Concerns about drink preservatives as well as a general lack of insight into plant-based drinks, on the other hand, would hamper the market's expansion. Significant trends include rising e-commerce retail sales, a growing youthful generation, as well as increased popularity of fully prepared tea and coffee by adding soy and almond drink. The Market for plant-based alternatives to milk is extremely concentrated. Much lactose-intolerant clientele chooses plant-based milk substitutes. Additionally, almond and soy beverages have numerous health benefits, which is why these drinks are gaining popularity among individuals, especially health-conscious people. Worldwide, plant-based alternatives to milk are gaining popularity and admiration, which is increasing market demand. According to Figure 8, the international dairy alternatives market was worth 20.50 billion in 2020 and is expected to grow at a 12.5 percent annual rate between 2021 and 2028 (Grand view research, 2021).

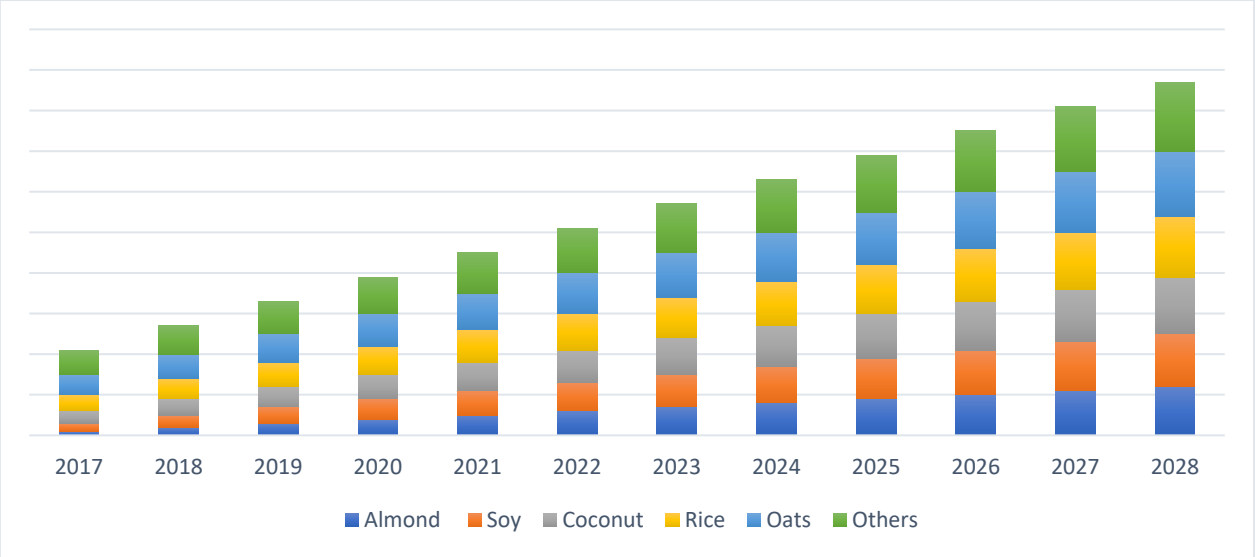


Figure 8. Growth of U.S. Alternative market size (2017-2028)

Source: (Grand view research, 2021)

According to Data Bridge Market Research (2021), Asia Pacific is the fastest growing regional market for milk substitutes due to rising production and consumption. Consumption of a wide array of plant-based alternatives to milk is increasing, owing to China's status as Asia Pacific's largest subregional market. Additionally, a varied selection of flavors is available, assisting the Asia Pacific industry in swiftly increasing its market volume over time. Furthermore, due to the increasing prevalence of lactose intolerance and the vegan population, North America has historically accounted for a sizable portion of the global plant-based milk market. Between 2020 and 2030, the global business for plant-based alternatives to milk seems to be expanded at a breakneck pace, with the Asia Pacific set to lead the way. Consumer preference for plant-based alternatives to dairy products is rising, signalling rapid growth for the worldwide plant-based milk business. The research and development department of Blue Diamond Growers, Danone group, The Hain Celestial Group Inc, and other related companies are focusing on how their company will develop and improved on their existing plant-based products and even strengthen their competitive level in the global market. Two further strategies used by major rivals to get a competitive edge in the international business for plant-based alternatives to milk are upgrading production and improving performance.

### 2.2.2. The West Bengal markets

West Bengal is one of India's states in the east; its land border is with Bangladesh, while it is separated from Nepal in the west. Bhutan is to the northeast, while Sikkim is to the north. It is bounded by the states of Bihar and Jharkhand on the west, Orissa on the south, and the Bay of

Bengal on the west. The cancer tropic runs across the state. The state stretches from the snow-capped Himalayas in the north to the Bay of Bengal in the south. The Ganges and its numerous tributaries have sculpted the diverse geography of the state. West Bengal is endowed with natural resources, including six unique agro-climatic zones, fertile soil brimming with biodiversity, and reliable irrigation.

According to Data Bridge Market Research, the Asia-Pacific dairy alternative market is expected to grow at a compounded growth rate of 9.5 percent through 2028, exceeding USD 256,676 million over an eight-year period. In response to declining dairy product sales in many countries, international dairy conglomerates are approaching the leading dairy alternatives market and growing demand for plant-based food and beverage items. Dairy product sales are dropping in key Asian economies, owing to a growing appetite for plant-based foods and beverages. Leading market competitors such as Hershey's and Sanitarium Health & Wellbeing Company have a commanding position in the global dairy replacement industry due to the breadth of their product offerings, incorporating almond, soy, cashew, rice, and coconut-based foods and drinks. (Mordor Intelligence, 2020).

India is a significant player in the industry. Plant-based alternatives to milk that are vegetarian-friendly are on the rise imposing pressure on India's predominantly vegetarian dairy sector. In India, soya milk is indeed more popular and extensively consumed as well as generally accessible dairy-free milk. Fortified soya drink, made from soya beans, has a protein level equivalent to milk from cows and is high in calcium and vitamin D (Foodopedia, 2020). In India, vegan beverages are popular, with brands such as Sofit and Staeta's almond and soya beverages stacked high on store shelves. It's difficult to obtain statistics on the West Bengal market because little research has been conducted on it.

## 2.3. Research approach

According to Trochim (2006), the inductive and deductive processes represent two "vast modes of thought." He describes induction as a process that begins with the particular and ends with the general; inductive arguments are best conveyed through experience or observation, whereas deductive arguments are best articulated through laws, rules, or other commonly recognized principles. The deductive researcher, according to Creswell and Plano Clark (2007), "tends to work from the 'top to bottom,' through a concept via hypotheses to evidence that supports or refutes the

theory." Through deduction, a theory and hypothesis (or hypotheses) are produced, as well as a research strategy for evaluating the hypothesis. Induction is used to collect data and develop a hypothesis as a result of the data analysis. The two most often employed types of research analysis methods are quantitative (deductive) and qualitative (inductive). The above two techniques are not reciprocally unique and incompatible, and they regularly cover the exact issue in unique ways. When research establishes a link between previously held beliefs and reality, it is referred to as deductive research. This implies that the theoretical framework is tested empirically by observations or investigations that confirm or contradict the theory. Inductive theories are conclusions and results derived from observations without reference to already well-known theories, eventually developing into newly established theories (Bryman & Bell, 2005). The deductive approach was used in this thesis since the thesis's objective was to answer research questions based on theory in the literature review, so enabling the thesis to accomplish its objective.

### 2.3.1. Comparison of qualitative and quantitative research approaches

To reach valid conclusions in this thesis, data must be gathered. Two types of research methodologies are used to collect empirical data. The two are qualitative and quantitative, according to Bryman and Bell (2005). Qualitative techniques in research are more loosely structured and thus better suited to describing complex situations (Malhotra, 2010, Christensen et. al. 2010). Due to its capacity to foster greater comprehension, the qualitative approach is preferred for elucidating complex conditions and is thus better suitable for a single problem; yet it is not acceptable as a tool for drawing broad generalizations (Bryman & Bell, 2005). The quantitative approach exhibits statistical results in numerical and statistical form, together to infer broad conclusions from the data. This method is codified, regulated, and controlled to examine the effect of a limited number of variables on a several of individuals (Bryman & Bell, 2005; Christensen et. al. 2010). The purpose of this research was to establish an overall assessment regarding how customers make judgments about plant-based milk alternatives. As a result, a qualitative strategy was deemed inappropriate for this thesis's objective; rather, a quantitative approach has been chosen because it produced crucial information from a huge sample size, allowing for broad generalizations.

