# The Determinants of Consumer's Behaviour in Restaurant Food Waste Mitigation: Evidence from North Cyprus

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# ABSTRACT

The current circumstance on food waste mitigation in North Cyprus shows that, it needs a productive and successful waste administration system having analysed the case of waste mitigation of the food sectors in North Cyprus.

This thesis empirically examines the determinants of consumer's behaviour in restaurant food waste mitigation in North Cyprus. Regression analysis, independent t-test and ANOVA analysis were employed to inspect the trade-off between food waste mitigation and its determinants. Surveys were distributed to two hundred and six participants for the analysis on an online platform.

Regression results indicate that new ecological paradigm, favourable to natural conduct at home, mentalities towards eatery food squander and foreseen feelings towards eatery food squander have significant positive impact on food waste mitigation. The results also illustrate that male and female mostly have different opinions on food waste mitigation whereas Anova analysis shows that job status as well as job occupation have different opinions.

**Keywords:** food waste mitigation, Regression analysis, food sector, North Cyprus

# ÖZ

Yapılan analizler ışığında Kuzey Kıbrıs'ta gıda atıklarının azaltılmasına ilişkin mevcut durum, genel bağlamda gıda sektörlerinin atık azaltımı durumunu analiz eden verimli ve başarılı bir atık yönetim sistemine ihtiyaç duyduğunu göstermektedir.

Bu tez ampirik olarak, Kuzey Kıbrıs'ta yemek sektörü atığını azaltmada tüketici davranışının belirleyicilerini incelemektedir. Gıda atığını azaltma ve belirleyicileri arasındaki değiş tokuşu incelemek için regresyon analizi, bağımsız t testi ve ANOVA analizi kullanıldı. Analiz için iki yüz altı katılımcıya çevrimiçi olarak doldurduldu.

Regresyon sonuçları, yeni Ekolojik Paradigma, Evde Çevre Yanlısı Davranış, Restoran Gıda Atıklarına Yönelik Tutum ve Restoran Yiyecek Atıklarına Yönelik Beklenen Duyguların Gıda atıklarının azaltılması üzerinde önemli ve olumlu etkiye sahip olduğunu göstermektedir. Sonuçlar ayrıca erkek ve kadınların gıda atıklarının azaltılması konusunda çoğunlukla farklı görüşlere sahip olduğunu gösterirken, Anova analizi iş statüsünün ve iş mesleğinin farklı görüşlere sahip olduğunu göstermektedir.

**Anahtar kelimaler:** gıda atığı azaltma, Regresyon analizi, gıda sektörü, Kuzey Kıbrıs

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# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

# Chapter 1

# INTRODUCTION

## 1.1 Background of the Study

It can clearly be stated that industrialization is part of globalization and there is no doubt that attention given to industrialization is increasing day by day. Industrialization has come up with nearly zero tolerance on manufacturing the product, so developers and investors are attracted by industrialization. Development of the industrialization and discovering the benefits of it, create impeccable opportunity on gaining time on manufacturing. Considerable observations clearly show that time is money. However, pollution created by this opportunity cannot be neglected. A normal individual creates more than four pounds of waste every day. This creates quotable data around 1.5 tons of waste every year (Do Something, 2018). Importance of industrialization is undeniable, however, the waste created by the businesses cannot be ignored.

The removal of the waste created from the eatery offices is a significant issue concerning the whole world. The strong and fluid waste created has exceptionally high levels of contaminants and cannot be dumped straightforwardly into civil landfill destinations or waterways. Every year, food- road traffic produces about eighteen thousand tons of carbon emissions, most of which is connected to restaurants; seventy five per cent of the six hundred thousand tons of glass bottles junked every year by restaurants, cafes, bars, hotels and clubs never even get close to a recycling plant; and

a third of the food purchased by the trade is thrown away (International Solid Waste Association, 2013).

