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Central European University in part fulfilment of the**

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**Factors that influence Sustainable Food Consumption in urban
environments in India**

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ABSTRACT OF THESIS

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Food production to consumption has the largest carbon footprint. Therefore, it is necessary to gain sustainability in case of food consumption. In India, there is no policy regarding sustainable food consumption, as well as the concept of sustainable food is quite new to the country. In that light, how sustainable food consumption is influenced by various internal and external factors has been explored in this research paper. To understand the concept, the research defined sustainable food in different point of views and include some aspects which were not explored previously. Lastly, to understand, if policy has any role to play in this sustainable food consumption or influencing people. The study has been done in a metropolitan city, to maximize cultural, economic and social diversities.

Keywords: Sustainable food, policy influence, affordability, health, religion, society, culture.

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Chapter 1: Introduction

With the changing climate and increasing sustainability challenges, the food production system becomes a major concern. Almost 30 per cent of the global greenhouse gases in the atmosphere are contributed to by the food and farming system (Hedin, et al. 2019). Moreover, the food production system connects several ‘several planetary boundaries’ such as ‘biosphere integrity,’ ‘land-system changes,’ and ‘bio-geo chemical flows’ (Soma 2020). All stages of food production and consumption system affect climate and the environment, starting from food production (agricultural activities), processing and manufacturing, wholesale and logistics, retail and food services, consumption (storing and using), and waste management. According to FAO (2013), the wastage of food, both at the post-harvest and consumer stages, is estimated to lose one-third of all food produced for human consumption.

Various studies have been done over the year to reduce the effect of food production on the environment and climate. In 2014, a study done by Gooch et al. showed that households are the primary source of food waste and ‘unsustainable than institutions; “it is estimated that this sector alone is responsible for eight times the energy waste of post-harvest losses due to the energy lost during food preparation and along the food supply chain” (Gooch and Felfel 2014).

Over the past year, researchers tried to understand how household food consumption varies attitude, behaviour, and policy interventions.

A recent research done in Norway, showed that, approximate 52 per cent of the consumers become more interested in sustainable food item after attending workshops regarding sustainability and environmental friendly practices (Vittersø and Tangeland 2015). So, it is evident that, a certain push can influence in individual’s behaviour.

Welsh et al. (1993) in their study showed that after the U.S. Department of Agriculture and the U.S. Department of Health and Human Services intervene and enforce the policy of proper

labelling of food and advised healthy choices in food consumption, due to this, there was a significant decrease in consumption of fast food. A review by Bucher et al. (2016) said that policies targeting behavioural change alone caused a 15per cent increase in people's consumption of sustainable food choices in the United Kingdom. Similarly, a Swedish modelling study found that such (behavioural change) policies, such as taxation, influence food consumption, tax ranging from 8.9per cent to 33.3per cent on seven meat and dairy foods, will reduce greenhouse gas and nitrogen emissions associated with the consumption of these animal-based foods by up to 12per cent (List & Samek, 2015).

Similarly, society also influences what we eat. A study done by Reisch et al. (2008) pointed out that we mimic our companions; for instance, if we eat with someone who is eating a large amount, then we are likely to model what they eat and consume more than we would eat if we were dining alone. We are also likely to eat a large amount if we eat in a group rather than eating alone. Such 'social facilitation of eating has been well documented with evidence from food diaries, observational and experimental studies. Several studies have examined how people adjust their eating behaviour to manage their public image and create a particular impression on others. Vartanian et al. (2012) concluded that we use stereotypes about consumption patterns to convey an image of ourselves following that stereotype. For example, eating vegan food conveys an environmentally friendly and otherwise positive image, which may be used to create a favourable impression on a fellow diner who values those characteristics.

Among diverse ethnicities and immigration history, consumers tend to behave differently around food consumption and mealtime habits. The Hartman Group's Exploring the Diversity of American Foodways report finds that while many consumers have similar ways in which they eat, their cultural background has an impact on what they eat (in terms of flavors and

authentic dishes), and food is a meaningful way that people maintain a connection to their cultural background.

So, it is clear that, apart from policy, society and cultural background also affects what we are putting on our plate.

This study aimed to understand how policy, social, and cultural factors influence the sustainable consumption of food in two cities in India. There are a considerable number of studies done on this subject matter. These studies primarily focus on the Global North (Soma 2020). Soma (2020), in her paper, she also mentioned that the primary reason for the lack of such studies in the Global South seems to be the general assumption of ‘subsistence agricultural production and consumption’ (Soma 2020). However, this assumption has been contested on several grounds, such as the growing impact of urbanization, retail modernization, rising middle class, and shifting consumption patterns in the Global South (Rastogi et al., 2013). A growing number of South-East Asia’s middle and upper-income consumers shop at modern supermarkets. For instance, in Indonesia alone, the population belonging to the middle-class has grown from 1.6 million in 2004 to 50 million in 2009 (Rangkuti & Wright, 2013). Similarly, in the case of India, supermarkets are no longer niche as the number of consumers shopping at supermarkets is growing, causing demand for ‘exotic’ food, which challenges the idea of ‘sustainable food consumption (Teng et al., 2012). The focus of this study is India, which makes this one distinctive from the previously done studies.

1.1 Aim

The study aims to contribute to the understanding of how different internal and external factors influence the transition to more sustainable food consumption in Urban India.

1.2 Research Objectives

The research has the following objectives:

- i. To identify environmental attitudes and value that influence food consumption decisions and practices among people residing in Delhi.
- ii. To explore the influence of income, social, cultural, and policy factors on food consumption practices.

1.3 Research Question

Within the context of sustainable food consumption and behaviour change, this research seeks to answer the following research questions:

1. How do internal factors such as environmental attitudes and values influence food consumption decisions and practices?
2. How do external factors such social and cultural factors influence (sustainable) food consumption practices?
3. How, if at all, do local, regional, and national policies shape food consumption in an urban setting?

1.4 Scope

This research focuses on the sustainable food consumption, what are the main driving force behind them and if policy and other political will has any influence on the consumption pattern. For the research and building theoretical framework and reviewing relevant literature, no emphasis was made on geographical location or political will. The empirical part of the research is broadly based on one metropolitan city of India, Delhi- NCR region. As the selected city is the national capital of the country, from the pilot survey it has been established that, most the population of the city are migratory in nature, which means people from the other

region of the country lives there. From the data collected for the analysis, it can be seen that 86 percent of the total sample people who migrated to the city in past 3 years. To understand the people's behaviour on sustainable food consumption semi-structured interviews were conducted, which is one of the most common method use in qualitative research (Doody & Noonan, 2013) and provide an advantage to explore the topic from different point of views and deep diving into a certain factors which may not be explored previously (Gray, 2009).

1.5 Chapter Disposition

The Introduction Chapter will be followed by literature review chapter (Chapter 2), which will broadly discuss the sustainable food consumption and concept of sustainable food, the third chapter (Chapter 3) will discuss the theoretical framework of the research which is divided into consumption and production side of the sustainable theory. The theoretical framework chapter will be followed by methodology (Chapter 4), where the research methods will be broadly discussed. The chapter provides information about collection and presentation methods of data, as well as strength and weakness of the particular data analysis methods. The analysed result of the data both from the interview and questionnaire survey are presented in the Chapter 5, 6 and 7. The discussion and conclusion part is presented in Chapter 8. The discussion chapter also includes reflection of how data correlated to the theoretical framework, methodological choices and literature review. Finally the chapter is concluded with recommendations, practical implications and future research outline.

Chapter 2: Literature Review

The main aim of the literature study is to understand various factors that govern consumer behaviour in sustainable food consumption. The literature study is mainly divided into two broad parts; the first part talks about sustainable consumption itself and the effects of various factors that govern consumers' choices. The second part mainly examines the role of policy in shaping their food choices in the urban environment as an active actor and how it (people's behaviour) is getting influenced by other factors such as social and cultural contexts.

2.1 Where it all started

What is on our plate is mainly governed by our personal behaviour, so why should the government or policymakers or researchers be attempting to influence our very own food choices? To answer this, it is necessary to look into the more significant scenario in global food consumption and production. Almost 30 per cent of the global greenhouse gases in the atmosphere are contributed to by the food and farming system (Hedin et al., 2019). Moreover, the food production system connects several 'several planetary boundaries' such as 'biosphere integrity,' 'land-system changes,' and 'bio-geo chemical flows' (Soma 2020). All stages of food production and consumption system have an effect on climate and environment, starting from food production (agricultural activities), processing and manufacturing, wholesale and logistics, retail and food services, consumption (storing and using), and waste management. According to FAO (2013), the wastage of food, both at the post-harvest and consumer stages, is estimated to lose one-third of all food produced for human consumption. Various researches have been done in past decade to understand how to reduce the effect of food production on the environment and climate. Gooch et al. (2014), in a research depicted that the primary source of food waste is household units, and it is more 'un'sustainable over institutions. The study estimated that this sector (household consumption) "alone is responsible for eight times the

energy waste of post-harvest losses due to the energy lost during food preparation and along the food supply chain” (Gooch & Felfel, 2014).

The inherent nature of a city is ‘consumption’ culture. Although cities have taken several steps to mitigate the ‘unsustainable’ nature of consumption, most have a long way to go. The Future of Urban Consumption in a 1.5°C World (2019) pointed out that food production and consumption accounted for 13 per cent of total emissions produced in the largest cities in 2017. So, it is evident that there is a positive correlation between the declining state of the environment and the consumption of food. Therefore, there is an urgent need to change the food consumption pattern of people to be more sustainable. In 2016, the United Nations stated that to reach the sustainability goals, high-income nations should focus more on food consumption pattern and push the policy agenda towards sustainable food consumption (Blazhevskaja n.d.). Despite the growing concern over food consumption and the debate to make our food consumption pattern more sustainable, there is no “commonly agreed-upon definition” of sustainable food (Reisch, Eberle, and Lorek 2013). According to Marion Nestle, in her book ‘Food Politics’, defined sustainable food as “regenerative”, in simple word, “putting back into the soil what gets taken out”. She further defined that the concept of sustainable food is constructed on the three basic principles, the ecological, social and economic value – which tied the community as a whole. According to the EU (European Union), it has been seen in terms of affordability, quality, safety, health, secure supply and environmental sustainability – in addressing the issues related to climate change, biodiversity, water and soil quality. The Kindling Trust of the United Kingdom took a wider approach in case of defining sustainable food. Apart from environment, health, social and economic perspective, eight other inter-related notions were taken into consideration. These are – local and seasonal, organic and sustainable farming, reduced animal products and maximized animal welfare standards, exclusion of fish species identified at risk, fair-trade-certified products,

promotion of health and well-being, food democracy and reduction of waste and packaging (Kindling Trust, 2012). So far, the most inclusive definition of sustainable food was defined by the UK Sustainable Development Commission. According to their definition, ‘sustainable food and drink’ can be defined as – safe, healthy, nutritious and affordable for the consumers of all age and economic background, ‘provides viable livelihood’ and safe and hygienic work environment for the people engaged in food production and processing system, while, taking the consideration of the environment and animal welfare, reducing energy consumption in case of transportation of food and other materials, most importantly respecting the local diversity in food production and consumption pattern. In short, sustainable food should be “feasible, accessible, affordable and available” (Reisch, Eberle, and Lorek 2013).

From the above discussion, it is clear that not one definition addresses all the components of sustainable food, but each addresses various dimensions of it. We can group these definitions into a number of categories:

- the first set broadly talked about affordability, quality, safety and health;
- the second set of the definition includes all the first set and added additional dimensions such as organic, minimizing animal product and minimizing the use of plastic and other non-biodegradable packaging;
- the third dimension pushes it further and included more dimensions, such as fair trade, human rights and safety and hygienic work conditions.

For purposes of this research, some other factors have also been included, such as indigenous crops and climate change resilient varieties.

2.2 Global Urban context of ‘sustainable’ food consumption

With changing demography and rising economic prosperity – the demand for energy, food and water is also on the rise, which will compromise the sustainable use of resources and increase

geopolitical tension (Gorgitano and Sodano 2014). With this clear view in mind, policymakers and global governments are trying to push for sustainable food consumption policies, even though there is wide acceptance of sustainable policies in food dimensions. However, there is a lack of integration with other aspects of sustainability, and sustainable food consumption policies are more or less in silos. Reisch et al. (2006) rightly mentioned that the most of the country's political action plan and governance mainly focused on food security and agricultural production, mainly ignoring the modern global food system, which is complex and interdependent – in terms of culture, ethics and belief.

2.3 Policy as a driver to sustainable food consumption

Cities are mostly perceiving as the engine of growth and home for a rapidly growing 'obesogenic'¹ population. Morgan et al. (2010) stated that urban food consumption is mainly energy-dense, but lack of physical movement opportunities makes citizens obese. In the same context, he mentioned that the availability of food in the urban context doesn't fit the sustainable term – in case of production, consumption and affordability. To mitigate this 'unsustainable' consumption of food, cities like London and New York first came forward to introduce 'urban food strategies'. Even though the initial aim was public health but with several iterations, these cities include other sustainable food consumption aspects.

The first policy drive to promote 'sustainable consumption' started by Mayor Ken Livingstone in 2006, in London, as a response to the increasing health problems of the citizens, mainly diabetes and obesity, affordability of food and food security, later he emphasized the environment as well (Morgan and Sonnino 2010). In 2008 the *London Food Strategy* came into an existence, which looked into eight factors – commercial viability, consumer engagement, procurement strategy, local food preferences, healthy school lunch and reduction of food waste

¹ Anything that promotes obesity. Possible obesogenic factors include excessive food intake, lack of exercise, insufficient sleep, antipsychotic drugs, late pregnancy and some environmental pollutants.

(LDA,2006). The main idea was to control and command a small portion of the community, started with a sustainable school food program and encourage people to consume more locally-grown food. This particular strategy becomes successful mainly because of the implementation of the policy. The city authority explicitly said,

“The cost of improvements to London’s food system cannot be met by the public sector alone. It will be vital to maximise the input and impact of the private sector, as well as voluntary organisations and, of course, individual consumers, on an equitable and enduring basis”. (LDA, 2006, Pg. 103).

The policy regulated the acquiring area of the food and vegetables. It said that the food in the local market should be procured from 100 miles radius of the city, and should serve the ethnically and socially diverse people of the city. Thus it is clearly promotes sustainable consumption, but also considers the social and cultural values. The affordability of food increases as locally grown foods started to enter people’s kitchens (Morgan & Sonnino, 2009).

Similarly, New York city Senator Clinton, 2008 introduced, ‘Healthy Food for Healthy Lives Act’. This policy also aimed to encourage consumers to buy locally grown and sourced products and make it more inclusive; the government defined that the product should be produced, distributed and marketed without travelling more than 400 miles (Morgan and Sonnino 2010). This regulatory policy has been implemented to force supermarkets to sell more locally produced food. The city of New York is unique in setting in case of social cultural and economic statues, where more than half of the population is affected by obesity and overweight. At the same time, more than 1,300,000 people are suffering from food insecurity (Bucher et al. 2016). The policy came into existence with the notion that encouraging local food consumption means consumption of nutritious, less processed food, but they largely ignored the idea of

access to such locally produced less processed food – as most of ‘fresh food’ is much costlier than ‘junk food’. In this context, the New York City Food Coordinator said that,

“There are two interrelated food policy issues that are really important to the city of New York: hunger, or more precisely food insecurity, and obesity. [...] There is a strong sense that poverty, food insecurity and obesity are very much related issues. [...] We are talking about hundreds of thousands of people that do not consistently have confidence that they can put food on the table”. (New York Food Coordinator, Speech given om 2016).