### 2.3.2. Marketing research

According to the American Marketing Association, marketing research has characteristics of promoting the inquiry about the work that connects the advertiser to the shopper, client, and open through information; specifically, information used to recognise and characterise promoting openings and issues, as well as to create, advance, and assess promoting as a plan. Promoting inquiry is additionally concerned with the information required to address these issues, as well as the strategies for gathering this information. Moreover, promoting investigation is broadly utilized to speak to and define the information collection preparation, as well as to examine what comes about and communicate the suggestions of the discoveries (McDaniel & Gates, 2010).

Marketing research, according to McDaniel and Gates (2010), is concerned with the creation, selection, and assessment of information applicable to the decision-making of marketing, as well as the communication of the study's findings to management.

A marketing study, according to Malhotra (2010), is a "comprehensive and systematic characterization and the application of data for the intention of developing outcome in marketing regarding the discovery and resolution of challenges and prospects." This definition, according to the author, emphasizes important points to consider, namely the idea that marketing studies are structured, which mostly implies that gathering and analysing is required throughout all phases of the research study. Marketing study, according to Zikmund and Babin (2010), is the use of the scientific approach to finding answers to marketing concepts and theories. The authors define research projects as determining marketing issues and challenges, implementing, and executing marketing strategy, reviewing progress, and generally understanding the marketing plan.

The definition of marketing studies, according to Malhotra and Birks (2006), implies that it is a method. The first step, according to these authors, is to define the research aims and objectives. According to Malhotra (2010), marketing research entails the selection, creation, assessment, sharing of information, and transmission of data. All stages of this marketing study design, according to the author, are vitally important.

## 2.4. Research design

Creswell (2012, p. 627) defines research design as "a set of procedures for gathering, analysing, and reporting data". The researcher examined the study's findings quantitatively. Quantitative analysis is predicated on numerical and empirical data. Its use enables researchers to develop generalizable statistics and to study the correlations between variables to ascertain cause and effect linkages. Study Design establishes a framework for the collection and analysis of research data, by Bryman and Bell (2007, 39). (Saunders et al. 2015) defined this as a comprehensive strategy to assist researchers in resolving research questions. As already indicated, I conducted my research quantitatively. I use deductive research designs to provide a clear and accurate picture of the market environment and to deliver essential information about a subject to the reader. Due to the nature of quantitative research, the descriptive approach is typically appropriate, and hypotheses are commonly used.

## 2.5. Data collection and questionnaire

We have primary data and secondary data in research work, where the primary data is gathered for a specific purpose by the researcher, and the primary data collection has several advantages, including the fact that it makes a significant contribution to the study and is appropriate to the research goal (Christensen et. al. 2010). Despite the fact that primary data is more expensive and time-consuming than secondary data, it appears to be the most relevant type of information for a specific study topic due to its degree of relevance (Christensen et al. 2010).

In the case of secondary data, the researcher gathers information for a different reason or for thesis work (Christensen et al. 2010). Secondary data is not required to accomplish the research's goal, but it will aid in achieving a clearer interpretation of the problem and incorporating concentration into the research (Aaker et. al. 2010). Secondary data may be gathered in a variety of ways, including through official statistics departments, the media, and trade associations, and is helpful since it saves the researcher time and money. Due to the abilities and expertise of several statistics agencies, this type of data is typically reliable and precise (Bryman, Bell 2005). Secondary data collection has a disadvantage in that its intent is often unrelated to the research and renders it irrelevant (Christensen et. al. 2010).

In undertaking the survey, the author used primary data and secondary data, with primary data receiving the greatest attention. The introductory chapter used most of the secondary materials which reviled a lot of the information related to the research work and some as a guide in carrying out the research questions. Primary data were gathered for analysis using the procedures outlined in the following sections to compile pertinent material for this thesis.

The questionnaire was a critical instrument for acquiring primary data. Its primary objective was to provide a framework for quantitative data that would shed light on how customers make purchasing decisions about plant-based alternatives to milk. The questionnaire was written in English and then translated into the indigenous Bengali language. The questionnaire's aim was explained to responders, who were promised that the information they provided would be used purely for research reasons and would remain confidential. The questionnaire had twenty-nine (29) questions intended to elicit information about the respondent and their choices, as well as consumer decision factors, influences, and health. The data collection took three months from March to May in all regions of West Bengal where the online method was used through Facebook of registered groups in West Bengal, WhatsApp, and Emails of connected people in West Bengal.

## 2.6. Sampling

To acquire pertinent responses to each query, researchers must elicit suitable responses from the populationin to get the sample size. Therefore, gathering data from a population of a larger group or region is almost impossible due to the high number of units. One way to perform the survey is to interview every member of the population, which is referred to as a census survey. However, due to the community's size or individuals' motivation to engage, eliciting replies from the whole population may be challenging (Bryman & Bell, 2005). As a result, a subset of the population may be chosen to serve as a representative sample; this subset is referred to as the sample (Bryman & Bell, 2005; Malhotra, 2010). A sample survey is conducted on a subset of the population, referred to as the sample. For reasons that will be discussed in greater depth in the following sections, this thesis relied on a sample survey.

Due to the community's size, a sample had to be decided from the population to perform the research. Due to the difficulty of conducting a surveying the complete population (Malhotra, 2010), was chosen using the following criteria. The questionnaire used to collect data for this thesis was not distributed randomly. Additionally, the sample was drawn at random. There is a

convenience sample of individuals who are readily available to the researchers throughout the study (Bryman & Bell, 2005). The correct number of respondents in the sample was established using an arithmetical computing standard. The standard calculated the smallest size of the sample necessary to establish a statistically important number on the population supplied.

Cochran (1963, 75) developed an equation for calculating proportions in large populations.

$$n = \frac{Z^2 p(1-p)}{e^2}$$

where n is the sample size,

$Z^2$ is the abscissa of the normal curve that cuts off an area α at the tails (1 - α equals the desired confidence level, e.g., 95%)1,

e is the margin of error

p is the population proportion and q is 1-p.

The value for Z is found in statistical tables which contain the area under the normal curve.

With p = 0.5, a confidence level of 95%, and at least 5 %-plus or minus precision. A 95% confidence level gives us Z values of 1.96, per the normal tables, so the results will be

$$n = \frac{\{(1.96)^2 (0.5)(0.5)}{(0.06)^2}$$

$$n = 267$$

As a result, a sample of 267 people from the target group will suffice.

Following data collection, results will be analyzed. Due to the analytical nature of the research survey, a quantitative research method will be used to carry out this research work. The data was then gathered from raw to group data using a statistical approach, Microsoft Excel and the Statistical Package for Social Science were used to analyse the data (Christensen et. al. 2010).

## 2.7. Quality of research

When doing research, it is necessary to offer valid and credible data. Yin (2009) offered four measures to assess the quality of research: concept validity, internal validity, external validity, and reliability. The concepts are discussed critically below to increase the credibility of the case study.

**Validity** - Construct validity is concerned with establishing the most relevant operational measurements for the investigated concepts. Because the researchers' subjective evaluation of the data is inherent, construct validity is a critical criterion, particularly for case studies. It is the most challenging type of validity since it entails comparing an instrument to a broader theoretical framework to determine if it validates a set of assumptions derived from an existing and at least partially validated theory (Silverman, 2006). To mitigate this risk, the researcher gathered information from several sources, including primary and secondary data, a technique is known as triangulation. However, the inclusion of websites from non-official and well-known groups might introduce mistakes. The respondents' reluctance to provide some sensitive information was a challenge, however, this was overcome by asking the appropriate interview questions. Internal validity, according to Merriam, is the degree to which the results conform to reality. As a result, suggestions with a high degree of internal validity are critical for the case firms' strategic success. The triangulation concept contributes to the study's outstanding internal validity.