Metropolitans face a big challenge in disposing urban solid waste, with their small land area and high population density. This is especially urgent given the exponential waste generation resulting from the economic growth achieved over the last forty years of development. If the trend continues to develop, to create more costly incineration plants and landfills, increasingly scarce land resources will have to be set aside (European Commission, 2017). In addition to incineration and recycling, the waste minimisation approach is also implemented, which primarily aims to minimize waste at its source before it is generated. To fulfil the goals of a zero landfills and zero waste environment, steps are being taken. Analysing the waste from a food and beverage source would have a clearer picture of the waste profile so as to find ways to minimize and utilize the waste. The environmental impact of food waste in landfills is much greater than that of landfill packaging. Food waste is in fact 5 times more impactful than food waste in a landfill. Nourishment in landfills produces methane gas, which is multiple times more dynamic ozone harming substance than CO2 (Nordic Council of Ministers, 2012). In the event that it isn't destroyed and tossed, all the assets which go into developing, creating and dispatching nourishment would be squandered. Wastewater is made from the washing of crude nourishment items, utensil washing, floor washing, and so forth which is likewise a significant ecological concern (Singh, 2010). Waste management should also be considered, while paying attention to hygiene rules at restaurants.

China's ongoing restriction on twenty four strong waste and recyclable items is affecting both the waste business and generators (Smil, 2020). Nowadays, eateries

could not dump reused materials like they used to do. Local recycling systems are overloaded, piling up the volume. If their options run out they could resort to landfills. Restaurants are also held more accountable for the goods and the actual amount of what they're throwing. With associated gadgets in the refuse and reusing canisters at every café, knowing where these recyclables originate from in the production network would likewise empower the eatery to settle on educated choices about waste decrease. Waste management providers can also call out if there is a need to inform and train local workers on new recycling strategies based on benchmarked data for all restaurants, as well as develop a clear framework for the recycling requirements for each city and county (Rhyner, Schwartz, Wenger, & Kohrell, 1995).

As far as concerned, producers are behind thirty percent of the all-out nourishment squander on the planet. Eateries are fourteen percent at risk. This affects every step of the food consumption chain: from the manufacturer to the customer, each has their share of the responsibility. On average, one meal per week is wasted by each member of the French population (Singh, 2010). For their part, producers are behind thirty two per cent of the total food waste in the world. Restaurants are fourteen per cent liable. The laws were voted and enforced in 2013 to counter these unfortunate everyday activities. A regional agreement to halve food waste by 2025 was then signed by major actors in the food chain. Two giants participated in the battle in 2016: retailers greater than four hundred square meters are now expected to form a relationship with their choice's food relief agency, and to recycle unsold items that are still suitable for daily eat (International Solid Waste Association, 2013). Additionally, manufacturers are specifically banned from spoiling their goods to make them unfit for sale from this stage onwards. The donation duty was applied to the food processing industry in 2018

(Aardsma, 2018). Such steps taken in the last two years are in accordance with the aspirations of French voters, who are nearly eighty per cent involved in seeing environmental conservation lift the goals of the government (The Guardian, 2019). However, since these new policies are placed on firms within multiple sectors, one can claim that they will be of value to them. Indeed, these businesses fulfil consumers ' desires of needing improvement, and therefore benefit from enhancing their brand. Food waste has an environmental impact much greater than one would expect (Vaughn, 2009). Firstly, it causes natural resource wastage. 28 per cent of the world's farm land is known to be used to produce food that will never be eaten. Thus, reducing waste means saving arable land. And this figure is even more troubling as we place it next to the percentage of people in the world who are suffering from malnutrition: one out of six. Yet, this is not the only impact. Animal food production and shipping account for thirty six per cent of greenhouse gas emissions. According to the French Environment and Energy Management Agency, food wastage's total carbon footprint amounts to about 16 million tons of CO2 a year on French territories only. It would be the third-largest source of greenhouse gas emissions if food waste were a nation. Another troubling fact: Each year the equivalent of nearly 5,000 times a person’s total who line in France, water intake is used to manufacture unconsumed food items. Such energy consumption continues throughout the entire manufacturing process, as recycling these goods often requires money. Battling nourishment squander all the time in one's eatery implies entering a more noteworthy battle: battling for our general surroundings and sparing our planet. Seventy-six per cent of whom are agree that responsible eating is a means of investing in sustainable growth. Sixty-four percent think that food-processing companies play a role and have the ability to change customer preferences. Best mentalities and practices are getting increasingly