In this scenario, the definition of ‘sustainability’ and ‘localness’ in food consumption has been contradicted at various levels. This distinctive challenge made policymakers to think about how to change the “rhetoric of sustainable consumption”. This particular policy, rather than only targeting ‘consumer behaviour’ as a way to achieve sustainable consumption’; emphasizes the need for ‘simultaneous interventions in the production, distribution, storage and retail of food’ (Evans, McMeekin, and Southerton, n.d.).

Some policies directly affect what we are put onto our plate. Those direct regulations are mostly either information-based policies, i.e., authorities seek to influence behaviour by using information instrument to change consumption patterns. In their study, Welsh et al. (1993) showed that after the U.S. Department of Agriculture and the U.S. Department of Health and Human Services intervened and enforced the policy of proper labelling of food and advised healthy choices in food consumption. Due to this, there was a reasonable decrease in consumption on fast food. Similarly, U.K. imposed legislation for labelling sustainably grown vegetables and dairy or poultry products, and the amount of resource (such as water, energy, and land area) used to produce the product (Temme et al., 2020) which influence people to buy more sustainably grown local foods.

So, from the above discussion, it is clear that to stimulate sustainable food consumption, the authority/government should integrate different policy domains – because in today's world, today's food policies are only concentrated in production, economic viability, and food security. But the policy should address – socio-cultural-technical aspect, political system, and role of social media.

2.4 India: Policy (?)

As India is emerging as one of the fastest growing economy in the world, and with this there is significant increase in urbanization, per capita income, which leads to change in lifestyle and consumption pattern (World Bank 2012). Mittal (2008) in her paper, Demand and Supply Trends and Projections of Food in India said that, there is mixed evidences that there is an increase in per capita food consumption in India, both in quality and quantity (Mittal, 2008). She in her paper also pointed out that, with increased income, the middle and high-income urban consumers become more conscious about food choices, there is a increase demand of organic food (Mittal, 2008). The state-led eco labeling scheme Ecomark become popular in case of recognizing sustainable food production, but the broader picture in India's sustainable food consumption is missing.

In 2015, the Indian government signed the Sustainable Development Goal and, in 2016, the Paris Agreement to reduce the impact of climate change by reducing greenhouse gas emission. In the same year, the Government of India set up a committee to monitor and evaluate SGD goals. The National Institute for Transforming India (NITI Aayog, formerly the Planning Commission) become the front runner in implementing and evaluating the goals. But none of the policy mapping or evaluation didn't mention which of these programs are relevant to the food system, either in production on in consumption scenario. Apart from that, there is no

indication of how influential these policies are and the extent to which environmental sustainability has already been integrated into existing or drafted food policies in India.

Brown et al (2021) pointed out that only a few food system policies in India directly aimed at the environment, and SDG 12, which talks about sustainable production and consumption; and SDG 13, which mainly focus on climate change. In this paper, the authors also pointed out that, among these 52 policies related to the food system, only 0.7 per cent of the budget was allocated to a quarter of the policies. These 12 policies are directly linked with the National Action Plan on Climate Change, which spread across three different ministries. The only policy directly focused on production and consumption is SAMPADA Yojana (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters); the main aim of this policy is to increase efficiency, minimise waste, and maximise profit along the food supply chain by providing ‘modern infrastructure facilities’, such as cold food stores to support food processing and distribution – making the system more environmentally friendly in nature. Food policies related to food subsidy, school meal or social assistance budget areas and environmental sustainability are not addressed. Apart from that, there is nothing mentioned regarding sustainable consumption in any of these policies.

Only in recent time, the National Mission on Sustainable Agriculture (NMSA), a part of a larger inclusive policy, the National Action plan on Climate Change and Human Health (NAPCCHH), was the only policy trying to integrate sustainability into food policy. This cross-ministerial policy tied the Ministry of Environment, Forest and Climate Change and Ministry of Agriculture to implement a series of more minor policies targeting farmer welfare, encouraging sustainable agriculture using climate change resilience and indigenous crops. Both the ministries often mentioned this mission, indicating a degree of sustainability integration,

“Mission on Integrated Development of Horticulture will work closely with National Mission on Sustainable Agriculture towards development of Micro-Irrigation for all horticulture crops and protected cultivation on farmers’ field.” (MoEFCC, 2017)

In the same spirit, the state governments took the opportunity and formulated state exclusive policies to promote sustainable agriculture and production. It’s worth mentioning that, though they didn’t focus any policy on sustainable consumption but push for indigenous crops production and include that in mainstream food. In 2018, Orissa State Government started *Odisha Millet Mission*. To popularise the attempt, they added millet to school meals and government canteens, simultaneously campaigning about the goodness and nutritional value of the crop. As a result, there was a significant increase in the production of millet across the state. There is clear evidence of an increase in the production of millet (finger millet + small millet) in Orissa. In 2016-17 the production was 5.79 q/ha and in 2017-18 the production increased to 12.72 q/ha (NCDS, 2019). Even though there is a sharp increase in the production of millet, the consumption of finger millets in India declined by 47 per cent. In comparison, intake of other small millets fell by 83 per cent in the last five decades, according to DHAN Foundation. Though the policy helped increase the production of this sustainable crop – climate resistance and high yield indigenous crop still regarded as one of India's lowest consuming food grain.

It is evident that policy can be used as an instrument to influence people’s behaviour towards certain choices. But policy is not the only factor that governs the food choice/consumption habit of a consumer. There are other influential factors that shape the food consumption behaviour and policy formulation and implementation in various national and regional contexts. Now the question is what all other factors influence change in behaviour in sustainable food consumption.

2.5 Society as a decision influencer

There is a typical English proverb, ‘don’t build your fences high, build your table long’ – which indicates that sharing a meal with society, i.e. with friends and family, is regarded as a noble and common activity. Higgs (2014), in her paper pointed out that, much of our eating happens in a certain social context, and as a result society has an influence in our food consumption decisions. Hermen et al (2003), argued that the presence of other diners in a setting increase the consumption of compared to eating alone. This ‘social- facilitation’ of consumption has been well documented in various research studies. But why do people follow certain social norms? Higgs et al (2015) in their study (conducted in a social laboratory) showed that there are possible two reasons to follow certain social standards; first and foremost, following certain norms will increase the chance of being affiliated with social groups *and being liked*. The second reason could be expressed as, *many felt that following a norm results in eating that is correct*. They also emphasise most of these traits are associated with need for affiliation, such as self-esteem and empathy. In another social study, researchers observed that people change their eating habits or behaviours when they are in certain circumstances to create a version of their public image (Robinson et al, 2011). They also concluded that people tend to affiliate themselves with certain stereotypes and patterns to express a definite likeable impression of themselves while consuming food or buying a food product. On the same note, Mr M Karthikyan (2016), in an interview with The Hindu, said that, in India. However, the production of millet increased almost double, but the social affiliation of the grain makes it unpopular. According to the DHAN Foundation (2015), ground-level survey, millet is affiliated with poor people’s food, creating a resistance to include it in dietary habits.

Similarly, this social status of food and consumers affect food choices. Harmen et al. (2015) showed that people tend to be part of certain social ‘group’ – with the group, the individual perceives their choices as the social perception of ‘out-group’ regarded as low status. To

constantly be part of the group, individuals change their preferences. A study was done in the UK (not a controlled environment), showed that individuals to part of 'healthy sustainable' group change certain eating habits, such as consuming less red meat and buying more eco-label and locally grown vegetables as a part of their daily life (Salazar et al. 2012). "Food consumption plays a pivotal role in the economy and the health of individuals. Foods and meals, in addition to sustaining life, also have many functions in society, such as human bonding. The purpose of our study is to present a qualitative research method to show the role of food consumption in the culture of several ethnic groups, and to introduce the ways in which cultural factors influence eating habits and local food supply conditions. In the first part of the research, the sample was a mix of multiple nationalities. During our investigations, the main questions were: What do you think about the culture and value food consumption? What kind of food do you consume the most? What differences do you find in the habits of different ethnic groups, especially regarding their eating habits? In the second part, we asked the main actors of the local supply system (restaurants, buffets, shops) about the ways they track the demand of foreign students. Our results have been implemented into two different SWOT matrixes. We can conclude that such research on food consumption attitudes and community behavior is essential. Most of the interviewed students are interested in comparing their diet and cultural traditions to those of other nations and prefer local foods. The study proved that eating habits in Hungary have an impact on the eating habits of international students, and they changed them from several perspectives. The study found that dietary choices are complex decisions that have a significant environmental and social impact, but we need to add that thanks to the strong cultural background, the students can keep their sustainable eating and community values abroad, which can also strongly influence the development of the local food supply practices. The Role of Cultural Factors in Sustainable Food Consumption—An Investigation of the Consumption Habits among International Students in Hungary (Nemeth et al. 2019).

So, from the evidence, it is clear that, societal norm has a widespread effect on food consumption; specially presence of other people has a powerful effect on what we are putting in our plate. Social scientists pointed out that the main reason behind it is that the social bond and centuries developed skill of learning behaviour from others; we feel approval from others rewarding and disapproval aversive. They are a powerful influence on behaviour because following (or not following) norms is associated with social judgements. Norm following is more likely when there is uncertainty about what constitutes correct behaviour and when there is greater shared identity with the norm referent group. Social norms may affect food choice and intake by altering self-perception and the sensory evaluation of foods.

2.6 Culture as a decision influencer

The most important elements of culture are language, religion, values, attitudes, customs and different norms of the group or society. When we think about cultural models, we interpret different combinations of these elements.

Aspects of sustainable or healthy food consumption often change and depend largely on the ethnic composition of a given community. So, the question is: how do cultural influences affect these processes in global systems? The result of the research is that cultural influences have an impact on the consumer environment. A study led by Nemeth et al (2019) on cultural factors on sustainable food consumption among international students in Hungary showed that a major part of the student changes their meat consumption pattern in the host country due to 'religious beliefs' and concentrated on more green vegetable consumptions (Nemeth et al. 2019). In comparison, a section of the student changes their consumption pattern for more socially acceptable. A similar situation arises in many cases. In India, a certain part of the country believe 'cow' as the deity and forbid eating meat. So, traditionally the consumption of vegetables and other products are high, which in certain ways can be regarded as sustainable

consumption (Kiran et al. 2011). For the research purpose, sustainable consumption also considered the locally grown and available food. In that scenario, India's island state, where growing vegetables or other gains is a challenge, fish (not the endangered listed) are more sustainable than green vegetables. So, in that place, people with same religious belief practice different food consumption pattern.

2.7 Challenges

Despite increased public awareness of the topic, the strong commitment of governments and businesses, the various declarations and guidelines and the great research effort by scholars of different disciplines, no progress has been made in the direction of more sustainable consumption patterns. As early as in 2005, Fuchs and Lorek (2005) entitled their work in the field of sustainable consumption “Sustainable consumption governance: a history of promises and failures”, pointing the finger at the ineffectiveness of action taken by policy makers. More recently, a large number of published papers have clarified the causes of such a failure. Thøgersen and Schrader (2012), over the last three years various journals have published special issues analysing the causes of the scant progress in the field of sustainable consumption. To date, there have been given many explanations of why consumption patterns in modern society are still far from being sustainable. It is possible to quote three major learnings, which are particularly important for the analysis of sustainable food consumption trends: the failure of market and economic incentives to promote sustainable food consumption; policy makers inability to acknowledge social and cultural aspects in creating or implementing policies; and most importantly the lack in voluntary behavioural change of consumers. When designing consumer policies, it is generally taken for granted that the greater the information consumers have on the environmental impact of their current consumptions and on “green” alternatives, the more they will switch to sustainable consumption. Instead, it has been documented that this is often not the case. A knowledge-to action gap exists to such a point that the knowledge and

the awareness of environmental problems may not be sufficient to change consumer behaviour and lifestyles. This gap depends mainly on three factors. Firstly, there may not be adequate sustainable consumption options; these might be unattractive, due to dominant tastes and social norms, too expensive, or requiring a high “purchasing effort” (i.e. hard to reach). Secondly, consumers might not be adequately motivated to change their habits. Consumption decisions are influenced by a multitude of values and criteria competing with environmental and social values, and sustainability may rank low compared to competing aims. Consumption is strongly influenced by socio-economic conditions, leading to a conflict between personal values and social expectation (Gastersleben et al., 2002). Furthermore, business communication strategies often confuse consumers, soliciting purchasing motivations which contrast with sustainability. When the informative and socio-cultural frameworks become too complex and imbued with contrasting opinions and value judgments, consumers tend to stick to dominant habits, unable to make radical changes.

Chapter 3: Theoretical Framework

So as the literature progress and it is clear that change is behavioural habit is controlled by a series of factors. Earlier, this area of research was the domain of economists and industrial ecologists, primarily to investigate the habit in food consumption to model and come up with empirical evidence to measure the effect of diet on the environment (Vinnari, 2012). This kind of input-out models of production and consumption showed how dietary changes also have an effect on the global economy. Nevertheless, the introduction of such dietary changes in sustainable food consumption is a challenging political task (Dagevos et al., 2013). Fuchs and Loreck (2005) argued that a strong, sustainable consumption approach, which applies in the case of radical dietary changes, is highly unpopular both with consumers and businesses. Discussion of eco-efficiency and green innovation meets general consensus, but when it comes to consuming (and producing) less, enthusiasm disappears. Moreover, even more than other consumption habits, dietary habits are influenced by rigid social and cultural norms, together with individual psychological factors, which can hardly be changed by public intervention. In particular, the greatest obstacle to dietary change appears to be the moral theory endorsed by modern societies and policymakers alike.

3.1 The consumer perspective

Vermir et al (2006), in their paper, pointed out the three most important factor to understand the consumers perspective in case of consumer behaviour. They pointed out three major traits of consumers intention in choosing sustainable food products – the basis of these traits is taken from Jager’s (2016) *consumer behavioural model*. These four main trains can be categorized into three sets;

- the first set consists of personal needs, personal and cultural value and motivation,

- the second set more decision-making attitude and perception towards consumption behaviour, whereas,
- the third set is more knowledge-based, which is information and knowledge of the product, and
- the fourth set is majorly focused on behavioural control (Vermir et al, 2006).