**Reliability** - According to Yin, a case study is credible if it would yield the same data and conclusions if repeated by another researcher, i.e. if it is repeatable. "The goal of dependability," According to Yin (2009), "the goal of a research is to minimise errors and biases." The researcher addressed low dependability by employing the concept of triangulation and rigorously recording the field study to minimize the possibility of misinterpretation. Additionally, the interviews were done in a relaxed and trusting manner, which reduced the likelihood of making errors. Due to the aforementioned obstacles, the researcher believes the case study is trustworthy. If the study is replicated by various researchers, the same conclusions may be found.

# 3. ANALYSIS AND DISCUSSIONS

This chapter summarizes the demographic section's findings descriptively, whereas the remaining parts are statistically examined using statistical representations of the different factors investigated.

## 3.1. Descriptive statistics

The demographic section contains information about respondents' gender, age, marital status, educational attainment, income, and occupation. These topics were chosen because they are critical for understanding each respondent's unique consumer behavior. There were 202 completed surveys out of 300 disseminated by email, WhatsApp, and Facebook groups in West Bengal. The results are tabulated and include frequency and central tendency.

There were 98 men in the poll, accounting for 48% of the total, and 100 females, accounting for 50% of the total; there were four replies for unable to identify their gender, accounting for 2% of the total. This demonstrates that the participants were more female than male, indicating that the selection procedure was not biased. The respondents' ages were sorted into ten-year intervals spanning from twenty to over fifty. Those under the age of 20 accounted for 6%, those between the ages of 21 and 30 accounted for 53%, those between the ages of 31 and 40 accounted for 24%, and those between the ages of 41 and 50 accounted for 9%, and those aged 51 and above accounted for 8%. The data indicates that the highest age group received 107 replies, while the lowest age group received 12, representing 53% and 6%, respectively.

Looking at the region's marital status from the poll, it's clear that the majority of respondents were single, with 112 replies accounting for 55%, followed by marriage, with 82 responses accounting for 41%. The widow and divorce received the fewest replies, with five and three, respectively.

Table 1: Demographic data

| Demographic | Feature | Frequency | Percentage % | Cumulative % |
|---|---|---|---|---|
| Gender | Man | 98 | 48.5 | 48.5 |
| | Woman | 100 | 49.5 | 98.0 |
| | Cannot answer | 4 | 2.0 | 100.0 |
| | **Total** | **202** | **100.0** | |
| Age | Less than 20 years | 12 | 5.9 | 5.9 |
| | 21 - 30 years | 107 | 53.0 | 58.9 |
| | 31 - 40 years | 49 | 24.3 | 83.2 |
| | 41 - 50 years | 18 | 8.9 | 92.1 |
| | 51 years and above | 16 | 7.9 | 100.0 |
| | **Total** | **202** | **100.0** | |
| Marital status | Single | 112 | 55.4 | 55.4 |
| | Married | 82 | 40.6 | 96.0 |
| | Widowed | 5 | 2.5 | 98.5 |
| | Divorced | 3 | 1.5 | 100.0 |
| | **Total** | **202** | **100.0** | |
| Education | High school/Vocational/Technical | 30 | 14.9 | 14.9 |
| | College diploma level | 42 | 20.8 | 35.6 |
| | Undergraduate degree | 58 | 28.7 | 64.4 |
| | Master's/Post-graduate degree | 64 | 31.7 | 96.0 |
| | PhD degree level | 8 | 4.0 | 100.0 |
| | **Total** | **202** | **100.0** | |
| Monthly income | No regular income | 28 | 13.9 | 13.9 |
| | Below 10,000 | 17 | 8.4 | 22.3 |
| | 10,000 - 20,000 | 31 | 15.3 | 37.6 |
| | 20,001 - 30,000 | 27 | 13.4 | 51.0 |
| | 30,001 - 40,000 | 32 | 15.8 | 66.8 |
| | 40,001 - 50,000 | 0 | 0.0 | 66.8 |
| | 50,000 and above | 67 | 33.2 | 100.0 |
| | **Total** | **202** | **100.0** | |
| Occupational Situation | Studying | 67 | 33.2 | 33.2 |
| | Unemployed | 11 | 5.4 | 38.6 |
| | Employed | 90 | 44.6 | 83.2 |
| | Self-employed | 29 | 14.4 | 97.5 |
| | Retired | 5 | 2.5 | 100.0 |
| | **Total** | **202** | **100.0** | |

Source: Afrin (2022), author’s calculations

According to the study, 30 respondents had a high school/vocational and technical education equivalent to 15%, 42 respondents had a college education equivalent to 20%, 58 respondents had an undergraduate degree equivalent to 29%, and 64 respondents had a master's degree equivalent to 32%. PhD received 8 responses or 4%. The poll found that the majority of respondents held a Master's degree.

According to the statistics, the majority of households earned more than 30,000 rupees, or 358 euros, every month. 14 percent of respondents reported having no monthly recurring income, 8% reported having less than 10,000 rupees (119 EUR), 15% reported having between 10,000 and 20,000 rupees, 32% reported having between 30,001 and 40,000, and 33% reported having 50,000 or more. In general, the author may conclude from the available data that the economic position of the population of West Bengal was above average. The author also examined the occupational situation in West Bengal and discovered that the majority are working at a rate of 45 percent, followed by 33 percent of those studying, 14 percent who are self-employed, 5% who are jobless, and 3% who are retired.

## 3.2. Consumer behavior in the decision-making process

This section discusses the respondents' responses to questions about consumer behavior and its impact on purchasing decisions, such as whether respondents were aware of plant-based alternatives to milk, whether they were unfamiliar with them, the clarity of the ingredient, whether they purchased based on personal preference or family influence, and the availability of plant-based alternatives to milk in every grocery store.

The data was analysed using a seven-point Likert scale, and the respondent strongly disagreed that plant-based alternatives to milk are novel to us, with the highest response rate of 68. 43 of the respondent stated they were unable to speak or react. This study indicates that the majority of people are aware of plant-based alternatives to milk. 118 respondents stated that they are unable to respond to the question of whether manufacturers clearly show the ingredients in plant-based substitutes to milk. A total of 40 respondents concur that the ingredient presentation was quite clear. When respondents are asked about their personal preferences for plant-based alternatives to milk, the majority agree that the bulk of their decisions are personal, while the majority continue to remain silent. Apart from those who are unable to speak, the majority of 41 respondents said

that it is their own decision. Another component of behavior is family influence, which demonstrates that people strongly believe they were influenced by their family members. Information gathered from the survey work indicates that plant-based alternatives to milk are not accessible at every grocery shop in West Bengal.