predominant in individuals' lives. Aware of their utilization's natural impact, thirty three percent of French individuals will in general be increasingly more critical while choosing the items they buy from, and the spots they go to (Cuzin, 2019). The European Commission 2019 as of late backtracked on a driven arrangement of administrative guarantees on waste and reusing, including the eliminating of utilizing landfill for recyclable junk and a promise to cut food squander by thirty per cent by 2025 (Scott, 2020). Accordingly, there's one thing that every single waste master will concur and that is the direct make-use-arrange model where we fabricated our general public needs dumping for good. Be that as it may, meshing our monetary frameworks into one agreeable, endless heap of reusing and reuse is no simple undertaking. First of all, it implies a monstrous redesign in how waste is considered. Indeed, even the word is stacked: "squander" isn't really squandered material, says Marcus Gover, chief at the UK backing bunch WRAP, it's an important ware (Wu, 2020). In an addition to that, the main organizations that need to perceive that are the waste the executives organizations. By 2025, squander disposers "won't cover or consuming individuals' waste as they do today", states Gover. These organizations will converge into what he terms the "reprocessing industry", where their focal job isn't to dump stuff however to return "important assets to makers" (Smil, 2020).

A comparable revaluate is expected of fashioners and producers as well. The products of today, Gover says, should be viewed as the crude materials of tomorrow. At the point when that occurs, items will start to be made with the end goal of enduring longer and to being simpler to fix and at last disassemble. Phillips' anything but difficult to dismantle light gives an illustrative case in point. Even in the event that they do experience this change, squander organizations will in any case need plans of action

that can make money. One arrangement is transforming waste into vitality. As per advertise examiner Grand View Research, the worldwide market for transforming refuse into power is relied upon to reach nearly $38 billion by 2020 (Trevor & Daniel, 2011). While the greater part of the development to date has been in warm advancements, organic advances could give a significant achievement. One promoter of the last was Justin Keeble, overseeing chief for manageability administrations at Accenture, who focuses to another age of firms utilizing 100% biodegradable feedstock and propelled biotechnologies. Keeble's rundown incorporates LanzaTech, an Illinois-based biotech firm that utilizations protected organisms to change over carbon-rich waste into biofuel through a gas maturation innovation. Another is Novozymes, a Danish biotech firm as of late that propelled Eversa, a protein based arrangement that changes over utilized cooking oil or other lower grade oils into biodiesel. Another obstacle for producers is the recyclability of materials. Reusing an essential metal, for example, copper is sufficiently simple (its expertise is behind the spike in metal burglaries). Reusing advanced plastics or other complex materials is an alternate ballgame. Steve Lee, CEO of the Chartered Institution of Wastes Management, gives the case of carbon fiber. From one perspective, it's at the "front line" of transport development, with any semblance of McLaren and Airbus amped up for its points of interest as far as quality, weight and vitality productivity. In any case, minimal genuine idea has gone into its re-use or reusing. Shutting these "asset circles" is fundamental, he includes. "We will likewise require more cunning innovation to isolate materials rapidly and proficiently for reusing." Automating the determination of plastic from paper is one prerequisite, for instance. Recognizing one plastic polymer from another is basic as well. Accordingly, close infrared spectroscopy could introduce an answer. In view of diffuse reflection, the strategy empowers one of a kind polymer

structures to be recognized dependent on their phantom differences. It's not simply business that necessities to change. Among now and 2025, open perspectives to squander require an extreme generally speaking as well. Half of the food delivered far and wide winds up in the container, as indicated by the Institution of Mechanical Engineers. Venture forward shrewd cards. The foundation's head of condition and vitality, Tim Fox 2018, contends that keen estimating innovation which charges purchasers for the food squander they produce could change open perspectives sharpish. Pilots of the methodology have just been effectively tested in the South Korean capital of Seoul. “Residents are given cards which incorporate a chip holding the name and address of the cardholder. Inhabitants examine their recognizable proof card, at that point discard their garbage in a savvy canister with an inherent gauging scale, and are essentially charged for the comparing waste" (DeBenedetti, 2019). The concept of customer related reusing shouldn't all be buyers’ responsibility. Retailers that sell unrecyclable bundling ought to likewise roll out an improvement, contends Conrad McCarron, head of the corporate social duty program at the As You Sow Foundation. "Organizations liable for those business need to step up and take a solid proportion of duty regarding financing assortment and reusing of post-purchaser bundling", McCarron states 2019, noticing that under fourteen per cent of plastic bundling is at present reused in the United States. He focuses to the Carton Council as a prominent special case. The United States business affiliation is giving awards to arranging office moves up to make gathering aseptic and peak top containers simpler. The plan likewise observes it give specialized help to material recuperation offices, just as help to create guaranteed markets for aseptic fiber (Dillard, Dujon, & King, 2009). Implementations on developed countries can help developing more ideas about waste management implementation.