This particular study considers these consumers behavioural model as the theoretical framework for the study. The following framework is adapted from, Vermeir and Verbeke (2006), for consumer behavioural study:

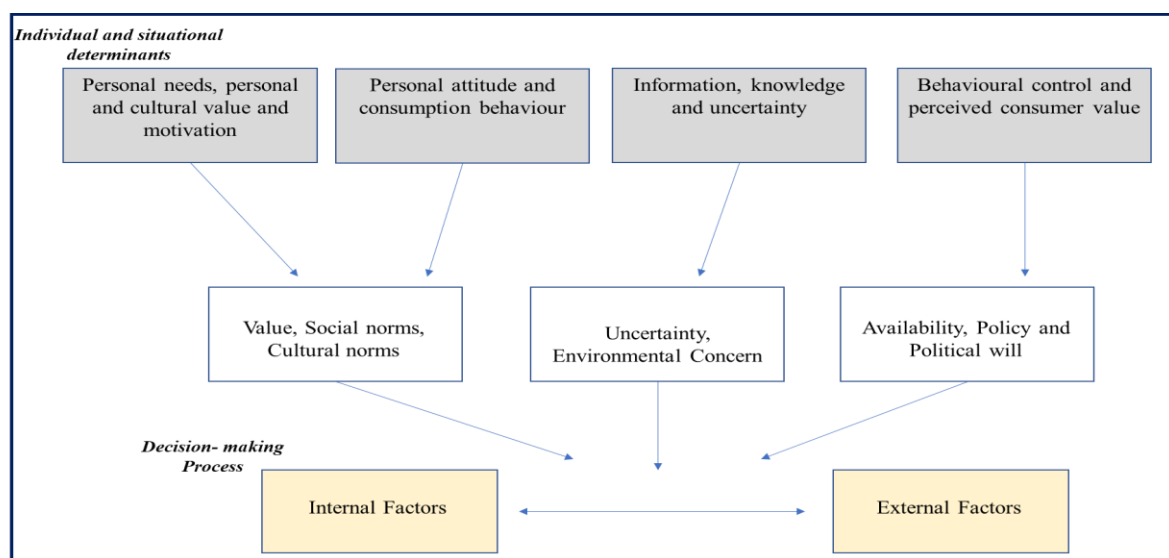


Figure 1 Consumer Behavioural Framework

3.1.1 Personal needs, value and motivation

Human believes, and values are mostly shaped by social belief, society's approval of certain behaviour and norms. Value is the driving force behind motivation, which influence people's decision making choices (Burgess, 1992). Like, personal values play a more important role in consumers' decision in product choice or brand choice decisions (Carlton, 2010). For example, people who believed that as a human they must protect the environment, and for this reason, they will buy more environmentally friendly products (Valera, 2013). So, this personal value or belief or emotion drives them to make certain choices. But, these values and motivation vary

in certain intensity. For instance, to make an ethical choice, in some cases buying sustainable products, people are more driven by values than consequences (Vitell et al. 2001).

In many cases, making these decisions majorly motivated by self-importance, by putting oneself as a higher rank than others. Jager (2000), in his study, pointed out that to seek the importance or validation is a specific kind of motivation for people to make certain decisions in consumption. Like, the general notion, the value of *universalism, benevolence, self-direction, honesty, idealism, equity, freedom and responsibility* are seen as the core value of sustainable consumption. Whereas *power, hedonism, tradition, security, conformity, and ambition* are regarded as the fundamental characteristics of unethical or ‘un’ sustainable traits of consumption (Schwartz, 1992). In the same context, Thogerson (2001) argued that, these values related to sustainable consumption might be effective in the long run if one can institutionalize and implement properly. He in his paper also pointed out that, in the short run the sustainable consumption values are mostly tied with habits, selective attitude, opportunities and preferences.

3.1.2 Attitude and Consumption Behaviour

It is clear from the previous set that a positive approach towards sustainable products could be a good baseline to start promoting sustainable consumption. A study done in the UK showed that, on average, 30 per cent of consumers shows a positive attitude towards sustainable products (Vermir, 2006). In that study, it has also been observed that those consumers pay particular attention to packaging, the origin of the food product, if those products are genetically modified or not, eco-labelling and if the production of the product needs a lot of chemical fertilizer or pesticide or not. The general perception is that sustainable food products are synonymous with organic food product, which connotes the idea of more tasteful, higher in respect of quality, safe and fresh, more beneficial to health and the environment (Vermier,

2006). At the same time, Vermier and Verbeke (2006), in their study, also pointed out that but there is also a negative attitude tied with sustainable food, as it considered as costlier than other mass-produced food and not easily available. Nonetheless, even though consumers favour buying sustainable food items, but become more passive in case of affordability and convenience (Minteer et al., 2004). The gap between this positive attitude and actual purchasing behaviour is complex, and it depends on a variety of motivation that influences the purchase decision.

3.1.3 Information Knowledge and Uncertainty

Various studies have shown that information regarding food ingredients on the packaging is considered an important factor in case of making a purchasing decision. Temme et al. (2020), in their study, pointed out that, since the US Food and Drug Administration (FDA) introduced, Nutrition Labeling and Education Act (NLEA), there is a decrease in high sugar and sodium content food. Similarly, UK's Carbon labelling in food products encourages consumers to buy more environmentally friendly products. But often, these advertisements of environmentally friendly products are poorly communicated to the consumers, so they are not able to influence the consumer's behaviour. Verbeke (2005), in this study, argued that in most cases, consumers were unaware of the production system (agricultural system) and the processing of food, and this lack of information mostly affects their decision-making process.

In some cases, this information about food products available in such complex and contradictory ways that consumers become uncertain about which product to choose (Dickson, 2001). The vast knowledge gap in choosing sustainable food products can be attributed to credence, which means consumers personally unable to evaluate, put much trust in the source that it claims to be sustainable. This type of uncertainty makes consumers to rely on more social information, which means consumers are mostly influenced by other consumers purchasing

decisions. Verbeke and Viaene (1999), also bring out that dichotomy of consumers knowledge and perception of a food product. An example can be drawn in this situation, locally green vegetables are regarded as sustainable food products with lower environmental effects. But if a community residing in an island, where freshwater is scarce, the cultivation of those vegetables may not be regarded as sustainable, for that island consuming locally available fish (excluding endangered species) will be more sustainable. But, in some cases, this knowledge gap leads to uncertainty in decision making for the consumers.

3.1.4 Behavioural Control, availability and perceived consumer value

The last potential determinants of consumers decision making related to the availability of sustainable food product, perceived knowledge and behavioural control of consumers. Behavioural control can be defined as, 'ease of difficulty of obtaining or consuming specific product.' Virmeir and Verbeke (2006) in their paper on sustainable consumption mentioned that, sometimes consumers has higher motivation in purchasing sustainable food but the availability of such product is inadequate. They also pointed out that, the product price and the inconvenience are the bigger barrier in case of attracting consumers to buy sustainable or 'eco-friendly' products. Robinson and Smith (2010), in their paper on behavioural change in consumption argued that, Perceived Consumer Effectiveness (PCE) has a bigger role to play in choosing and buying sustainable food items. PCE can be expressed as the, consumers personal believe that their personal effort can contribute towards solve a bigger problem. High PCE has an effect on actual purchase, this belief motivates them to shift their consumption to sustainable products. The authors also argued that, in order to change consumer's behaviour, it is necessary that, their personal behaviour has an effect on environmental degradation or making environment better (Robinson et al, 2010). In this case, policy could play the instrument incase of rising awareness among consumers to choose more sustainable food choices.

3.2 Narratives of Sustainable Consumption

As these theories explained the consumption side of the sustainable food part, now for the research purposes the production side of the theory will be introduced, as how different ideas of sustainable production can be categorized into broader narratives that inform people's understanding of sustainable food practices.

Since the birth of environmental ethics in the 1970s, several ethical perspectives have emerged to explore human-environment interactions, to set the background for the data analysis, here the focused area will be modernization vs traditional environmental ethics. The field of ethics in the environment emerged in the 1970s; with this field's inception, there have been several theories to explore the man-nature relationship (Colyvan et al., 2009). As a part of the study, we try to understand how these ethical theories can be defined in a sustainable consumption scenario. Vinnari et al. (2012), in their paper, *Sustainability of diets: From concepts to governance, Ecological Economics*, showed the interrelated connection between ethics, sustainable diets and modernity. Higgs (2014), in her paper, simplified the concept and divided it into two distinct categories – the first one is a moral theory, where she talked about *deontological vs instrumental ethics* and *late-modernity vs pre-modernity*, which basically looked into the unique characteristics of how moral theory moved in the cultural and institutional context of late-modernity and pre-modernity. Vinnari and Tapio (2012), in their paper, tried to put these categories into five distinct paths, i.e., *deep ecology, deep modernization, preservation thinking, ecological modernization and green* (Vinnari and Tapio 2012).

Each of these five categories or path are mainly explained on the basis of four different attributes; the first and important one is moral theories, followed by economic theories, and the latter two focused on the type of diets and how the food has been produced. These five distinct

categories' matrix shows that deep ecology and preservation thinking are more inclined towards pre-modernity or traditionalism, where deep modernization, ecological modernization, and green revolution are more inclined more towards late- modernity. The matrix has been adapted from Vinnari and Tapio (2012) work on behavioural change and environmental ethics, and further modified for this particular research purposes.

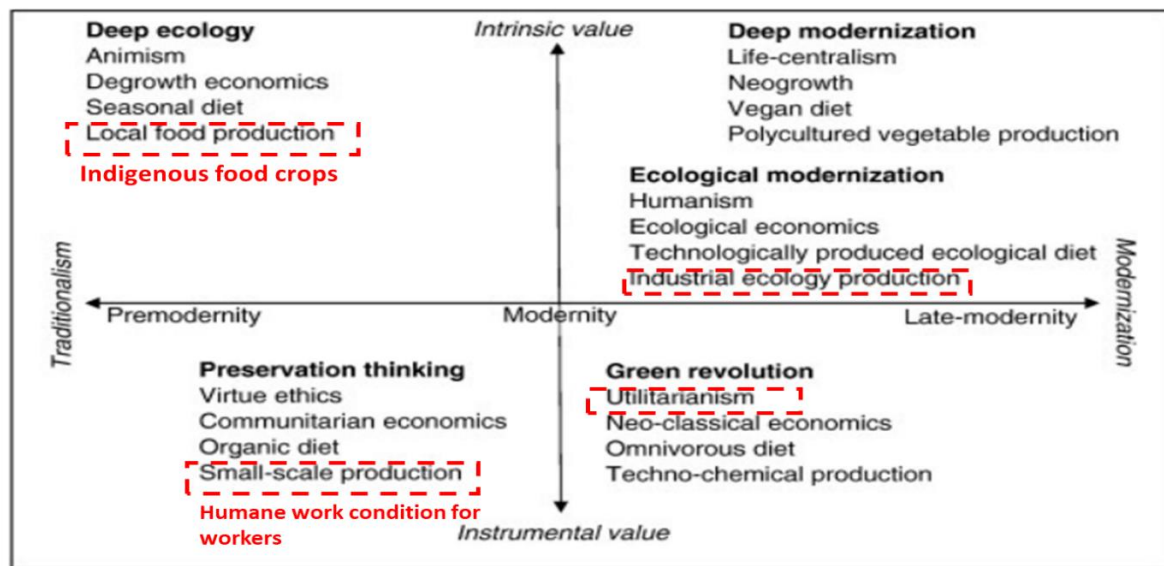


Figure 2 Environmental Ethics Narrative and Sustainable Food Consumption Matrix

The production and consumption both varies from intrinsic value to instrumental value. In intrinsic value, the main focus will be on local food production, and for the study purposes, indigenous food crops have been added. In instrumental values, the main subject that has been emphasized is techno-chemical production. To understand both the standpoint, it is necessary to define the basic concept of intrinsic value and instrumental value. According to environmental ethics, intrinsic value is synonymous with ‘inherent’ value, which means ‘the value an entity has itself for what it is, or as an end (Sandler, 2012). Whereas, the instrumental value can be defined as ‘the something has as a means to a desired or valued end’; for example, it is the value that can be measured as a resource, like, ecosystem services as a source of recreational, aesthetic or spiritual fulfilment (Sandler, 2012). So, in other words, instrumental value is putting a price on every environmental value. Deep ecology is an internal part of

intrinsic value, the embedded value of local food production and indigenous food crops, which value the local nature and knowledge. Whereas the instrumental value stresses more on the use environment as a product and techno-chemical production system, and exploitation of nature is an integral part of it, the green revolution² is a part of it (Zahaf, 2015).

From the modernity era to late modernity, individual rights and democracy have been mainly emphasized. To practice individual rights and democracy, one of these three paths (green revolution, ecological modernization and deep modernization) should be selected.

The green revolution is the path consistent with the neoliberal ideology, endorsing neoclassical economics and a business-as-usual scenario. Being based on utilitarianism could be the new way of dealing with problems of sustainability. Utilitarianism theory said that actions should maximize happiness and well-being for each individual. As it emphasizes consequences, it said that whether actions are good or bad will depend on their outcome. As humans are social animal, they tend to put themselves on higher moral ground than others, with the thought that their actions towards the environment should bring maximum joy to society. In the case of policymaking in the consumption of sustainable food products, this consequence-based moral theory can be endorsed to divert people to consume less environmental food products to more environmentally friendly food products. When choosing between these remaining paths, deep modernization is definitely the one that is fully consistent with sustainable food consumption since it assumes a plant-based diet and polyculture vegetable production that enables biodiversity to be sustained. “In deep modernization, technological modernization is seen as part of the solution to the environmental crisis, but a value change in people's attitudes towards

² The Green Revolution, or the Third Agricultural Revolution, is the set of research technology transfer initiatives occurring between 1950 and the late 1960s, that increased agricultural production in parts of the world, beginning most markedly in the late 1960s (Hazell 2009)

other life forms is also emphasized; the question of life is central, and there is an emphasis on the inherent value of production animals (Vinnari, 2010)”.

Furthermore, the path of deep ecology is highly regarded in the case of formulation and implementation of policy in sustainable food consumption. The philosophy of deep ecology stands on the principle of deep-seated respect for all life forms. It subsequently offers a radical agenda that replaces the ‘ideology of economic growth’ and brings the concept of ecological sustainability (Akamani, 2020). With this philosophical approach, sustainable food policymakers bring the idea of the introduction of indigenous food crops into the mainstream food production system. Integration of ecological sustainability with the current food production system will be beneficial for the environment and be beneficial for human health. The idea also endorses the local food consumption, which is an essential part of sustainable food consumption. As more locally-grown food will be on our plate, the environmental cost of transportation will be reduced. For this reason, New York and London food policy mentioned that supermarket should not be allowed to procure food more than 400 miles away from the city (Reisch, 2009).

Now, as the trend in consumption always swings between per-modernity and post-modernity, environmental theories and ethics also change. In modernist thinking, ecological modernization took the limelight in environmental ethics. The core argument of this theory is the system of production will be benefitted in the long term if its move towards environment or environmental sustainability. For the research purposes, the key element from this broader theory we took only the industrial ecological production. However, as many theorists argue that, ecological modernization’s under-conceptualization of consumption (Carolan, 2010), but, as sustainable consumption defined that environmentally sustainable production is an important component of sustainable consumption. The counter argument can be, if the crop in

growing/ produced in ecologically sustainable way, with minimum carbon footprint the consumer buying that product will have lesser footprint than that of his counterpart.