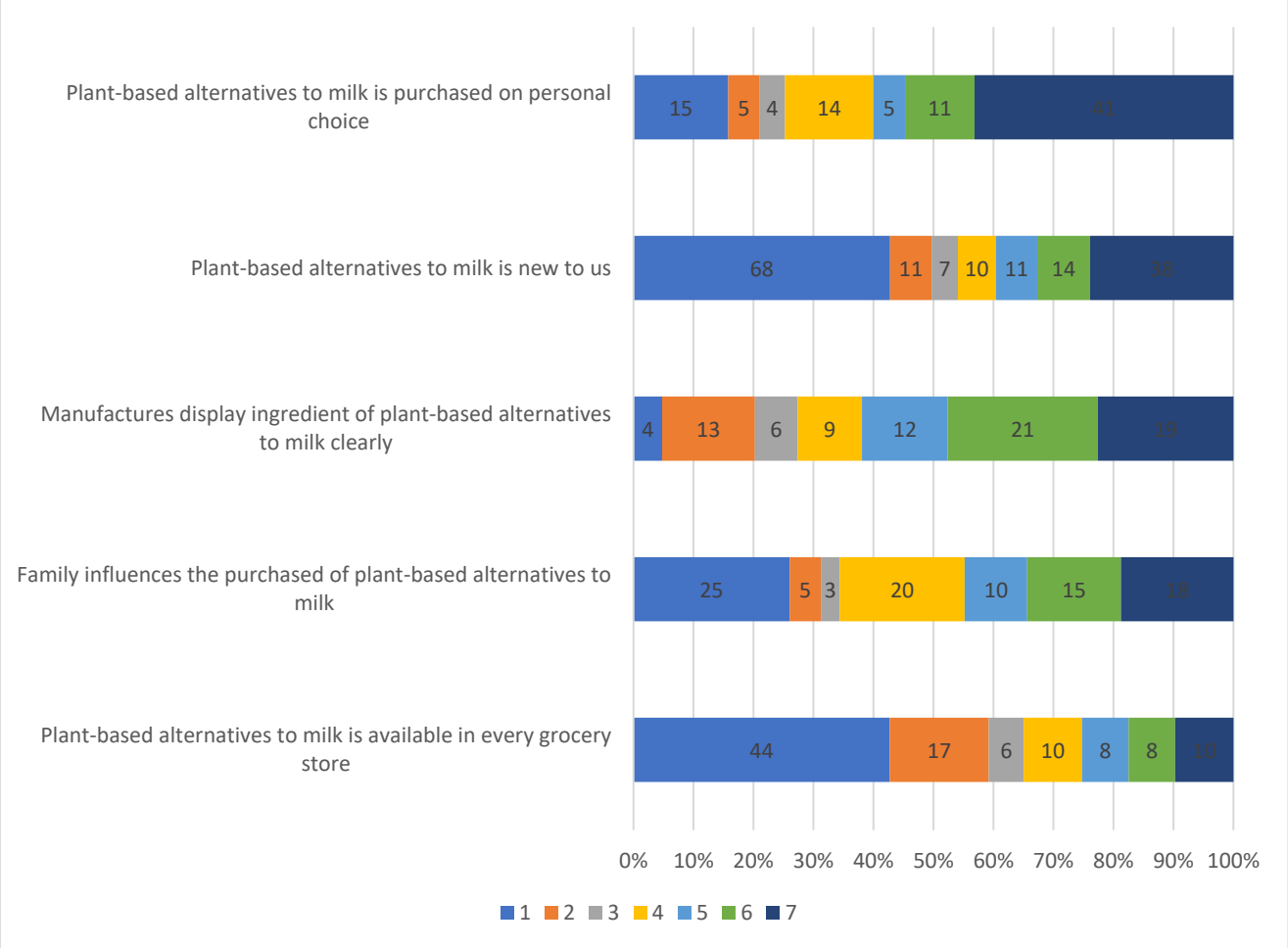


Figure 9. Consumer behavior in the decision-making process

This component was to ascertain our respondents' purchasing patterns for plant-based alternatives to milk. According to the results, 58% of respondents had never purchased plant-based alternatives to milk. 16% of respondents stated that they had purchased but not lately, followed by 10% who purchase on a regularly basis. It was 2%, 6%, and 8% for those who purchased daily, weekly, twice, or three times a month, respectively. To summarize, the author may state that plant-based substitutes for milk are not well-liked in West Bengal.

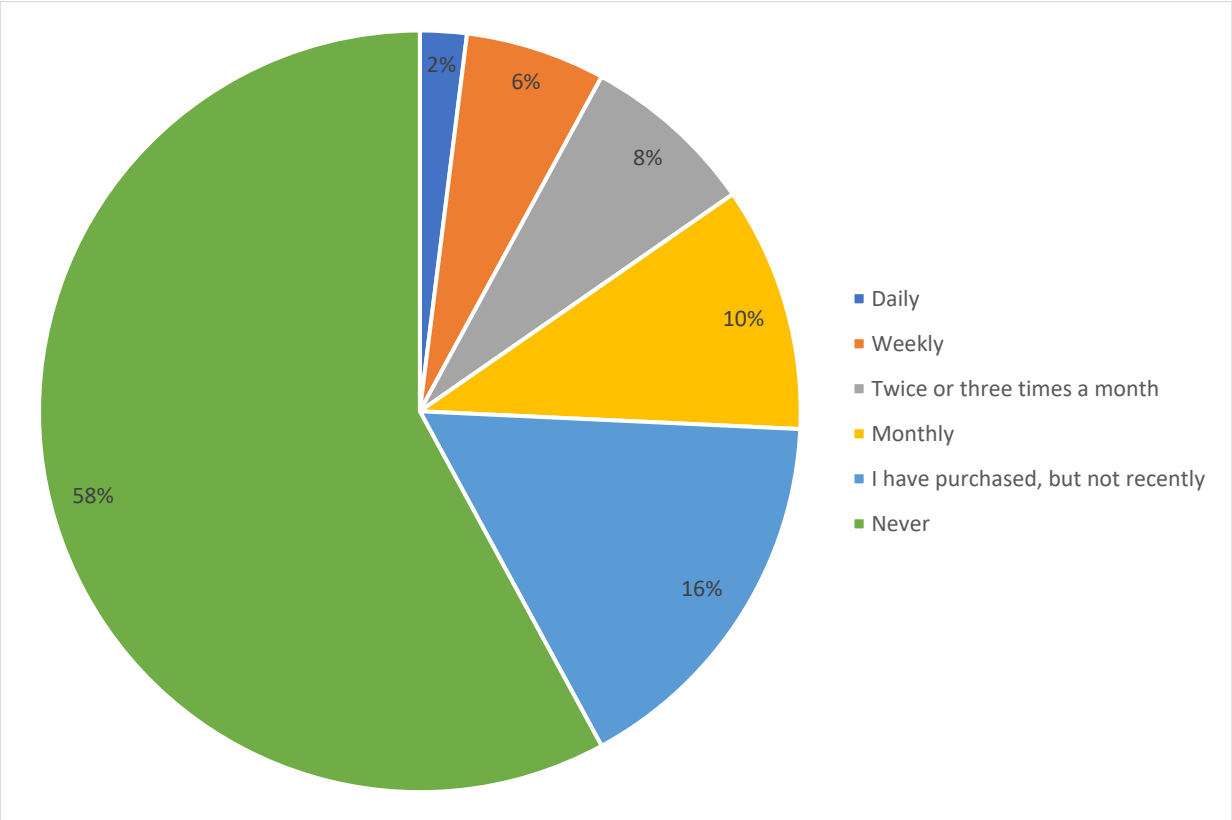


Figure 10. The purchased pattern of plant-based alternatives to milk

## 3.3. Reasons for choosing plant-based alternatives to milk

According to Figure 11, the primary reasons for choosing plant-based alternatives to milk given by respondents are as follows: reduced exposure to antibiotics and hormones (7.07), environmental friendliness (6.92), affordability (6.88), allergy-free (6.86), personal initiative (6.19), only vegans (6.03), encouragement from a family member (5.74), social media influences (5.52), and finally, encouragement from a friend (5.50).