## 1.2 Problem of the Study

According to the World Agricultural Industry, one third of the food produced is being wasted. In other words, 1.5 million tons of food is wasted. This means thirty percent of vegetables and fruits are being wasted without being consumed. This waste is calculated as loss of 750bn$ once in a year (Caradonna, 2014). Also, in 2010, environmental effect of food production and consumption in the European Union countries was thirty percent (Morone, Papendiek, & Tartiu, 2017). If we add carbon emissions and production processes to these figures, the cost increases much more. Restaurants are the leaders in producing food waste. Each person going to the restaurant produces average of 1 kilogram of waste (DeBenedetti, 2019). Researchers claim that it is possible to meet the energy consumption of a thousand families with only one restaurant's annual waste savings (Morone, Papendiek, & Tartiu, 2017). Countries did not realize the danger they have left to the future generations while developing economically and tried to proceed their economic development in ways that threaten the environment. However, countries have given up their insistence which states that only economic development should be prioritized. It has changed in a way that aims to ensure economic development by protecting the environment. However, it is difficult to implement the multidimensional and complex structures that requires sustainable development to balance the economy, society and the environment (Chandrappa & Das, 2012).

Most of the developed countries are aware of the importance of the waste management, however developing countries like North Cyprus are struggling to implement recovery, recycling and reuse tools (Gökçebel & Dalokay, 2020). Major reason behind this lag is lack of knowledge and governmental progression on the area. All wastes should be

monitored until they disappear, however Northern Cyprus fails on monitoring the process of waste. Also, there are not many researched data on waste management in North Cyprus. Conditions are not really prone to get data from the sources, because of the lack of knowledge on this area and this causes challenges while collecting data on the area.

Moreover, there is a waste management plan held by the Governmental Organisation of Environment Protection Department which is organized by Ministry of Tourism and Environment TRNC. The plan includes preparation of waste management plans at regional level and determine principles of waste management for North Cyprus. In addition, Republic of Turkey and Turkish Republic of Northern Cyprus have signed a peace treaty on 1994 for the protection and development of the environment of Northern Cyprus, in accordance with historical and cultural relations. Treaty is detailed with the principles to follow. However, there is no published law execution taken by the TRNC government.

## 1.3 Aim of the Study

This thesis empirically examines the determinants of consumer's behaviour in restaurant food waste mitigation in North Cyprus. Regression analysis, independent t-test and ANOVA analysis were employed to inspect the trade-off between food waste mitigation and its determinants. Surveys were distributed to two hundred and six participants for the analysis on an online platform.

## 1.4 Research Questions

RQ 1: Is there any relationship between food waste mitigation at restaurants and its determinants? (Regression Analysis)

RQ2: Is there a significant difference between the gender based on food waste mitigation at restaurants (T-test)

RQ3: Is there a significant difference between the occupation based on food waste mitigation at restaurants (T-test)

RQ4: Is there a significant difference between the job status based on food waste mitigation at restaurants.

## 1.5 Importance of the Study

Restaurant industry is among the fastest growing industries across the world. This industry offers a wide range of culinary cuisines and a wide range of cooking techniques to the consumers and it focuses on improving the level of services provide to the consumers. Disposal of waste generated is among the most concerning factors initiating from the restaurant facilities (Stöckli, Dorn and Liechti, 2018). Different solid and liquid wastes generated are high in their level of the pollutants and cannot be discharged directly to the municipal dumping sites or rivers in most of the cases. Metropolitans with limited availability of lands are at a higher risk when it comes to disposing the solid municipal waste. This waste has posed a major challenge especially in terms of the economic growth which has been restricted mainly due to the waste and the disposal generated through the restaurants. In a scenario where this trend continues, it would result in setting the expensive incineration aside from the land resources (Cesareo, 2019). There has been a growing evidence of global food disposal observed which has resulted in concomitant detrimental impact for the sustainability of the environment in the longer run. Reducing the waste from restaurants is one of the major challenges which can influence sustainability in the food service industry. There has been an increasing awareness in terms of implementation of waste disposal strategies and various innovative practices which also aim to influence economic

development. Food loss and waste is observed at different stages of global food value chain initiating from the agricultural production to the final consumption of the food (Twumasi, 2016). The concept of food production can also be linked to the land conversion and biodiversity loss along with the consumption of energy and greenhouse gas emission along with water and pesticide usage.