From the above discussion, it is clear that, both environmental ethics matrix and consumer behavioural model will compliment each other and will evaluate the collected data. As, in some cases environmental ethics are directly influence consumer behaviour and vice versa.

Chapter 4: Research Methodology

This chapter explains the methodology used to conduct the research. It includes research questions, qualitative and quantitative methods, population and sample and development of the research instruments. The present research is focused on exploring and tries to have a clear insight to understand the consumers' attitude towards sustainable food consumption, primarily based on dietary preferences and socio-cultural and political influences through a mixed-method approach.

4.1 Research Design:

This research tried to explore the answers based on the following research questions in the context of sustainable food consumption and behaviour change:

- How do internal factors such as environmental attitudes and values influence food consumption decisions and practices?
- How do external factors such as income, social, and cultural factors influence (sustainable) food consumption practices?
- How, if at all, do local, regional, and national and regional policies shape food consumption in an urban setting?

The broad scope of this research is approached by consisting both qualitative and quantitative methodologies. Hence, mix method approach has been adopted to understand the influence of primary factors and the decree to which they change the food consumption pattern in cities. This study tried to look into consumers' knowledge about food policies and their effect on changing food consumption pattern.

4.2 Study Area Profile (Delhi):

Delhi was selected out of India's total 29 states for this study. It has been chosen based on the rich cultural heritage. The study site is multicultural in nature having high cultural differences, people have immigrated from different other places to settle in this versatile city. It consists of

three different states. People are free to express their will and demonstrate their hostility towards regulations, like banning certain food items.



Figure 3: Source: <https://www.mapsofindia.com/maps/delhi/>

4.3 Pilot Study

A pilot study or pre-testing technique is considered a technique used to test instruments developed for the data collection, i.e., interviews and questionnaires, before collecting the data from the chosen sample for the research. After a careful analysis of the available literature, both the interview guide and questionnaire were developed. After this, a pilot study was conducted with a particular sample to finalize the instruments.

Further, the research instruments were revised again and again. The questions that were not providing detailed information were excluded, and other valuable questions were added that provided much more detail related to the targeted population's experiences. During the interview session, the researcher observed that it is better to probe the participants at their ease rather than strictly following the interview guide's order. The researcher actively investigates the participants to have more enriched information. The research instruments were modified with the critical issues in each interview and questionnaire filled by the participants.

4.4 Gender and environmental Consciousness

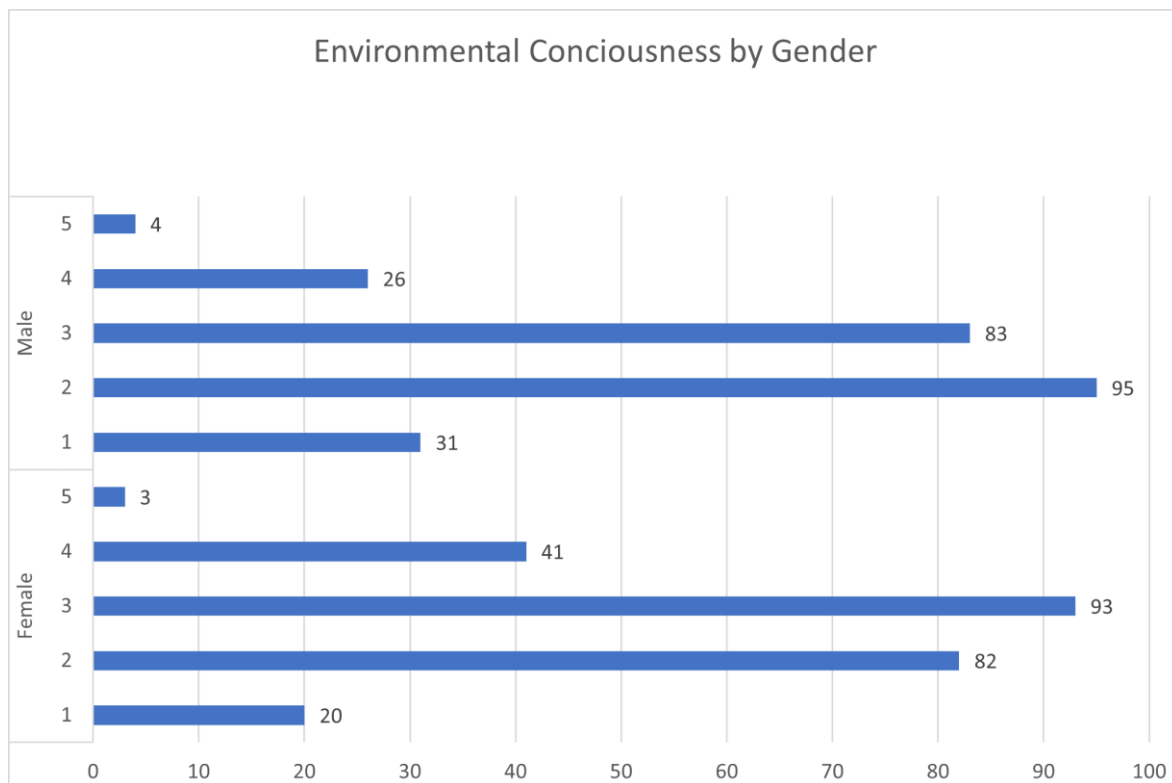


Figure 4 Environmental Consciousness and Gender

For the study purposes, the consumer groups were divided by gender, respondents were given option to choose male, female and prefer not to say. Most of the respondents choose their social affiliation either male or female as there was not considerable number of responses in ‘Prefer not to say’ that category was discarded. From the Figure 4 it is evident that, both the gender has considerably equal environmental consciousness. But, in case of female respondents there is a considerable high response in 3 and 4 scale category, whereas in male category it was low. It should be noted here that, during survey, it had been tried to get equal number of responses from both the genders, i.e among 485 respondents 237 were female and 239 were male.

4.5 Age and Environmental consciousness

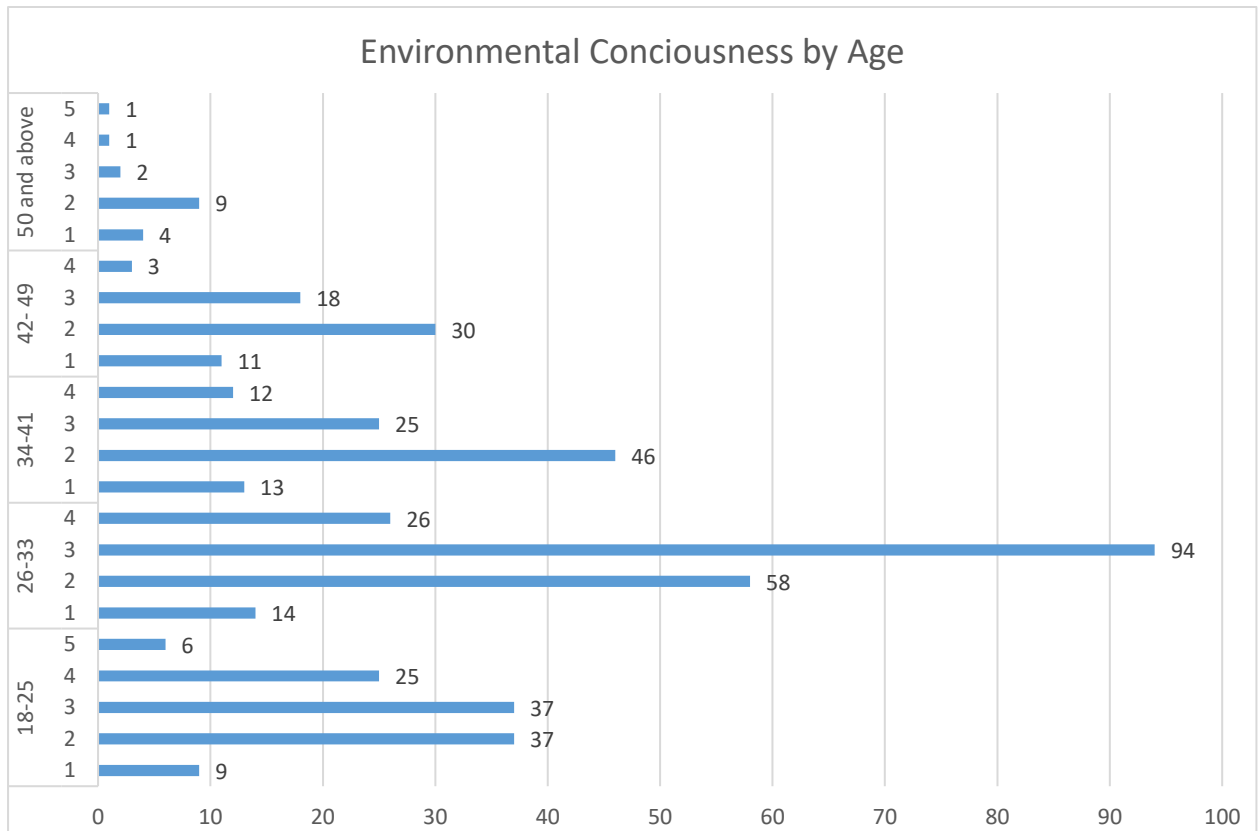


Figure 5 Environmental Consciousness by Age

In this section, I tried to understand, how people of different age considered themselves as environmentally conscious. Figure 5 showing the age-wise environmental consciousness, and 26-33 age bracket are more environmentally conscious than others. But, at the same time, in case of questionnaire respondents, most of the respondents are at 26-33 age bracket.

4.6 Education and Environmental priority

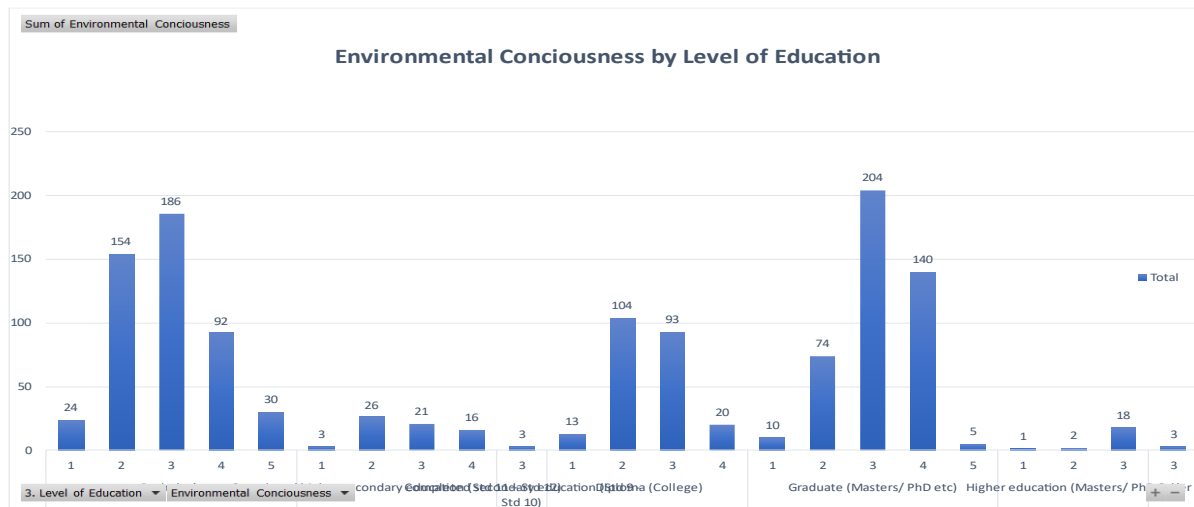


Figure 6 Environmental Consciousness by Level of Education

In this part, I tried to portray if there is any influence of education on environmental consciousness. From the Figure 6 it is evident that, people with higher education are more environmentally conscious than their other counterparts. It may be the reason, that more education and awareness makes them conscious towards environment. This part will further be discussed in the main thesis discussion section.

4.7 Methods of Data Collection

The quantitative data was obtained through a questionnaire, where consumer groups ranked their preferences and priorities in making their selection about food. For this, the questionnaire was divided into five different categories. There were demographic factors, weekly food choices, environmental and health-related factors, socio cultural influences, policy influence, and personal idea about 'sustainable food'. The qualitative data was collected through semi structured interviews conducted from general public residing in Delhi. A respondent is a person, has common or general knowledge on surrounding matters and having opinion. It is a widely used method for collecting qualitative data (Meuser and Nagel, 1991).

4.7.1 Online Survey

Survey methods was used to collect the quantitative data. Surveys are known to produce a piece of inherently statistical information. Every method of data collection, including the survey, is only an approximation to knowledge. Each provides a different glimpse of reality, and all have limitations when used alone. Before undertaking a survey, the researcher would do well to ask if this is the most appropriate and fruitful method for the problem at hand. The survey is highly valuable for studying some issues, such as public opinions (Warwick and Lininger 1975). A questionnaire as "a method of gathering information from respondents about attitudes, knowledge, beliefs and feelings" (Polit and Beck, 2004). A questionnaire was formulated by using google forms and was circulated through different online channels. The survey had 27 number of questions to know about the opinion of the respondents.

4.7.2 Online Interviews

A semi-structured interview guide was developed for the middle-income group of people residing in Delhi. The developed interview protocols consisted of an introductory section, questions of investigation, and open-ended questions based on the literature about the topic (Creswell 2014). Most of the respondents were contacted through survey agency, a few was contacted through social media platform like Facebook and Instagram, while only three respondents were collected via Snowball Sampling. Interviews were conducted and recorded through online platforms like zoom, skype and WhatsApp. Otter was used to transcribe the interviews, later they were corrected by manually. A few interviews were in Urdu and Assamese, those were translated and transcribed manually.

4.8 Respondents:

Twenty-five participants were interviewed within the middle-income group for the city of New Delhi. Participants were conveniently selected based on their availability for an interview. A

sample of 485 people was selected for collecting questionnaire responses from the study location. The data was collected through convenience sampling technique. A consent form was signed by the participants for participating in the study.