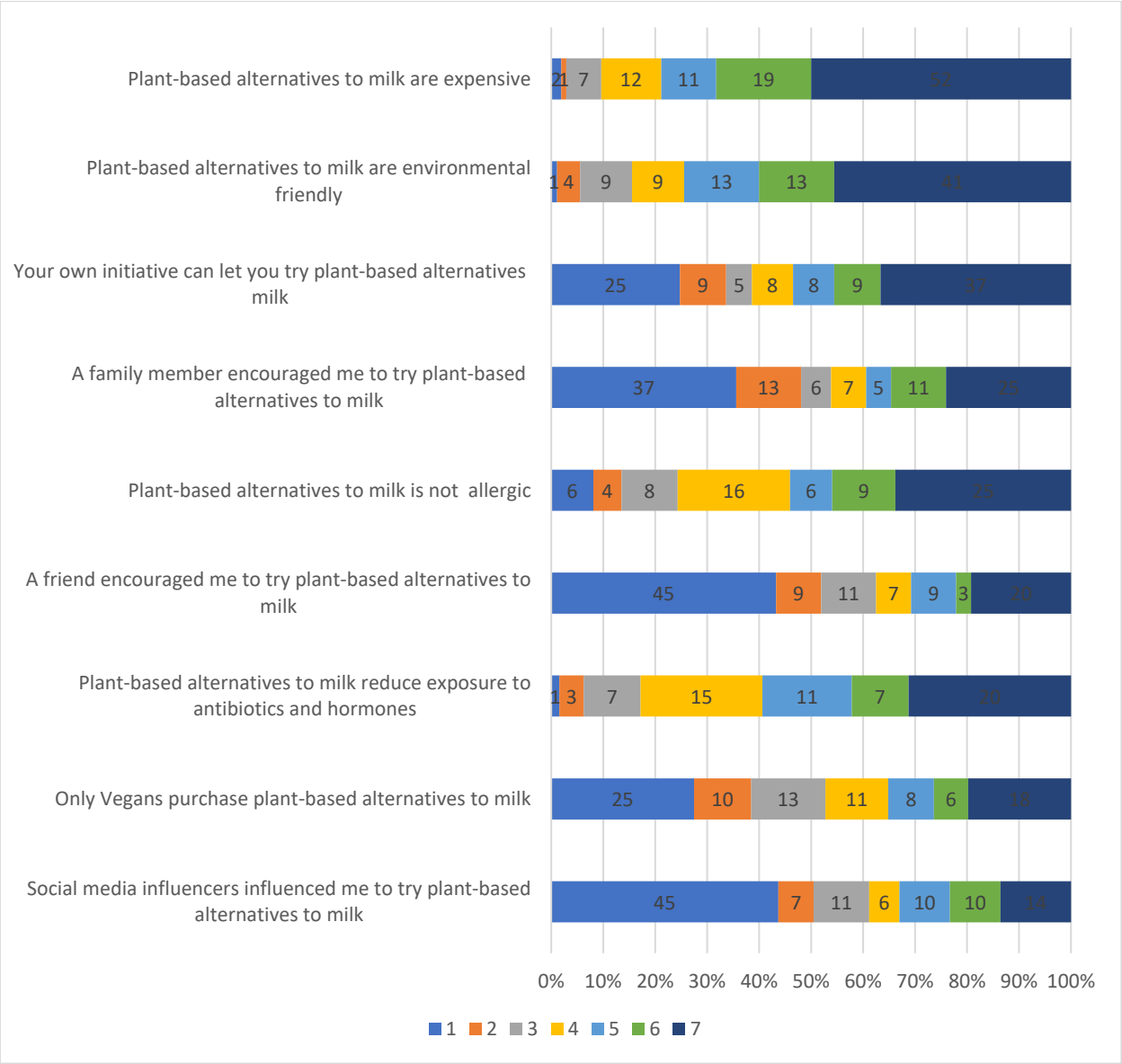


Figure 11. Reasons for choosing plant-based alternatives to milk

## 3.4. Factors taking into consideration when purchasing plant-based alternatives to milk

The author sought to ascertain the elements that impact the purchase of plant-based milk replacements. Considering this, the research considered the following factors: country of origin, brand, price, packaging, contents, supplements (minerals and vitamins), well-known brand, prior experience, and recommendations. As shown in Table 2, the primary factors influencing customers' decisions are ingredients, with a mean of 6.23, supplements, with a mean of 6.14, and pricing, with a mean of 6.09. Additionally, well-known brands, recommendations, brands, and packaging all scored higher than 5.0 on the mean scale. Previous experience was 4.71 lesser than

5.0 means but was considered before the country of origin. Consumers' previous experience and country of origin have a negligible effect on their purchase decisions.

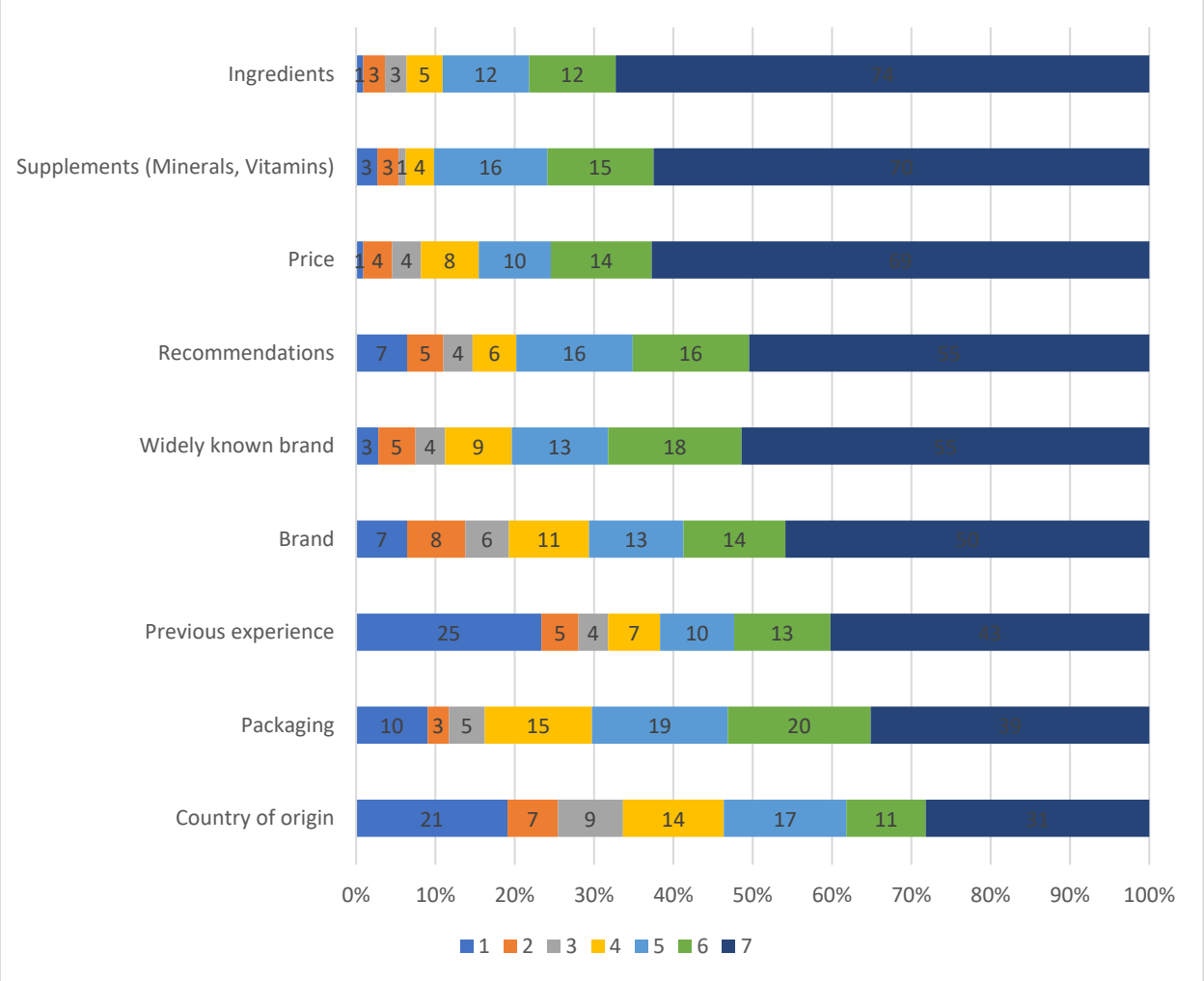


Figure 12. Factors taking into consideration when purchasing plant-based alternatives to milk

Table 2: Consideration into purchasing of plant-based alternatives to milk

| **Factors taking into consideration when purchasing plant-based alternatives to milk** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Mean** | **Standard Dev.** |
|---|---|---|---|---|---|---|---|---|---|
| Country of origin | 21 | 7 | 9 | 14 | 17 | 11 | 31 | 4.42 | 2.24 |
| Brand | 7 | 8 | 6 | 11 | 13 | 14 | 50 | 5.36 | 1.97 |
| Price | 1 | 4 | 4 | 8 | 10 | 14 | 69 | 6.09 | 1.47 |
| Packaging | 10 | 3 | 5 | 15 | 19 | 20 | 39 | 5.22 | 1.89 |
| Ingredients | 1 | 3 | 3 | 5 | 12 | 12 | 74 | 6.23 | 1.36 |
| Supplements (Minerals, Vitamins) | 3 | 3 | 1 | 4 | 16 | 15 | 70 | 6.14 | 1.44 |
| Widely known brand | 3 | 5 | 4 | 9 | 13 | 18 | 55 | 5.79 | 1.65 |
| Previous experience | 25 | 5 | 4 | 7 | 10 | 13 | 43 | 4.71 | 2.46 |
| Recommendations | 7 | 5 | 4 | 6 | 16 | 16 | 55 | 5.63 | 1.85 |