The field of waste management in Northern Cyprus lacks related researches, thus, this study is very important to improve the field and increase the awareness on environmental issues. Every individual constitute waste during their daily activities and constituting waste is an unavoidable situation. Also, North Cyprus is a small island as a sample size of individual, and this means that the implementation of food waste management can be easier when compared to other countries which are greater in population like Turkey or other states. This thesis may encourage or exhort the restaurant managers in North Cyprus to implement waste management and help to save natural resources, reduce pollution, also to save the planet.

## 1.6 Limitation of the Study

The reason for the usage of these sampling methods was based on factors which includes time and budget. Also, since the preparation process of the study coincided with the pandemic period, an online survey was used for data collection. Some of the participants didn't fill the entire form so these forms were excluded from the analysis. Researcher tried to contact with those participants however just one of them had responded and complete the full survey.

## 1.7 Findings of the Research

Regression results indicate that new Ecological Paradigm, Pro-Environmental Behaviour at Home, Attitudes towards Restaurant Food Waste and Anticipated

Emotions towards Restaurant Food Waste have significant positive impact on Food waste mitigation. The results also illustrate that male and female mostly have different opinions on food waste mitigation whereas Anova analysis shows that both job status and job occupation criteria have different opinions.

## 1.8 Structure of the Thesis

This study includes 5 main chapters, including this chapter. These chapters are as follows: Chapter 1 is the introductory chapter which explains the background of the study and the problems with regard to this study and take the objectives of the study into account. Chapter 2 provides a background information on waste management, and food waste management. In this chapter, there is explanation of type of waste. Furthermore, this chapter includes how restaurants around the world implement food waste management. In an addition to these, this chapter explains the food waste management situation in North Cyprus. Chapter 3 is the methodology chapter, which discusses the research process such as format of the research questions and data collection process. This chapter also summarises the findings after the data collection period. Chapter 5 is the chapter of the results which includes conclusion of the study such as recommendations and findings.

# Chapter 2

# LITERATURE REVIEW

Waste and garbage are different concepts that should not be confused. Materials such as paper, cardboard, glass, metal, plastic that are left behind after being separated from the garbage and which cannot be recycled in any way are called waste. In other words, while garbage is a part that needs to be stored or disposed of regularly, it is the part that needs to be separated from the materials it contains and recycled according to its characteristics and can provide added value to the national economy (Morgan, 2009).

Natural resources are rapidly deteriorating and decreasing due to technological developments, rapid population growth, changing consumption habits and many other similar reasons. In addition to this deformation in natural resources, the amount of waste left to nature is increasing rapidly (Cuzin, 2019). Many factors such as the increase of wastes, changes in their characteristics, the proliferation of wastes that can remain in nature for years without dissolving and losing their destructive effect, cause the environment to go beyond its intended use, ie environmental pollution.

The environmental problems that people face today vary in terms of resources and development. In addition to the difference in causes, the factors affecting the increase of the problems also vary. Main reasons can be listed as irregular urbanization, migration from rural to larger cities and unplanned urbanization. Waste creates great pressure on the environment and single approach is not enough to solve this problem.

An effective waste management can be achieved by a combination of all the methods. Waste can be considered as the substances that are useless and which originates from people's social and economic activities. In other words, they are the substances that should be expelled from the environment (Trevor & Daniel, 2011). Waste was still an issue even in the times when water and air contamination issues attracted the attention of the human civilization. Due to the development of new items, innovations and administrations, the amount and the nature of waste have changed throughout the years (Chandrappa & Das, 2012).

## 2.1 Type of Waste

Types of waste comprise of domestic waste, medical waste, hazardous waste, industrial waste and construction waste. Domestic waste is the wastes that do not contain dangerous or harmful substances. For example; food waste, shampoo packaging, fruit juice cartons and bottles, plastic water and beverage bottles, glass jars, tin and metal canned tins. Medical waste is the waste which generally comprises at health and treatment centres such as hospitals, and clinics. Used medicine, medical material, wastes generated during surgery and treatment can be exemplify as medical waste. Hazardous waste harm human and environmental health and these wastes arise from industrial and various production facilities such as battery, paint, and various chemicals. Industrial waste is generated during or after a process in industry and production facilities. Construction wastes are stone, soil, iron, wood waste which comes up during the process of building (Chandrappa & Das, 2012). Waste is associated with human development due to technological and social developments. The emergence of waste has varied over time, depending on the industrial development and changes in the materials used.