Respondents Profiles of Qualitative Interviews from Survey Agency and Snowball Sampling

Table 1 Respondents Profiles of Qualitative Interviews from Survey Agency and Snowball Sampling

Respondent	Dietary Preference	Gender	Age group	Education	Any knowledge about food policy?	How did you hear about this survey?
R1	Omnivore	M	18-25	Bachelors	No	Survey Company
R2	Omnivore	M	26-33	Masters	Yes	Facebook
R3	Omnivore	F	26-33	Masters	Limited	Survey Company
R4	Omnivore	M	42-49	Masters	Limited	Survey Company
R5	Omnivore	M	50 above	Bachelors	No	Survey Company
R6	Omnivore	M	42-49	Bachelors	No	Survey Company
R7	Omnivore	F	26-33	Bachelors	No	Facebook
R8	Vegetarian	F	50 above	Masters	No	Survey Company
R9	Vegetarian	M	26-33	Bachelors	No	Instagram
R10	Vegetarian	M	42-49	Masters	No	Survey Company
R11	Vegan	M	42-49	Masters	No	From a friend, who

						forwarded the survey
R12	Omnivore	F	50 above	PhD	Limited	Facebook
R13	Vegetarian	F	42-49	Secondary	No	Survey Company
R14	Vegan	F	26-33	Bachelors	No	Facebook
R15	Omnivore	F	18-25	Bachelors	No	Instagram
R16	Omnivore	F	18-25	Masters	Limited	Direct Contact
R17	Vegetarian	F	26-33	Masters	No	Facebook
R18	Vegan	F	26-33	PhD	No	Direct Contact
R19	Omnivore	F	26-33	PhD		Survey Company
R20	Vegetarian	F	50 above	Primary	No	Survey Company
R21	Vegetarian	M	26-33	PhD	Limited	Facebook
R22	Omnivore	M	18-25	Vocational	No	Instagram
R23	Vegetarian	M	18-25	Vocational	No	Instagram
R24	Vegan	F	18-25	Secondary	Limited	Instagram
R25	Vegetarian	M	42-49	PhD	No	Direct Contact

This section will in general discuss about the profile of respondents based on gender, education and environmental consciousness. As for the study, I consider environmental consciousness has a central role to play in case of sustainable food consumption, along with other factors. According to Merriam-Webster dictionary (1972), environmental consciousness can be defined as, ‘marked by or showing concern for the environment’. The questionnaire asked the

respondents how environmentally conscious they are and rate it on a scale of 1 to 5, where 1 stand for the least and 5 stands for the most. Among 25 respondents, 12 considered them as strongly environmentally conscious person, rating themselves 5, while five respondents considered themselves as moderate rated themselves 3 and 4 and rest believed that environment will heal by itself and environment's main purpose is to serve humans, so as our ancestors used the resources we should also use the resources as we develop our society more and more.

4.9 Methods for Data Analysis

To analyse the qualitative data collected from semi-structured interviews, two framework, namely behavioural model by Vermeir and Verbeke (2006) and different paths towards sustainable food consumption matrix developed by Vinnari and Tapio (2012) has been adopted and modified based on research objectives. The behavioural model mainly helped to understand the four main consumer traits, which influences their decision-making process in sustainable food consumption. Whereas, the sustainable consumption matrix, help to organize the different discourses that helps to understand the sustainable and unsustainable consumer as well as production behaviour. To understand how consumers perceive sustainable food, and sustainable food consumption; it is necessary to comprehend the respondents answers in a meaningful way, which can be interpreted through the above mentioned theories. From the theoretical concept, the concept of the research was identified into four main themes, idea of sustainable food and sustainable food consumption, internal influences (personal needs and values) in decision making, external influences (social, cultural and political) in decision making, and behavioural control.

For the analysis of the collected data, two methods were followed, qualitative and quantitative analysis. For quantitative data was analyzed using Microsoft excel. The data from the survey was gathered through Google Forms and downloaded. It was further cleaned, and different

numerical values were assigned to different in the questionnaire. The data was then sorted and combined in similar categories to present it in the form of different charts and graphs.

While qualitative data was analyzed using thematic analysis. The present research first identified codes, categories, themes, and subthemes and ultimately produce a rich, detailed and coherent report on the said topic. Thematic analysis is a widely used method for identifying, analyzing, and reporting patterns (themes) within data as it organizes and describes the data set in detail and further interprets various aspects of the research topic (Braun and Clarke 2006) .

4.10 Ethical Considerations

The ethical consideration is one of the important parts of this research in case of treatment of respondents, and the data obtained through questionnaire survey and interviews. At the end of the questionnaire a column has been added that if anyone interested to give interview will be later contacted and all the interviewees were volunteered to join for the further discussion. Each interviewee was provided information regarding the purpose of the research project and complete disclosure how data will be used for the research, participants were also given choice not to answer any question they are not comfortable to; with participant's permission every interview was recorded and given the choice of anonymity. All the data used for the research stored securely. Considering the fact the research use some information delicate in societal sense, the complete secure services has been to store the data. As the research is funded by the Central European University, which is an academic institute without any political affiliation, so the result and analysis presented by the author, supported by her supervisor; has not influence by any political or other affiliation. The works of other authors used this thesis is properly acknowledged to avoid any plagiarism issues. The research design has been carefully reviewed by the ethics board of CEU.

4.11 Limitations

The study was conducted with participants living in India. However, due to the 2nd wave of COVID 19, the researcher was unable to collect the data face to face from the participants. This situation made it difficult for the researcher to observe their body language and expressions. Initially, for the research purposes, the researcher contacted WWF India, but after initial talk, none of the respondent affiliated to the organization contacted.

For the quantitative data collection, a local survey agency was contacted and hired, though the agency worked their best, but due to Covid-19 regulations and increased infections the survey cost increased from the initial estimation. Moreover, the cost was more than the university grant that had been obtained. For the same reason, different social media platforms were used to collect responses, which might be considered as a shortcoming. Apart from that, as mostly the quantitative data was been collected through various electronic media, most of the respondents were 26-33 age bracket and there are fewer responses in other categories, which may affect the result somewhat and counted as shortcoming.

For qualitative data collection, as many respondents answered in language which I am not accustomed with, for the reason few cultural differences was arise, which might had been avoided if in person interview was been conducted. For example: for many participants, the meat consumption, they didn't consider takeout as a home meal and didn't talk about their weekly meat consumption. For a few participants, while they were outside home given very different information regarding meat consumption, than they were at their home, which gave some contradicting information.

The following chapters will discuss the main theme of the research in more detail and draw conclusion regarding the main research questions.

Chapter 5: Sustainable Food: Definition and Consumers Concern

5.1 Sustainable food where we are standing?

“The sustainable food and drink can be defined as, as that which is safe, healthy, and nutritious for consumers in shops, restaurants, schools, hospitals, and so forth; can meet the needs of the less well off at a global scale; provides a viable livelihood for farmers, processors, and retailers whose employees enjoy a safe and hygienic working environment; respects biophysical and environmental limits in its production and processing while reducing energy consumption and improving the wider environment; respects the highest standards of animal health and welfare compatible with the production of affordable food for all sectors of society; and supports rural economies and the diversity of rural culture, in particular by emphasizing local products that minimize food miles” (Reisch, Eberle, and Lorek 2013).

Reisch et al (2017) pointed out that, the definition given by the UK Sustainable Development Commission (2005) is one of the most holistic definition. This leads to the challenge of understanding how to define sustainable food and sustainable food consumption. This chapter will analyse the people’s perception or idea about sustainable food and sustainable food consumption.

5.2 Overview of the Chapter

In this chapter the first research question (How do internal factors such as environmental attitudes and values influence food consumption decisions and practices?) is addressed. To comprehend the people’s attitude towards the environment and perception of sustainable food and how that affect their decision in case of food consumption, this chapter is thematically constructed based of different respondents’ perception. The first part of the chapter will define the concept of sustainable food and food consumption based on different consumers perspective, and in the second part will be focused on the different factors that influences their food choices. The second part of the chapter will be the set the stage for the later chapters.

5.3 Where it all started

The word sustainability is not new to people's dictionary or for their basic understanding. In 1987, the Brundtland Commission in their report first introduced the concept of 'sustainable development' and 'sustainability' (UN Brief, 2015). But the term became popular in United Nations Conference on the Human Environment in 1992, where the main principle has been established as, "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measure to prevent environmental degradation" (UNEP, 2012). Institutionally, government organisations are responsible implementing these sustainability concept into cross sectoral development. Though the concept in sustainable food consumption is mostly popularised by the UK Sustainable Development Commission. In the literature section the definition of sustainable food has been discussed, to understand the concept of sustainable food, three main sets of dimensions have been identified. Here in this section those dimensions are going to be measured based on the respondents' answers.

In the age of globalisation and industrialisation, the available food range is extensive and most of the vegetables and other seasonal items are available around the year and in some places easily available as well. This abundant choice of food makes consumers more attracted towards foreign food and less towards local and regional food choices (Sandler, 2015). As this global food system has been criticised for its extensive exploitation of environment, human rights and economies, there is a growing focus on how that can be reduced and encourage the local food system (Zahaf, 2015).

But now the question arises, how much consumers are aware about sustainable food or sustainable food consumption. Is there a common knowledge about the concept about sustainability in food consumption, apart from discussion in academia and expert level. The

first question of the semi structured interview, I tried to explore the understanding of this concept and how consumers perceived it. The factors identified through the literature review – affordability, quality, safety, health as well as minimum packaging, fair trade and safe working environment – are relevant for sustainable food definition. Analysing the sustainable food concept through the lens of each of them helped pinpoint the factor influences in case of sustainable consumption in urban India.

When in most academia and in practitioners field it is assumed that the concept of sustainable food is well known and practiced, one of the respondent (R3) break the myth with the following statement,

“Ah! Sustainable food and sustainable food consumption? Okay! Actually I never given too much thought about it, because sustainability concept you always you're always concerned also about energy efficiency in terms of you know, fuel you say or even housing. But in terms of food consumption, I would never thought and I never realized it, sustainability also applies to So, when I filled your form, then I realize myself that there are a lot of concepts, which are probably understood, they shouldn't be I should have been thinking about it more random thought about I didn't think about it early. So, I would say key this concept of sustainability on food consumption is very, pretty new to me, but it should. So, so far according to me, I cannot give you a perfect answer, but answers according to me is it should be easily available easily grown at a very, you know, economical prices and also healthy, I mean I am not only talking about price but also the food need to be environmental friendly, sustainability means environmental friendliness, as I understand it.”

This breath of explanation, it can be illustrated that, the scope and the issues related to sustainable food has largely been discussed in the scope of academia and dealt with policy makers but the consumer's side has largely been ignored. On a personal level, food consumption varies on different matters, from health safety to price of the product. As in the framework of the study it was mentioned that, price and the information about the product has a huge impact in the selection of the food items (Debru and Brand 2019). As the sustainability in the arena of energy, transportation etc has been largely promoted, but in many countries the sustainability in the arena of food has largely been ignored. In India, there is no food policy promoting sustainable food production or consumption (Brown et al 2021). The concept is

differently expressed by another respondent (R1) drawing some new set of points which can be future focal point of research,

“For me. Sustainable Food is basically about two things, rather, three things not to I will not say too much about these things. For example, it is about how much you consume. And I'm telling this because, you know, I spend a lot of my life in hostels³, and especially in government hostels, okay. In most universities, where food is a lot more subsidized. So over there, what I've observed is people, students specifically had a tendency to request for larger quantity of food and not eat it and wasted, so it would go straight. Because no one would reuse it because it was already on the table, it would go straight to the dustbin. Oh, yeah, that's what I kind of tried to tell, for me sustainable is about consuming what you need. Focusing on local indigenous crops, non-requirement of unnecessary packaging. Oh, you know, yes, for me, are three things that I for me, I usually buy food, which is more seasonal in nature. So in that case, what happens is sometimes maybe see for example, in India, tomatoes are harvested more during winters, okay? But availability of tomato or tomato or something like cauliflower. Okay, yes, which is more for winter vegetable, okay. But we haven't, you know, been getting a cauliflower in summer means it comes from a cold storage which either has cold storage, or there has been some form of preservative or fertilizers that has gone into it. Right? So I prefer to stick to seasonal vegetables in that way. You know, trying to purchase one available, which is not of that season. So it's an effort to avoid, there are two things, it's an effort to avoid preservatives and things of fertilizers in them, test one and the second thing is when I buy fresh vegetables or other products, as price does matter. And this matters for me mostly if it's a very essential thing. There are certain things that I will buy then, I try to be conscious I tried to be conscious in small ways because yes, the other thing is I prefer to buy from a local grocer or a farmer where I am vegetables have is actually sourced from surroundings surrounding smaller markets. Okay.” (R1)

These two respondents drew a comparison between the understanding of the concept of the sustainable food use the focus on health and affordability, stating that “sustainability in food is not a well-known concept, and never really give a thought about it as it not been promoted widely in India” (R3). While other (R1, R5 and R6) put more emphasis on consumption and food wastage, mentioned that, “as in many cases there are subsidised food available, people have a tendency to waste food – so reducing the food waste should be the focus point of sustainability along with affordable, healthy, safe and locally produced food”. As per DEFRA

³ Hostel: Student accommodation provided by educational institutes in India

definition of sustainable food, food wastage also took a important point of discussion (Reish, 2009).

5.3.1 Factors governing the change

For the questionnaire survey, a number of choices has been given to understand, what all factors influences a person most in case of choosing or purchasing sustainable food items. From the result, it can be seen that three main factors are given more importance than other to purchase or choose sustainable food items, naming, affordability or price, health/ nutrition factor and information available on the food items. In the later part, those factors are going to broadly discussed.

From all the conversations, for the consumers one of the most important came up is the affordability and the price of the food. As in the questionnaire, the consumers monthly income has been asked as in affordability is one of the key element of sustainable food consumption.

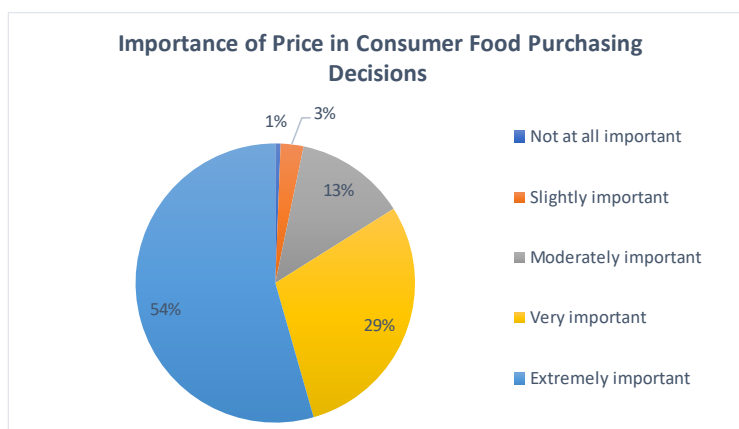


Figure 7 Importance of price in consumer's food purchasing decision

important factor.

From the Figure 7, it can be seen that 54 per cent of the respondents choose affordability as a strong or most important factor in case of buying or selecting food items; whereas only 1 per cent feels it's the least

To understand the significance of it, one way ANOVA test ('An ANOVA test is a way to find out if survey or experiment results are significant') has been done. The result is less than 0.05 which signifies that there is a significant difference in case of price affordability within the groups of different income brackets. The following table showing the result. It is necessary to

mentioned that, for the study purposes there are three broad categories based on monthly income, 1st category is people earning less than 260 euro, 260-600 euro and more than 600 euro.

Table 2 ANOVA: Price Affordability and Sustainable food Purchasing decision

ANOVA					
Price Affordability					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.892	2	7.946	7.744	.000
Within Groups	490.441	478	1.026		
Total	506.333	480			

The descriptive statistics shows that, in Delhi higher the income is people are more inclined to buy sustainable food products. In literature review, it can be seen that price plays an important role. Vermier and Verbek (2005), in their study on consumers behaviour on sustainable food consumption and purcheing decision, pointed out that, everyday consumption is heavily driven by affordability and convenience, which can also be termed into availability of the sustainable food items. One of the respondent (R15) introduced one of the interesting topic to the research, which was not initially included in the scope research arena, ‘food desert’,

“I don’t know if it is scope of your research or not. But, I really want you to highlight the concept of food desert. You know, in these remote places and also in sub-urbs where in these shops you can’t find vegetables or healthy food but at the same time you can see that, they are selling chips, Coke-cola, Pepsi, Lays what not. I mean, these are the food desert where access to healthy vegetables and fresh things are sparse but all these high calorific junk foods are available. I personally think sustainable food consumption should address this particular issue as well.”