Source: Afrin (2022), author's calculations

## 3.5. Factors affecting decisions of purchasing plant-based alternatives

As illustrated in Figure 13, the primary reasons for purchasing these products are to help reduce animal consumption (6.98), to be environmentally friendly (6.96), to be healthy (6.86), to have a variety of varieties (6.83), to be too expensive (6.80), to cater to a specific group of people (6.53), to have a higher nutritional value than regular milk (6.48), and to taste better than regular milk (6.48). (6.43). The respondents indicate that manufacturers/distributors in West Bengal have low mean to feedback of (6.39) and are easily accessible (6.25). The data indicate that the majority of respondents were concerned about their health and desired to live a better lifestyle. Consuming a plant-based diet benefits the environment, as the meat and dairy industries have a worldwide influence on water, soils, plant and animal extinction, and the consumption of natural resources, as well as a significant impact on global warming. Additionally, the flavor was found to be superior to ordinary milk. According to our respondents, plant-based milk substitutes are often lower in saturated fat and calories than cow's milk and offer some of the nutritional advantages associated

with whole grains. Plant-based milk substitutes are also an excellent choice for people with milk allergies or lactose intolerance.

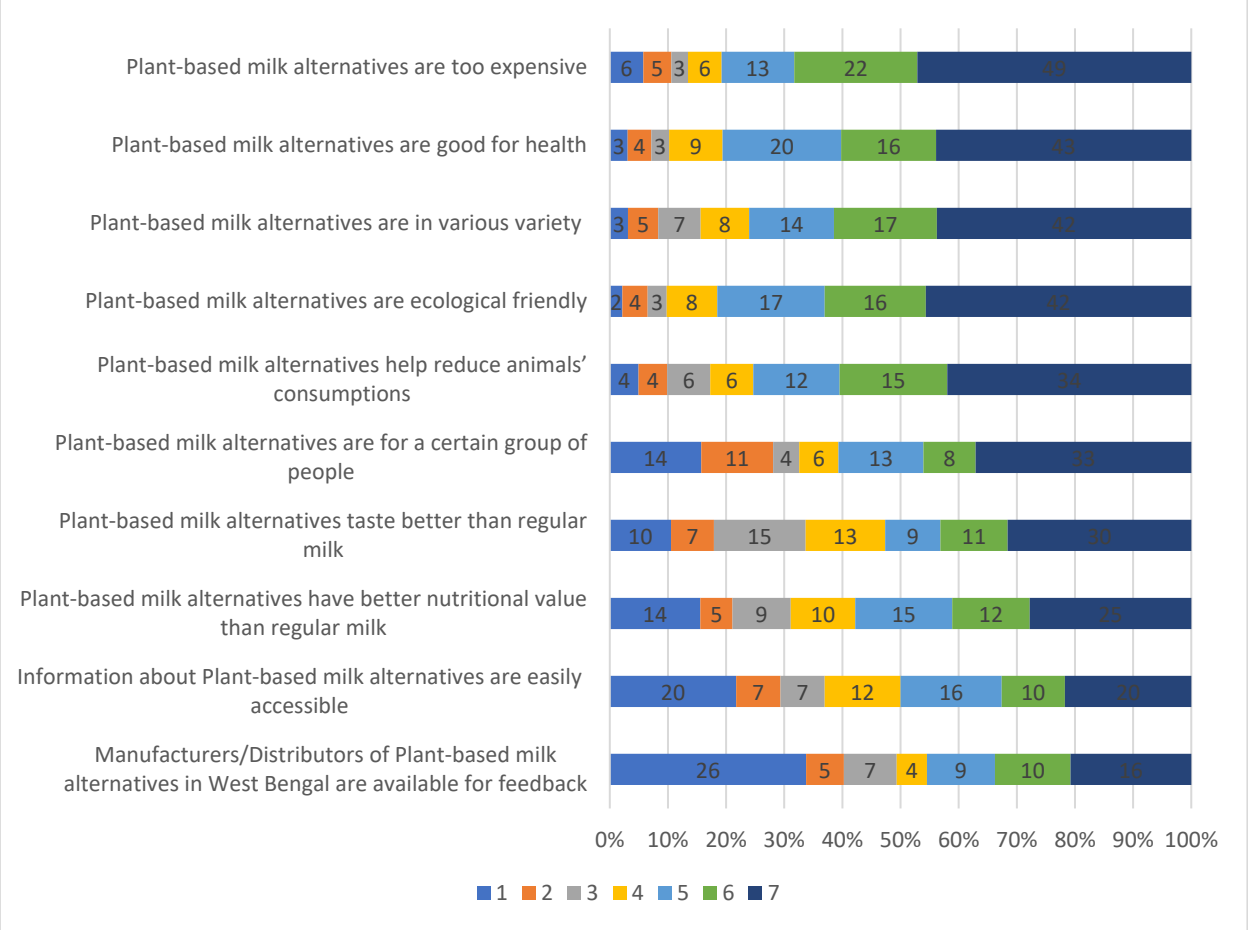


Figure 13. Factors affecting decision of purchasing plant-based alternatives

A correlations analysis was used in determining the factors taken into consideration when purchasing plant-based milk alternatives. The results were statistically significant, high positive correlation between ingredients and price (correlation coefficient 0.803), and a moderate positive correlation between supplements and ingredients (correlation coefficient 0.682). The other results that show a very low negative correlation was between previous experience and country of origin (correlation coefficient -0.123) and previous experience and packaging (correlation coefficient -0.159).

Below are the results of the correlation analysis:

Table 3: Correlation analysis of purchasing of plant-based alternatives to milk

| | *Country of origin* | *Brand* | *Price* | *Packaging* | *Ingredients* | *Supplements (Minerals, Vitamins)* | *Widely known brand* | *Previous experience* | *Recommendations* |
|---|---|---|---|---|---|---|---|---|---|
| **Country of origin** | 1 | | | | | | | | |
| **Brand** | 0.622 | 1 | | | | | | | |
| **Price** | 0.322 | 0.559 | 1 | | | | | | |
| **Packaging** | 0.647 | 0.522 | 0.453 | 1 | | | | | |
| **Ingredients** | 0.280 | 0.448 | 0.803 | 0.401 | 1 | | | | |
| **Supplements (Minerals, Vitamins)** | 0.221 | 0.391 | 0.570 | 0.437 | 0.682 | 1 | | | |
| **Widely known brand** | 0.314 | 0.595 | 0.505 | 0.416 | 0.581 | 0.591 | 1 | | |
| **Previous experience** | -0.123 | 0.166 | 0.125 | -0.159 | 0.125 | 0.181 | 0.336 | 1 | |
| **Recommendations** | 0.349 | 0.561 | 0.485 | 0.422 | 0.481 | 0.551 | 0.514 | 0.390 | 1 |

Source: Afrin (2022)

## 3.6. Summary of findings

Determining the decision-making process was the purpose of the research work which is to ascertain consumer behavior of purchasing plant-based alternatives milk in West Bengal, as well as to understand how customers are shifting toward plant-based dairy alternatives. Although people's responses to various surveys will vary according to their past views (Hoek et al., 2011; Janssen et al., 2016), frequent exposure to questions can affect behavioral intentions toward plant-based substitutes milk. Plant-based milk substitutes are a relatively new category in the plant-based food industry, but their popularity has grown because of a variety of factors, including increasing levels of lactose intolerance, diverse diet types, a desire for a healthy lifestyle, and concern for animal welfare, and environmental concerns. The production methods for the many plant-based milk replacements are both similar and unique. Wet milling, filtration, ingredient addition, sterilization, homogenization, aseptic packaging, and cold storage are all used in the production of plant-based milk substitutes; dehulling, roasting, dry grinding, steeping in diluted acid, enzyme addition, and soaking in deionized water are used in the production of different plant-based milk substitutes. Apart from the health advantages associated with the use of plant-based milk replacements, the manufacture of these drinks improves the environment in a variety of ways, including by lowering the water footprint and generating the possibility of climate change and ecotoxicity reduction. Increased consumer acceptance because of various trends such as

vegetarianism, Lacto-vegetarianism, and Ovo-vegetarianism, as well as the significant potential for reducing the impact of manufacturing on the environment, ensure that the market for plant-based milk substitutes will continue to grow.

## 3.7. Limitations and recommendations for future studies

As previously stated, this study's universal applicability is limited. To begin, there is the issue of low response rates in comparison to the population of West Bengal. The difficulty is that because the sample population does not reflect the entirety of West Bengal, the study, while accurate, cannot be generalized. The time range for data collection was constrained, and as a result, most respondents were unable to complete the questionnaire.

Plant-based goods promoted as milk substitutes would benefit from explicit labeling rules. The FDA and other regulatory agencies' approach to good manufacturing practices (GMP) is to make suggestions for the formulation of nutritionally sound food items. The FDA might take another regulatory step by establishing identification criteria. This research recommends that more investigation be done on the wholesome benefits of plant-based alternatives to milk. Plant-based alternatives to milk speak to an enormous development opportunity for the well-being nourishment showcase and ought to be completely explored through the improvement of progressed preparation, mechanical mediations, and fortress strategies to make a healthfully total refreshment with a tall level of worthiness. Since the points of interest of plant-based alternatives to milk drain choices, such as beat electric field innovation, progressed non-thermal innovations, such as beat electric field innovation, can help in recognizing variables restricting the victory of such plant-based alternatives to milk on a huge scale, subsequently helping in giving low-cost nutritious more up to date options to the dairy animals drain unfavourably populace.

# CONCLUSION

There is considerable interest in plant-based foods, especially plant-based milk substitutes. Their nutritional quality has been a source of concern for public health, particularly in child nutrition. Plant-based alternatives to milk are still used by a small fraction of the population; consumption is higher among females between the ages of 20 and 30 and middle-income earners, according to one report. Individuals who consume less meat and eschew animal products are more likely to choose a plant-based milk substitute.

Various variations from different nations, especially those with overwhelmingly "Western diets," demonstrate an increment within the ubiquity of plant-based alternatives to milk choices to drain, which is habitually driven by shifts in buyer request due to natural concerns. A related study from Australia, reports the number of plant-based alternatives to milk accessible in five major basic need chains expanded significantly from 26 in 2015 to 137 in 2019, counting over 50 distinctive plant-based burgers variations (Curtain, Grafenauer 2019; Schiffman, 2011). Besides, plagues such as the 2003 SARS episode, the 2013 Avian Flu episode, the 2019 African Swine Flu episode, and 2020 COVID-19 widespread hurried the move absent from ultra-processed animal-derived nourishments, especially in Asia, where these plagues have had an unbalanced effect. The underlying causes included food scares involving tainted products as well as more general health and nutritional concerns since poor diets were commonly associated with an increased risk of severe illness manifestation (Attwood, Hajat 2020). Numerous plant-based alternatives to milk give a basic like switch to animal-sourced meals, making them a practical choice for buyers searching for a stress-free way to extend their plant-based utilization. As a result, picking up distant better, higher strength or an improved. A much better understanding of the wellbeing and natural results of these nourishments, as well as the wider governmental, manufacturing, and agricultural suggestions of their expanded generation and utilization, is getting to be progressively critical.

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# APPENDICES

## Appendix 1. Questionnaire in English

Dear respondent,

I am a Master's student at Tallinn University of Technology's Faculty of Business and Governance, in Estonia and I am working on my thesis on the consumer decision-making process for choosing plant-based alternative milk in West Bengal. The research aims at getting new knowledge on consumer behavior regarding plant-based alternatives to dairy products. Your responses will be used in a generalized form and will not be associated with your person.

Your responses are crucial, and I humbly request that you set aside approximately 10 minutes to respond to all the questions. The survey is completely anonymous.

I will be pleased to address any queries you may have.
Thank you for your kind help!

Farmind Afrin
fafrin@ttu.ee

**Section A: Demographic Data**

1. What is your gender?
   - ◯ Man
   - ◯ Woman
   - ◯ Cannot answer

2. What is your age group?

   _____ years

3. What is your marital status?
   - ◯ Single
   - ◯ Married
   - ◯ Widowed
   - ◯ Divorced

4. What is your level of education?
   - ◯ High school / vocational / Technical
   - ◯ College diploma
   - ◯ Undergraduate degree
   - ◯ Master's/ Post-graduate degree
   - ◯ PhD

5. What is your monthly income per household (Rupee)
   - ◯ No regular income
   - ◯ Below 10,000 (Below 119 EUR)
   - ◯ 10,000 – 20,000 (119 – 238 EUR)
   - ◯ 20,001 – 30,000 (239 – 357 EUR)
   - ◯ 30,001 – 40,000 (358 – 475 EUR)
   - ◯ 40,001 – 50,000 (476 – 595 EUR)
   - ◯ 50,000 and above (595 EUR and above)

6. What is your occupational situation?
   - ◯ Studying
   - ◯ Unemployed
   - ◯ Employed
   - ◯ Self-employed
   - ◯ Retired

**Section B: Consumer behavior in the decision-making process**

On a scale of 1 to 7 (1 = Strongly disagree and 7 = Strongly agree)

| **Details** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Cannot Say** |
|---|---|---|---|---|---|---|---|---|
| Plant-based alternatives to milk is new to us | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Manufactures display ingredient of plant-based alternatives to milk clearly | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based alternatives to milk is purchased on personal choice | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Family influences the purchased of plant-based alternatives to milk | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based alternatives to milk is available in every grocery store | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

7. How often do you purchase plant-based alternatives to milk?
   - ◯ Daily
   - ◯ Weekly
   - ◯ Twice or three times a month
   - ◯ Monthly
   - ◯ I have purchased, but not recently
   - ◯ Never

**Section C: Reasons for choosing plant-based alternatives to milk**

On a scale of 1 to 7 (1 = Strongly disagree and 7 = Strongly agree)

| **Details** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Cannot Say** |
|---|---|---|---|---|---|---|---|---|
| Plant-based alternatives to milk is not allergic | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based alternatives to milk are expensive | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based alternatives to milk reduce exposure to antibiotics and hormones | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based alternatives to milk are environmental friendly | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Only Vegans purchase plant-based alternatives to milk | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| A family member encouraged me to try plant-based alternatives to milk | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| A friend encouraged me to try plant-based alternatives to milk | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Your own initiative can let you try plant-based alternatives milk | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Social media influencers influenced me to try plant-based alternatives to milk | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

**Section D: Factors taking into consideration when purchasing plant-based alternatives to milk**

On a scale of 1 to 7 (1 = Strongly disagree and 7 = Strongly agree)

| **Details** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Cannot Say** |
|---|---|---|---|---|---|---|---|---|
| Country of origin | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Brand | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Price | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Packaging | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Ingredients | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Supplements (Minerals, Vitamins) | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Widely known brand | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Previous experience | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Recommendations | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

**Section E: Factors affecting decisions of purchasing plant-based alternatives**

On a scale of 1 to 7 (1 = Strongly disagree and 7 = Strongly agree)

| **Details** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **Cannot Say** |
|---|---|---|---|---|---|---|---|---|
| Plant-based milk alternatives are too expensive | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based milk alternatives are good for health | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based milk alternatives taste better than regular milk | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based milk alternatives are ecological friendly | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based milk alternatives help reduce animals' consumptions | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Information about Plant-based milk alternatives are easily accessible | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based milk alternatives are for a certain group of people | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based milk alternatives are in various variety | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Plant-based milk alternatives have better nutritional value than regular milk | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |
| Manufacturers/Distributors of Plant-based milk alternatives in West Bengal are available for feedback | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ |

Source: Afrin (2022), author's work

## Appendix 2. Original questionnaire in Bengali

**বিভাগ এ: ডেমোগ্রাফিক ডেটা**

১. আপনার লিঙ্গ কি?