According to Britannica dictionary, it can be defined as, “an impoverished area where residents lack access to healthy foods” (2006). Nutritionists of western Scotland in early 1990’s first introduced the term to describe ‘the poor access to the nutritious food by the habitants of local public housing’. Though the phenomena primarily occur dur to lack of substantial transportation and other built environment factors, mainly, due to poor urban planning. But the

scenario is very different in Delhi city context. Most of the areas are well connected to city transport, but due to lack of demand for the nutritious food and highly advertised fast food change the dimension of food consumption and demand (Vermeir and Verbeke 2006). In their study, it was similarly pointed out that, most of the teens and young adults prefer high calorific fast food, as they are easy available and relatively cheaper than fresh vegetables, so there is growing demand of these items rather than fresh locally grown sustainable food items, creating food desert in the city. As WHO also pointed out that, in many industrialized countries as well as low income countries, this food wealth, combined with increasingly inactive lifestyles and modern high calorific diets, is leading to rising obesity, particularly among children and teenagers, and this phenomena is higher in the lower socioeconomic groups, who has relatively low access to fruits and vegetables (WHO, 2005).

It is clear that, income and personal habits has an important role to play in selecting food items or choosing a particular food behaviour. Such varying food habit has a direct impact on environment and as well as on human health as well. The next section will broadly discuss about the factors that influences people to change their food habit from commercialized food items to more sustainable food items. Today's world food is not only to satisfy the hunger but also immensely emphasized on health and fitness concerns (Schroder, 2003). As a result, even though sustainably grown food prices is higher than others and market share is less but there is a steady demand of such food in all section of the society, in absolute term it is less but there is a relative growth in this area (Tempelman, 2004). Since, well-being and healthy lifestyle become mainstream trend, there is steady growth in the market share of health-oriented products and organically growth food items (Reisch, 2005).

Factors potentially affecting the food consumption choices:

The second part is dedicated on the question what influences consumers most to change the current dietary habits to more sustainable food consumption. From the interviews and questionnaire survey, it was clear that apart from affordability the another most important factor that motivated consumer is health. From the survey, it showed that, 45 per cent of the respondent put nutrition/health as their first priority, and if it further breaks down, 59 per cent of the total female respondent choose health as their first priority, whereas for male respondents 55 per cent select nutrition/ health as high priority in case of buying food items.

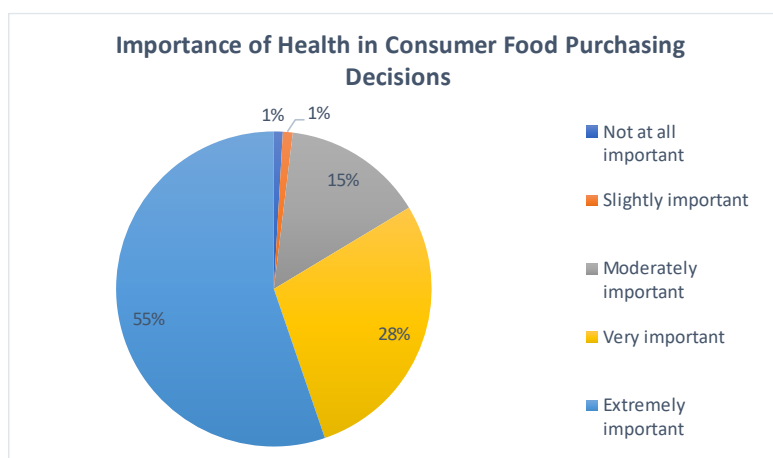


Figure 8 Importance of health in consumer's food purchasing decisoin

From the Figure 8, it can be depicted that, only 1 per cent of the respondents give least priority to the nutrition incase of selecting or buying food items.

Reisch (2012) in their paper argued that, with increasing food demand there is a growing use of pesticides, chemicals to the agricultural products and hormones to the livestock. The paper also pointed out that, early 1990's, with growing food production there is growing issues with food scandals, ranging from using of hormones in poultry farming to use of chemicals and questionable substances in agricultural products. Food fraud prevention become an important issue along the food chain to protect the health of the people and also the environment (Reisch, 2012). Consumer's confidence on food industry and agricultural sector has been shaken since then. One of the respondent (R21) pointed out that important conversation between health and poultry consumption,

"I personally don't like to consume red meat, so I started consuming poultry to fulfillment protine needs. But then I realized after a certain point of time that my period

cycle is irregular. I first thought it's because of my heavy workout. but as it continues to have more than six months, I consulted a gynecologist. She checked and said it could be related to my poultry consumption, as these days as as these days most of the most of the poultry farmer use hormone to make their chickens I mean hence bigger so they can sell more meat. she also mentioned that, this causes our body hormonal imbalance. after learning this I'm quite scared to consume any kind of poultry product. even though I am not really a big fan of lentils cause of heavy use of chemical products I started substituting poultry with lentils. I don't know how many women you but interviewed so far but I'm pretty sure most of them I mean who consumes meat might have face this problem at some point of time. I'm kind of requesting you to include this as a part of your study as well of course when you talk about sustainable food you cannot ignore these products as well. 'cause I think sustainable food also means locally available food, and sometimes it was easy to find poultry then fresh vegetables.”

This conversation brings the idea of alternative food products, for example organically grown vegetables or free range poultry. As consumers become more conscious towards sustainable food products, the developments within the food system have gradually shifted the focus of research on food system transitions from production to consumption of food. There has been much interest in the potential for consumer agency, i.e. seeing the consumer as a key player who promotes changes towards more environmentally friendly forms of production and fair conditions in the food supply chain. However, these analyses, which emphasize the growth of alternative food networks, are contested with respect to the scope and impact on food system transition, and with respect to the role of the consumers in the transition (Goodman, 2003).

5.3.2 Information availability:

In most of the western countries, specially in Europe, there is a significant number of regulations related to food- related information disclosure and information. Consumers have given information regarding ‘best before’ dates, origin, ingredients, environmental details of the product. But at the same time, product based consumer information are often overloaded and ignored (Miller. 1965). As a new trend and policies ensure that, ‘front of the package, easy to see and understanding information’, but are there any effect of these information in food purchasing decision of individuals (Hersey et al, 2011). In the questionnaire survey, the importance of information in case of sustainable food purchase decision has been asked.

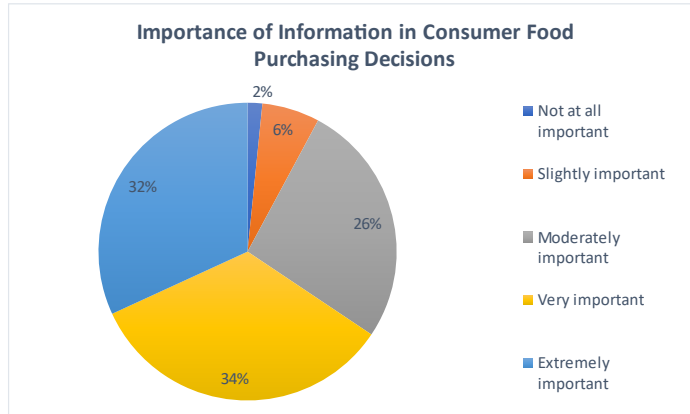


Figure 9 Importance of information in consumer's food purchasing decision

From the Figure 9, it can be seen that, 32 per cent of the respondents put information as their first priority and 34 per cent considered it as their second priority. Only 2 per cent of the respondents put information availability as least priority. From the literature study, it can also be seen

that, most of the consumer's choose their products based on the information available in the packet. It also been seen that, after putting the information regarding calorific value of drinks and other fast foods, there was a significant decrease in the sale of those items (Reisch et al, 2013).

Chapter 6: Social and Cultural upbringings

“Eating often occurs in a social context and the food choices of others and the amounts that those around us eat have a powerful effect on our own consumption decisions. We model the eating choices of our dining partners and consume amounts similar to what they eat” (Higgs, 2014).

Higg’s statement suggests that there is a significant impact of social and cultural upbringing in people’s food consumption choices. Hermen et al (2011), in their studies argued that, a person’s dietary behaviour is related to their peers approval of certain food habits or food. In literature review, it has been drawn to attention that, often a person’s choice of food change with the social surroundings. In many cases, to be in a particular social context people change their food habits for more social and cultural acceptance (Higgs, 2012).

6.1 Overview of the chapter

This chapter will examine the social and cultural influence in case of sustainable food consumption. Both the questionnaire survey and in semi-structured interviews shows that social and cultural influences are important factors in consumers’ decision making; in particular.

This chapter will address the second research question (How do external factors such as social and cultural factors influence (sustainable) food consumption practices?). In this chapter, I will put focus on how social structure or particular societal setting or cultural context influence or motivate a person’s food choices and decision-making.

The context has been set in the previous chapter which factors influences people’s food choice. Here, as discussed in the theoretical framework, social values and cultural norms, which are the part of the sub-categories of personal need, motivation and values related to society and culture and personal attitude towards sustainable consumption. The initial part of the chapter

will discuss how society influences food choices of an individual and the second part will continue with the cultural aspect of it.

6.2 Result and Discussion

Food habits on a personal level are mostly shaped by the cultural tradition, societal norms and

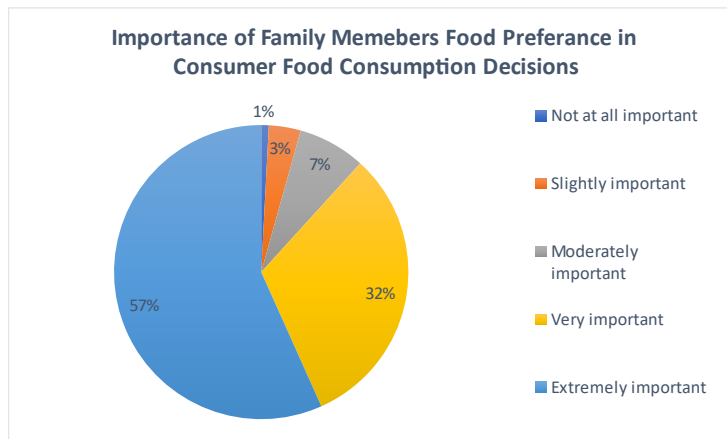


Figure 10 Importance of Family member's food preference in consumer's food consumption decision

personal experience of food consumption. Reisch (2012), in their study pointed out that, with availability of information, price and availability of sustainable food, another major factor that can also have a significant effect on sustainable food consumption is

‘house hold decision making’, apart from family tradition and other personal factors (Reisch, 2012). In the questionnaire survey, the question has been asked that, what is are the major factors that influence in decision making in sustainable food consumption. Respondents were asked to rate it on a scale of 1 to 5, where 5 is most important and 1 is least important. From the Figure 10, it can be seen that, 57 per cent of the respondents choose household decision making/ family influence has a significant role to play in case of sustainable food consumption. In this scenario it is needed to be understand the family and societal structure of Indian society. As Guhan (2007), said that, even though Indian society primarily patriarchal but household decision making still lies with the female members of the family. The same expericec in case of decision making in sustainable food consumption has been shared by one of the respondent (R2),

“Okay. So, typical Bengali diet consists of basically a rice that that is the basic necessity, and they will be a pulses, as you can see a pulse soup or lentil soup kind of

thing. And along with it, another mixed vegetable, or it can be a particular vegetable, maybe seasonal mostly. And another, there's another alternative, it's a fish soup kind of thing that you have with the gravy. So, these are the major things that goes on in a Bengali household and conditioned by it and precious really important for a Bengali household that has, so I have always grown up in this kind of a condition. And you see when I was young, I did not have any control over what I would eat and what I won't eat. Okay, I can say that, okay, I'm not going to have this particular vegetable. But it's not that I can rule out the end, change the entire menu to be a continental one or any different kinds. But now since I'm living alone, I have this freedom to eat what I want, but, I am ultimately conditioned to eat what I am eating since I was a kid. You can say autonomy on what to prefer if I want to have power vegetables, okay, it's fine. To have only vegetables without rice. But that's not possible in any Bengali means typical middle class Bengali household where the decision is mainly made by the woman in charge, technically mother or anyone who is cooking. We're the ones of the family and it has been carried out for generations, but these are the things that will give you energy and that is best for your health. And also if you take examples It is very, very difficult to have a diet individually for someone because it is not. That is not the way it works. Anywhere, the middle-class household here in India. So, if somebody has to have an autonomy on their food, they have to stay separately they have to have their decision-making power. So, that is one very important from some about having this decision-making power. So, I mean it's more cultural, or social I don't know what particularly to say."

As discussed in the literature as well, family is the smallest unit of societal representation and as the proverb said 'charity begins at home' – it is necessary to change the food consumption behaviour in the smallest unit of the society. The next major factor that influence in food consumption is family tradition. Family tradition can be defined as the values and societal norms a family or group of people follow.

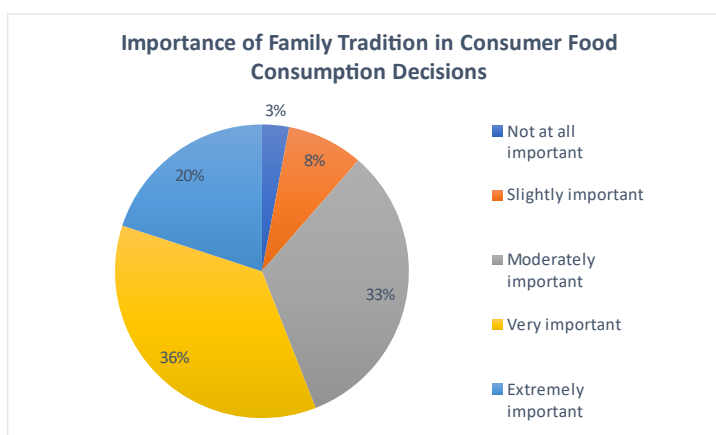


Figure 11 Importance of family tradition in sustainable food consumption decision

From the survey, it is evident that, 20 per cent of people give highest priority to the family tradition in case of sustainable food consumption and 36 per cent of the people keep that as second priority. Only 3 per cent of the people keep it as not at all important.

In the same way, the third most important factor is social gathering and how that influences in the sustainable food consumption.

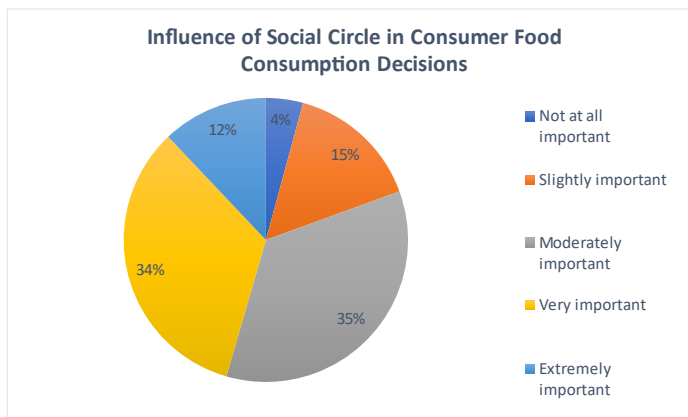


Figure 12 Influence of Social Circle in consumers food consumption decision

From the Figure XX it can be seen that, only 12 per cent of the people give most priority to social gathering as the most important factor, where as 35 per cent of the respondents choose this as the moderately important in case choosing sustainable food

consumption.

But respondents in the semi-structured interviews have a different story to tell. Among 25 of the interviewees, 22 said that, they change their food choices sometimes to more sustainable manner to blend with the broader spectrum of the society. One of the respondent (R22) said it quite literally,

“I am a hard-core non vegetarian, but my friends prefer to eat more vegetarian foods. All of us are working in mostly environmental sector, namely I work in sustainable transport and my most close friends working sustainable building and architecture. They prefer to eat more vegetarian food even though I don't like vegetarian food but whenever I hang out with them just not to be the hypocrite of the group I ordered always vegetarian food. All of us know that meat has a higher a carbon footprint, and being in the environmental sector sometimes you have to do something for the social acceptance, even though you don't feel like doing that.”

So, from the context, as mentioned in the literature review, social acceptance has a much significant role to play in sustainable food consumption. Higgs et al (2015) in their study also pointed out the same factor that, ‘being liked’ plays a major role in case of change in consumption behaviour of a person. As in the literature study, Higgs (2012) pointed out that,

people/ diners use information about eating behaviour of others as a guidance to follow what should be more acceptable or appropriate to that particular context.

This brings us to the argument of regional eats and how does that has an effect of sustainable food consumption. In the questionnaire survey it has been asked that, how much regional customs has an effect on one's food choices or in sustainable food consumption.

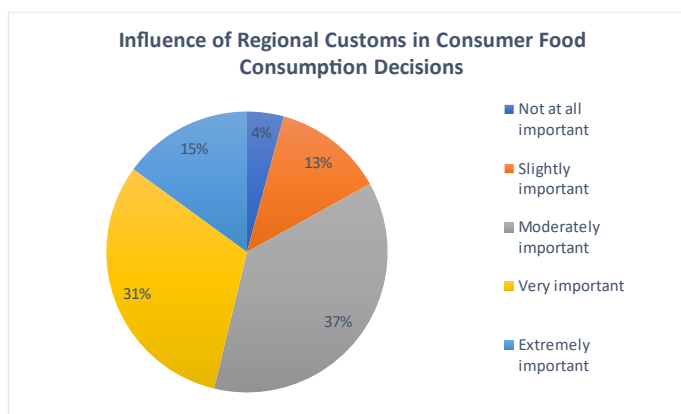


Figure 13 Influence of regional customs in sustainable food consumption

From the analysis, it showed that, only 15 per cent of the respondents give regional customs as a high priority in case of sustainable food consumption behaviour and 37 per cent of the respondents said it has moderate influence in case of

sustainable food consumption.

This similar question has been asked to the semi-structured interview as well. As per most of the respondents said that, cause of regional availability of certain food it has a relatively huge impact in their daily food consumption either it is sustainable or unsustainable in nature.

One of the respondent (R13) argued that,

“I'm from Kolkata, and I grew up eating fish everyday. But in Delhi, apart from Chittaranjan Park, it is next to impossible to find fish market. So here I changed my complete dietary do other nonveg product, actually I prefer eating more vegetarian food these days, it's not only cause of environment but also unavailability of non-vegetarian food in a good quality. So, I would say that yes region has a huge impact on what we eat. To be honest if I'm in Kolkata I might not have changed this whole fish consumption, I might reduce it but not completely abundant it”.

Here the line become fuzzier between social and cultural context. According to Merriam-Webster dictionary (2003), culture can be defined as, “the characteristic features of everyday existence (such as diversions or a way of life) shared by people in a place or time”. As we

discussed in the literature review that, culture shaped the way of people's life and has huge impact on their social upbringing and food consumption choices. In the questionnaire survey the question has been asked if there is any change in sustainable food consumption because of cultural heritage, here in sense of cultural heritage religion is taken as one of the components.

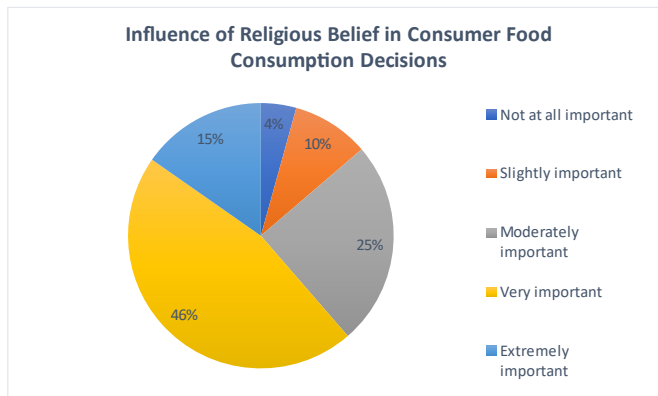


Figure 14 Influence of Religious belief in food consumption

From the Figure 14, it can be seen that, even though only 15 per cent of the respondents said that religion has the most important is the choosing sustainable food consumption, at the same time 46 per cent respondents says it is very important in case of choosing

or consuming sustainable food.

To understand the scenario further the same question had been asked in the semi-structured interview. Among 25 interviewees, 17 said that culture has a huge influence in the food consumption, 5 respondent were neutral in this factor where only 3 of them emphasize more on personal choice rather than cultural influence.

Another component in this cultural context is the meat ban and its effect on the daily food

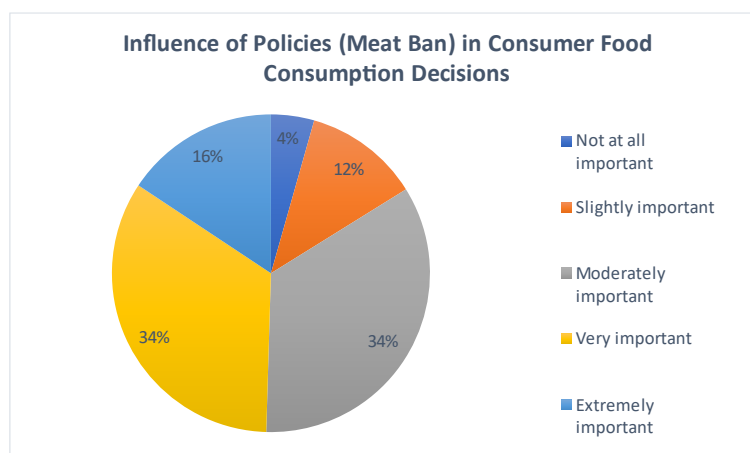


Figure 15 Influence of Meat ban in food consumption decision

consumption had been asked. As the policy of mean ban came from the religion/ cultural context in a few states in India. From the questionnaire survey, it can be depicted that, only 15 per cent of the respondents said

that, meat ban has an effect on their daily consumption and that claim has been supported by 46 per cent of the other respondents who choose it as the second most priority. This question has also been asked in the interview and as it is one of the controversial topic, interviewees were given option they can choose not to answer the question if they wish. Among 25 interviewees, only 5 interviewees choose not to answer the question for personal reasons.

As one of the interviewee (R7) said,

“I personally don't eat meat every day also I think this meat ban policy is nothing to do with culture. It's quite controversial in nature. I personally feel there is no need for a ban rather you can regulate it. Regulation will automatically bring down the consumption. at the same thing I wanted to point out that if this ban is for environment I will completely support it. but it is more like a political agenda a witch hiding behind some cultural ideas that they can't even explain so I feel culture might have a role to play, but it doesn't mean taking away one's choices in this scenario. Yes, I kind of change the diet, and buy more alternate protein like soybean and all”.

So, from the conversation it is clear that, culture has a role to play in case of food consumption. In the literature review, cultural context of millet cultivation has been drawn. It can be seen there international students in Hungary, there is a change in the pattern of their meat consumption from their home country cultural context, and adapted to consume more green vegetables. In this scenario, as well, it is clear that, though the ‘meat ban’ highlight the cultural value of the society to support the policy, but consumers rejecting the idea. Based on the scenario in a particular place, consumers also adapt the new context and change there consumption behaviour – in this case from meat to plant based products.

I, in conclusion, it can be seen can be drawn that, even though personal choice is a the major factor in the sustainable food consumption scenario, but those choices are influenced by societal setting and cultural ideas. The interviewees, pointed out, however that, sometimes, personal choices needed to be put aside for greater social acceptance and avoid conflict. Like

meat ban caused many consumers to change their diet pattern, which turns out to have lower carbon footprint as they change their diet from animal based products to plant based product.

Chapter 7: Policy and Political influence

“Governments around the world have the ability to transform our food systems, yet this will require co-ordinated, coherent, and integrated action. Food reaches many areas of our lives from health (nutrition) to society (culture), economics (jobs), and the environment (biodiversity). All of the policies that govern these areas, however, continue to be developed and implemented in silos. Government ministries might share information about on-going initiatives, and at times design policies with common objectives. Rarely though will policies be integrated, so that it clear how each policy fits into an overarching aim, such as moving towards sustainable food systems. This means policy is often inefficient, with priorities in one area potentially in conflict, negating, or leading to unintended negative consequences in another area”.(Brown et al. 2021)

7.1 Overview of the chapter

This chapter addresses the final research question, RQ3 (How, if at all, local, regional, and national policies shape food consumption in an urban setting?). The theoretical framework used for this is the policy and political will and how that influences consumers' choice of buying and consuming sustainable food.

In the previous chapter, the influence of society and culture influence sustainable consumption has been discussed. From that discussion, it is clear that society and culture has an impact on policymaking and implementation. Political will largely be influenced by societal will (find ref). To understand that, this chapter will dive into the aspect of policy and if that has any effect on sustainable food consumption.

7.2 Result and discussion

To understand the policy's influence on the consumers, the research tried to understand consumers' knowledge of policy related to food and sustainable food. In this scenario, it is necessary to mention that no food policy addresses sustainable consumption in India. Among 102 policies related to food, only two mentions sustainable food production (Brown et al. 2021).

In the questionnaire, a few popular or well-known policies name have been mentioned and asked respondents to selected which all policies they are familiar with.

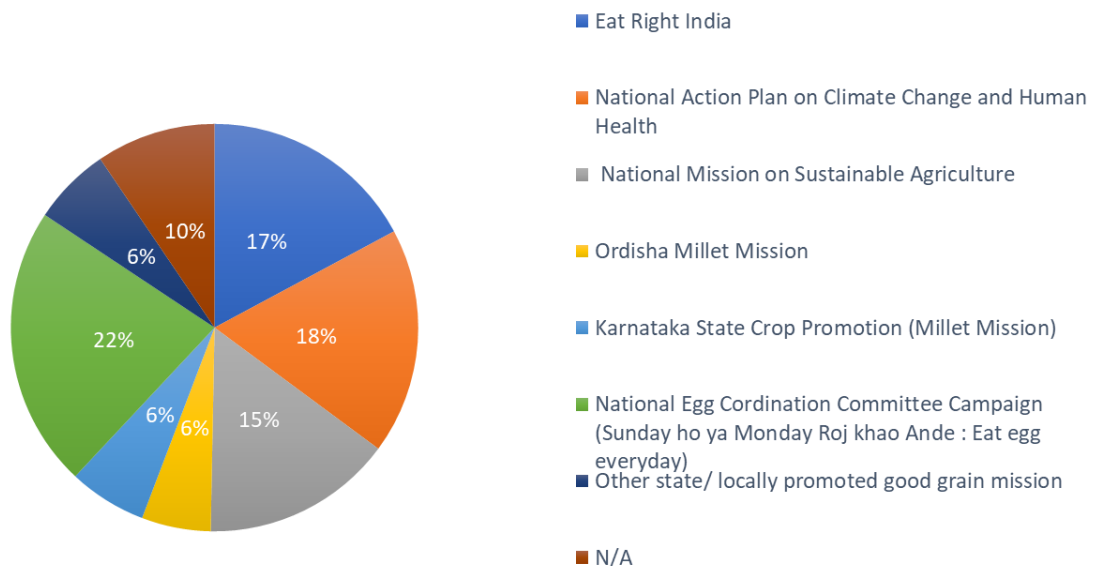


Figure 16 Consumer's Knowledge on Existing Policies

From the responses, it is evident that only 15 per cent of respondents are familiar with one of the food policies related to sustainable food production. Most of the respondents are familiar with is National Egg Coordination Committee Campaign, 22 per cent of the respondents are familiar with it. In this same context, it is needed to mention that after 2014, this particular policy has been discontinued by the current right-wing government. Also, it can be seen that only 6 per cent of the respondents are aware of Odisha Millet Mission. It is one of the most important state-run food policy, aimed to increase the production and consumption of local

food grains to promote sustainable food consumption and production. In the semi-structured interview, the question has been asked; which all policies interviewees are familiar with the mentioned policies and if that has any effect change on their food consumption. Among 25 interviewees, only 10 of them are familiar with more than one food policy, and the rest are familiar with one or less policy. As a follow-up question, the influence of these policies in their food habit, one of the respondents (R17) responded,

“I’m not really familiar with all the policies, but I heard about Millett mission and yes for a while I tried Millet as alternative to wheat. I quite liked it and I’m planning to continue with this one. So in a way you can see yeah this policies has an effect on me”.

As it already been discussed in the literature review and the theoretical framework, introducing policies to consume locally grown food has affected consumers, as from the London food policy, it is evident that more people started buying local food instead of packaged food or other exotic food from the supermarket (Bricas, Soulard, and Arnal 2019). In theoretical framework it has also ben argued that, PCE (Perceived Consumers’ Effectiveness) plays a bogger role in sustainable consumption and policies are mainly formulated around consumers’ PCE (Vermeir and Verbeke 2006). As policy push for sustainability is one of the major influence for the consumers’ perception of “doing bit” results more consumption of sustainable food items.

So in the questionnaire, the question has been asked if the policy influences the food habit or food consumption changes. The respondents were given the option to choose from yes, no and may be.

Policy effect on food consumption

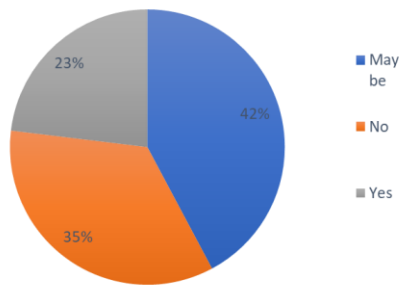


Figure 17 Influence of Policy on Food Consumption

From the responses, it can be seen that only 23 per cent of the respondents said that any food policy or campaign has an effect on their daily food consumption, whereas 42 per cent of the respondents are undecided and choose maybe as an option. At the same time, 35 per cent of the respondents strongly opposed the

idea and selected no as their option. The same question was asked to the interviewees in the semi-structured interview to dive deep into that.