- পুরুষ
- নারী
- উত্তর দিতে পারি না

২. **আপনার বয়স কত? _____বছর**

৩. **আপনার বৈবাহিক অবস্থা কি?**

- অবিবাহিত
- বিবাহিত
- বিধবা
- তালাকপ্রাপ্ত

৪. **আপনার শিক্ষাগত যোগ্যতা কি?**

- উচ্চ বিদ্যালয় / ভোকেসোনাল/ প্রযুক্তিগত
- কলেজ ডিপ্লোমা
- স্নাতক ডিগ্রী
- স্নাতকোত্তর/পোস্ট স্নাতকোত্তর ডিগ্রি
- পিএইচডি

৫. **পরিবার প্রতি আপনার মাসিক আয় কত (রুপী)**

- নিয়মিত আয়নেই
- ১০,০০০ এর নিচে
- ১০,০০০ - ২০,০০০
- ২০,০০১ - ৩০,০০০
- ৩০,০০১ - ৪০,০০০
- ৫০,০০০ এবং তার বেশি

৬. **আপনার পেশাগত অবস্থা কি?**

- অধ্যয়নরত
- বেকার
- চাকরী
- স্বনির্ভর
- অবসরপ্রাপ্ত

**বিভাগ বি: সিদ্ধান্তগ্রহনের প্রক্রিয়ায় ভোক্তাদের আচরণ**

১ থেকে ৭ এর স্কেলে (১ = দৃঢ়ভাবে অসম্মত, ৭ = দৃঢ়ভাবে একমত)

| বর্ননা | ১ | ২ | ৩ | ৪ | ৫ | ৬ | ৭ | উত্তর দিতে পারি না |
|---|---|---|---|---|---|---|---|---|
| দুধের উদ্ভিদ-ভিত্তিক বিকল্প আমাদের কাছে নতুন | | | | | | | | |
| প্রস্তুকারক দুধের জন্য উদ্ভিদ-ভিত্তিক বিকল্পের উপাদান পরিষ্কারভাবে প্রদর্শন করে | | | | | | | | |
| দুধের উদ্ভিদ-ভিত্তিক বিকল্প ব্যক্তিগত পছন্দে কেনা হয় | | | | | | | | |
| পরিবার দুধের জন্য উদ্ভিদ-ভিত্তিক বিকল্প কেনাকে প্রভাবিত করে | | | | | | | | |
| দুধের উদ্ভিদ-ভিত্তিক বিকল্প প্রতিটি মুদি দোকানে পাওয়া যায় | | | | | | | | |

**৭. আপনি কত ঘন ঘন উদ্ভিদ-ভিত্তিক বিকল্প কেনেন?**

- দৈনিক
- সাপ্তাহিক
- মাসে দু-তিনবার
- মাসিক
- আমি ক্রয় করেছি, তবে সম্প্রতি নয়
- কখনই না

**বিভাগ সি: দুধের জন্য উদ্ভিদ-ভিত্তিক বিকল্প বেছে নেওয়ার কারণ**

১ থেকে ৭ এর স্কেলে (১ = দৃঢ়ভাবে অসম্মত, ৭ = দৃঢ়ভাবে একমত)

| বর্ননা | ১ | ২ | ৩ | ৪ | ৫ | ৬ | ৭ | উত্তর দিতে পারি না |
|---|---|---|---|---|---|---|---|---|
| দুধের উদ্ভিদ-ভিত্তিক বিকল্প এলার্জি নয় | | | | | | | | |
| দুধের উদ্ভিদ-ভিত্তিক বিকল্পগুলি ব্যয়বহুল | | | | | | | | |
| দুধের উদ্ভিদ-ভিত্তিক বিকল্প অ্যান্টিবায়োটিক এবং হরমোনের সংস্পর্শ কমায় | | | | | | | | |
| দুধের উদ্ভিদ-ভিত্তিক বিকল্প পরিবেশবান্ধব | | | | | | | | |
| শুধুমাত্র ভেগানরাই দুধের উদ্ভিদ-ভিত্তিক বিকল্প ক্রয় করে | | | | | | | | |
| পরিবারের একজন সদস্য আমাকে দুধের উদ্ভিদ-ভিত্তিক বিকল্প চেষ্টা করতে উত্সাহিত করেছিলেন | | | | | | | | |
| একজন বন্ধু আমাকে দুধের উদ্ভিদ-ভিত্তিক বিকল্প চেষ্টা করতে উত্সাহিত করেছিল | | | | | | | | |
| আপনার নিজের উদ্যোগে আপনি উদ্ভিদ-ভিত্তিক বিকল্প দুধ চেষ্টা করতে পারেন | | | | | | | | |
| সোশ্যাল মিডিয়া প্রভাবশালীরা আমাকে দুধের উদ্ভিদ-ভিত্তিক বিকল্প চেষ্টা করতে প্রভাবিত করেছিল | | | | | | | | |

**বিভাগ ডি: দুধের উদ্ভিদ-ভিত্তিক বিকল্প কেনার সময় বিবেচনা করা বিষয়গুলি**

১ থেকে ৭ এর স্কেলে (১ = দৃঢ়ভাবে অসম্মত, ৭ = দৃঢ়ভাবে একমত)

| বর্ননা | ১ | ২ | ৩ | ৪ | ৫ | ৬ | ৭ | উত্তর দিতে পারি না |
|---|---|---|---|---|---|---|---|---|
| উৎপত্তি | | | | | | | | |
| ব্র্যান্ড | | | | | | | | |
| দাম | | | | | | | | |
| প্যাকেজিং | | | | | | | | |
| উপকরণ | | | | | | | | |
| পরিপূরক (খনিজ, ভিটামিন) | | | | | | | | |
| ব্যাপকভাবে পরিচিত ব্র্যান্ড | | | | | | | | |
| পূর্ব অভিজ্ঞতা | | | | | | | | |
| সুপারিশ | | | | | | | | |

**বিভাগ ই: দুধের জন্য উদ্ভিদ-ভিত্তিক বিকল্প কেনার সিদ্ধান্তকে প্রভাবিত করে**

১ থেকে ৭ এর স্কেলে (১ = দৃঢ়ভাবে অসম্মত, ৭ = দৃঢ়ভাবে একমত)

| বর্ননা | ১ | ২ | ৩ | ৪ | ৫ | ৬ | ৭ | উত্তর দিতে পারি না |
|---|---|---|---|---|---|---|---|---|
| উদ্ভিদ-ভিত্তিক দুধের বিকল্পগুলি খুব ব্যয়বহুল | | | | | | | | |
| উদ্ভিদ-ভিত্তিক দুধের বিকল্প স্বাস্থ্যের জন্য ভাল | | | | | | | | |
| উদ্ভিদ-ভিত্তিক দুধের বিকল্প পরিবেশবান্ধব | | | | | | | | |
| উদ্ভিদ-ভিত্তিক দুধের বিকল্প পশুদের খরচ কমাতে সাহায্য করে | | | | | | | | |
| উদ্ভিদ-ভিত্তিক দুধের বিকল্প সম্পর্কে তথ্য সহজেই অ্যাক্সেসযোগ্য | | | | | | | | |
| উদ্ভিদ-ভিত্তিক দুধের বিকল্প একটি নির্দিষ্ট গোষ্ঠীর জন্য | | | | | | | | |
| উদ্ভিদ-ভিত্তিক দুধের বিকল্প বিভিন্ন ধরণের রয়েছে | | | | | | | | |
| নিয়মত দুধের তুলনায় উদ্ভিদ-ভিত্তিক দুধ ভালো | | | | | | | | |
| পশ্চিমবঙ্গে প্ল্যান্ট-ভিত্তিক দুধের বিকল্পের নির্মাতা/পরিবেশক প্রতিক্রিয়ার জন্য সহজলভ্য | | | | | | | | |

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