But the scenario is not same for all consumers; from the semi-structured interview, it also can be noticed that personal choice is more critical than policy or any other external influence, as one of the respondents (R11) said,

“Kaho aap ruchi, peheno par ruchi (Eat according to your own choice but wear clothes according to society). I know about a few of these policies, but to be honest, never felt a urge or necessity to change my food choices. I might give this millet or ragi a try but changing my habit is not really I want or will do”.

This statement clearly can be linked with the theoretical framework, personal needs, and motivation. As Carlon (2010) argued, consumers' personal choice is the most crucial factor in decision-making, either in brand choice or food consumption. But at the same time, these individual choices also influenced by political agitation. As one of the respondents (R11) contextualize it,

“I'm not a big red meat eater, back the moment there is a ban now in the city during navratra I feel like why religion has to come to food choices and how it was governments concern to put such ban on a particular food. It feels like favoring one segment of the society then

other or just say promoting one cultural thing and denying the other culture. So, as protest I tried to find meat during that festival and consume it. It feels like that particular policy pushed me too do this. So, I guess not only positively but also negatively policy has an impact on my food choices.”

The same question was asked in the questionnaire as well, if meat ban policy (during Hindu festivals) has any effect on general consumption. I was an open-ended question, so I coded the answers into four categories based on common answers and view;

- It doesn't affect me as I am vegetarian, so I don't care.
- Government should not favour any particular community's demand.
- It would be better to regulate than ban meat, as for many it's a staple.
- I would support this ban, if it is for food sustainability, but as it is for favourism I don't support it.

Only 17 per cent of the respondents said they don't care as this ban does not affect them. Whereas 47 per cent of respondents said that if the ban is for sustainability and reducing carbon footprint, they will support the matter. However, as it is regarding favouring a particular community's demand, this ban should be lifted.

In this scenario as well, though the policy has an effect on the production side but not having any huge effect on consumption side of it. To understand the production side scenario, I tried to gather some data on India's internal meat production and consumption.

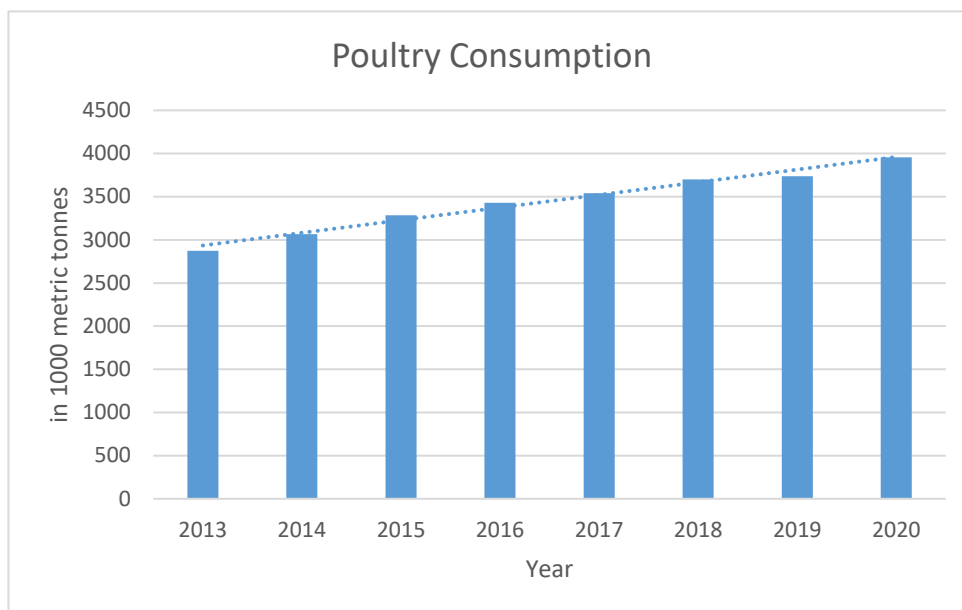


Figure 18 Poultry consumption 2013-20 (Proxy data)

From Figure 18, it is clear that there is an increase in poultry consumption over the year. Though the primary ban is on beef (red meat), there is no significant reliable

data available for the same. Hence, only poultry consumption data used as proxy data.

As of now, it is clear that policy has a somewhat effect on sustainable food consumption. Policies are mainly formulated and implemented by the state, and the general population has minimum to no say on that. To evaluate more how policies should work, I added a question in the questionnaire regarding, which policy or policies respondents want more to promote, or which policies the government should bring to action. As this was an open-ended question, I tried to categorize them based on existing policies. I organized them into three groups:

- Promoting indigenous climate resistant crops
- Promoting more sustainable chemical free farming
- Promoting and regulating organic food prices

After categorization, data showed that 35 per cent of the respondents emphasized promoting and regulating organic food prices, making it more sustainable. Whereas 25 per cent of the respondents choose chemical-free farming as their priority, and the rest of the respondents are enthusiastic about indigenous climate-resistant crops. In the theoretical framework, narratives

of sustainable production, which give a broader perspective of people's understanding of sustainable food practices, also pointed out how these values are influenced by behavioural change. As these choices vary from intrinsic value to instrumental value (Vermeir and Verbeke 2006).

As respondents are interested in climate-resistant indigenous crops, a question posed for the same in the questionnaire. If a state promotes indigenous crops, will the consumers be interested in consuming that rather than mainstream food grains. For this particular question, respondents were asked to choose among yes, no and may be.

State promoted Indigenous food grain

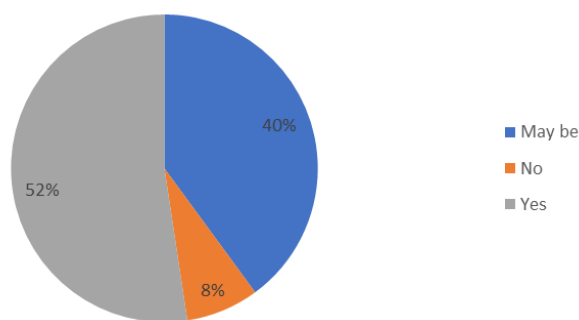


Figure 19 Influence of State promoted indigenous grains in Consumer's consumption decision

From Figure 19, it is clear that policies and personal idea of a particular food may vary. As, 52 per cent of the respondents are interested in consuming state promoted indigenous crops, as regarded as most sustainable than other mainstream food

grains. Only 8 per cent of the respondents marked it as no.

As of the interviewee (R9) pointed out that, "sometimes this state promoted grain advertisement and also when your favourite celebrity promoting it. You automatically drawn to that campaign. So personally, its more than policy, its more like how you are implementing it".

So as in conclusion, it can be drawn that, policy might not have a direct influence on sustainable food consumption but it somewhat influences people to change a certain food habit.

Conclusion

This study aimed to understand what all factors influence sustainable food consumption in an urban setting. To understand the scenario, the metropolitan city of India, Delhi, has been selected. The primary reason behind choosing the city is that Delhi is the socio-cultural hub of the country. Since the city is the capital of the country, the economic opportunities are immense. As a result, people from different part of the country migrated to the city for living, which gives a unique idea of social and cultural context.

To understand the mindset of the people, in the theoretical framework, the idea of consumers behaviour and the production and ethics has been emphasized and introduced.

For RQ1 (How do internal factors such as environmental attitudes and values influence food consumption decisions and practices?). This chapter explores the consumer's perception of sustainable food and the priorities they put forth to change their current eating habits. To understand the narrative of sustainable food from the consumer's point of view, the theoretical framework, where person's choice of sustainable food consumption as well as food production transitioning from intrinsic value to instrumental value and vice versa. Similarly, it also explores the dimension of personal need, choices, and motivation, one of the important components of the consumer's behavioural study framework.

For RQ2 (How do external factors such as social and cultural factors influence (sustainable) food consumption practices?). In this chapter, the influence of external factors on consumers' sustainable food consumption has been analyzed. For the research purposes, the social and cultural factors are being put forth. The idea of value of individual, social and cultural norms has broadly been explored in consumer's decision-making framework. Similarly, the broader narrative has been taken from the paths of environmental ethics and where it is travelled from pre-modernity to late- modernity – from traditional food to modernized vegan diet, plant-based meat etc.

For RQ3 (How, if at all, do local, regional, and national policies shape food consumption in an urban setting?). The final chapter explores the dimensions of policy and political will influence consumers' choice of sustainable food. To put the into the context, the two broad theoretical framework, policy and political will which align with environmental ethics narratives, modernity to post-modernity, from local food production policies to green revolution and from intrinsic to instrumental values – like from promoting indigenous crops production to putting strong policies regarding using more organic fertilizers.

The primary finding of this study is that both external and internal factors nudge change in food consumption behaviour and push consumers to more sustainable food choices. Societal acceptance have more influence on consumers to change their particular food habit to more sustainable food habits. Though in many cases, the situation is different. Too much societal pressure sometimes does a negative effect on consumers as they agitate and reject sustainable food. Apart from societal factor, the second biggest influencer is the affordability of the sustainable products. As mostly sustainable food products cost sometimes 1.5 times more than the usual products, consumers has a tendency to choose other products rather than sustainable food products (Kissinger et al. 2013).

Along with affordability, availability is another primary concern in the case of sustainable food consumption. To explore it more closely, the concept of 'food desert' also been introduced, as it was not the initial scope of the research.

The research is also scoping the policy and political influence on sustainable food consumption, the general observation pointed out that, most of the population are not aware of most of the food policies. In this scenario, it is also needed to pointed out that, in the case of India, only two policies mentioned about sustainable food, only the production side. There is no policy regarding sustainable food consumption(Brown et al. 2021). This leads to interesting discussion, as mentioned earlier, many respondents had no idea regarding what sustainable

food is, as they said, sustainability in the food sector quite new to them as they are familiar with sustainable energy and urban development but food is never came across to their mind. This leads to the further researching on this particular topic. As in India, there is not much study have been done in this scenario. So, putting emphasis only on societal part or cultural part and their influence in sustainable food consumption could be broadly explored.

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Appendix

Questionnaire (Collected via Google Forms)

Demographic and weekly food choices

1. Gender
 - Female
 - Male
 - Other
2. How old are you?
 - 18-25
 - 26-34
 - 35-44
 - 45- 54
 - 54+
3. You level of education
 - No schooling
 - Completed primary education (Std 1- Std 6)
 - Completed secondary education (Std 9 -Std 10)
 - Completed higher secondary education (Std 11 – Std 12)
 - Diploma (College)
 - Bachelor's
 - Higher education (Masters/ PhD etc)
4. What is your employment status?
 - Full-time
 - Part time
 - No employed
 - Home maker
 - Student
 - Retired
 - Other _____
5. You are originally from? _____
6. How long you are staying here? _____

7. Religion (optional) _____
8. What is your household characteristics
 - Single
 - Couple
 - Family with children (0-16 yrs)
 - Other _____
9. How many people reside in the household? _____
10. What is your household monthly income?
 - Below 20 thousand rupees (<250 euro)
 - >20 thousand rupees – 50 thousand rupees (250 – 600 euro)
 - Above 50 thousand rupees (> 600 euro)
11. Is there a change in your income in past 5 years? (Yes/ No)
12. Who does the most food shopping in the household?
 - Myself (Mention the position of the interviewee in family)
 - My spouse (Husband/ Wife) [Circle the choice]
 - Children
 - Parents
 - Domestic help
 - Other _____
13. Where do you typically shop
 - Local bazar
 - Shopping centre
 - Road-side vendor
 - On-line shopping
 - Farm delivery service
 - Other _____
14. During how many meals a week do you consume the following: (mention the number of days)
 - Red meat (Please mention the type) _____
 - Poultry
 - Fish

- Diary
- Eggs
- Fresh vegetables;
- Frozen/canned vegetables;
- Fresh fruit; frozen/ canned/ dried fruit
- Other _____

15. Who does the most cooking in the household?

- Myself
- Wife
- Son/ daughter
- Domestic help
- Other _____

Environmental and health related factors (ranking)

16. How Environmentally Conscious you think you are?

Rank from 1 (not important) to 5 (very important).

17. Do you read the labels before buying any new food items? (Yes/ No/ Not Applicable)

18. How important are these factor(s) in your food buying decisions: *Rank from 1 (not important) to 5 (very important).*

- Price, Affordability
- Nutritional value
- Vegetarian or vegan choice
- Safety (allergens, etc.)
- Religious norms
- Environmental production conditions
- Locally grown
- Indigenous crops or varieties
- Seasonal produce
- Limited food processing
- Human rights/ Labor conditions
- Animal rights
- Informational label
- Organic or other ecological certification
- Fair trade or other social certification
- Aesthetically pleasing presentation
- Sanitary, hygienic packaging
- Zero Waste (no packaging)
- Ease of preparation
- Other _____

Social/ Cultural Influences (Ranking)

19. How important are the following when determining your food choices: *Rank from 1 (not important) to 5 (very important).*

- Family members' preferences
- Family traditions
- Friends' opinions
- Religious beliefs
- Ethnic traditions
- Regional customs
- Food policies (meat bans)
- Food policies (promotion of special grains)
- Social gathering places (Consumption outside home)
- Social Media (Facebook/ Instagram/ Twitter etc)
- Other _____

20. Have your dietary choices led to any conflict and compromise?

- Have you ever: altered your food buying because you were eating in someone else's home
- In the company of someone with other dietary preferences
- In the company of someone with other religious norms
- In the company of someone with another ethnicity
- Other _____

Policy influence (Ranking)

21. Are you aware of the following food policies/ mission/ campaigns in India?

- Eat Right India
- National Action Plan on Climate Change and Human Health
- National Mission on Sustainable Agriculture
- Odisha Millet Mission
- Karnataka State Crop Promotion (Millet Mission)
- National Egg Coordination Committee Campaign (Sunday ho ya Monday Roj khao Ande : Eat egg everyday)
- Other state/ locally promoted good grain mission
- N/A

22. State Govt of Odisha promoted millet in the tribal areas for food security reasons, later promoted it as a product of sustainable food production, as it require minimum irrigation and has same nutritional value as rice or wheat.

- Have you tried state promoted new grain (such as ragi, bajra and millet)? (Yes/ No)
- If No, Why not?

23. Do you like to add those state promoted grains to your daily diet? (Yes/ No)

24. The recent food mission (Eat Right India) the ministry asked the food producers to put the calorific value and procurement of the item information on the food label, does that extra information has any effect on your food choices? (Yes/ No)
25. How do you react to current food politics?
26. Specially, about ban of meat consumption and production in your state?
27. Do you feel comfortable about political influence on food choices? (Yes/ No)
- Why?

Would you be willing to be contacted for a follow up conversation? (Yes/ No)

If so, please include:

- Name
- Phone/ email

Semi- Structured Interview (Guiding Questions)

1. To sum up, how would do you define “sustainable food”?
2. What are your is major concern about current food system?
3. How do you prioritize your concern about the food system? And how does it affect your daily diet?
4. How could you describe the food system you are part of? Local, Global or National scale?
5. Which food trends or policies and how, if any, have encouraged you to make more sustainable food choices?
6. How have these policies influence you?
7. Is it important for you to make these conscious choices towards diet? Why and how you make these choices?
8. What are your thoughts about changing tradition diet choices to new more environmental friendly food choices?
9. Thaoughts on meat ban