Waste types are not limited solely to solid wastes. Also, liquid, gas wastes can be named as waste. For example; hospital-originated blood, dental washing waters, dialysis machine waters, domestic-origin cleaning waters are liquid waste. Sources of gas waste are nuclear power plants, industrial plant pits, incineration plants, use of fossil fuels for energy, garbage storage and composting areas, etc (Australian Government, 2018).

## 2.2 Waste Management

Waste destroys the environment and human health physically, chemically and biologically. All these causes lead the direction towards a systematic application of waste management. Only Indonesia generates 38.5 million tons of waste every year which is a huge destroy for the human nature. Accordingly, waste management is a matter to be addressed with system approach (Morgan, 2009).

Waste management is a form of management which includes reduction, collection, temporary storage, intermediate storage, recycling, transport, disposal and post-disposal control, etc. of waste at its source. Materials that are re-utilized are recouped and after that utilized again in their unique shape require a controlled procedure of recuperation where defilement and harm can be minimized (The Chartered Institute of Purchasing and Supply , 2007). The basic policy in waste management is primarily to reduce wastes at the source, and to recover wastes that are inevitably recycled. This issue forms the basis of an effective waste management both economically and environmentally. Also, waste reduction does not always require costly technologies and does not require large investments. These techniques can often be carried out with minor modifications to the production process (Singh, 2010).

According to RRS Principal and Vice President David Stead 2015, first and main step about conceiving a waste management plan is to think about sustainable materials management not thinking waste management. The financial qualities that can be gotten from the strong waste framework are the recoverable material and the biogas-derived inputs. Income from these is firmly identified with the economic situations and the expense of the venture to be made. Hence, the monetary investigation should be excelled at the arranging stage. Also the plan must be flexible enough to adapt to the various changes that may occur in time depending on environmental, spatial and waste characteristics. The efficiency of planning depends on the amount of waste to be collected. The measure of waste created relies essentially upon the populace. For this reason, regional plans should be made in residential areas outside of the big cities. Institutionalization of all kinds of machinery equipment and contracting services in environmental protection is important (Trevor & Daniel, 2011).

The stages in waste management is as follow:

**Generation the waste:** This is the phase when materials winds up squander and is disposed of. The generating rate is frequently characterized as the heaviness of material disposed of as strong waste by one individual in one day (Ogunjimi, 2018).

**Storage:** House stockpiling, keeping strong waste set up or compartments which is the obligation of the individual individuals from the family unit while, Command stockpiling, is the duty of the decline accumulation organization (Ogunjimi, 2018).

**Gathering:** This needs to do with transportation of the strong waste from the purpose of capacity to the point of transfer, two phases are engaged with the accumulation

stages; The coordinate accumulation, which makes utilization of just a single methods for transportation (Ogunjimi, 2018).

**Disposal:** The last goal of strong waste, more often than not it is dumped ashore at a tip, this perhaps done in a built and sterile way (Ogunjimi, 2018).

While in case of post-harvest stage, waste again results in different steps during transport, storage, processing and distribution of the food items. While in the process of retail, again a considerable amount of waste is observed in the food supply chains. Especially at the end of food supply chain process and final consumption of the food items in terms of commercial and household utilization of the food items loss of food intensifies to almost 40%. It is extremely important to identify the drivers of waste generation and management (Twumasi, 2016).

Food waste management is one of the most complex phenomenon facing the restaurant industry spanning over a wide range of factors and activities. The concept of restaurant waste management can be divided in three different categories i.e. avoidable food waste, unavoidable food waste and possibly avoidable food waste. The concept of avoidable food waste refers to the food items which are not edibles in general i.e. peels of bananas, chicken bones etc. While the possibly avoidable food waste refers to the food items which are edible in situations while not in other e.g. potato skins etc. Whereas, the avoidable waste refers to the fraction of food item which can be eaten before being thrown away. This often includes the clean but left over food items (Salgin, 2019).

There have been a number of waste innovations being introduced which are exploring the opportunities to change the overall waste management approach especially aided by the technological innovations. The waste management process represents the clear departure from the already existing practise including the depth of knowledge, ample time, and availability of right resources and the commitment of all the members involved in the process (Williams, Curran and Schneider, 2012).

Waste management is an important and a useful process in the restaurant or food service industry. It is important to create awareness about the idea and to design further experimental approaches in reduction and management of the waste through various innovative ideas. Irrespective of the type of establishment for waste management in the restaurants, these consists of five major steps including the collection of the wasted food items, sorting between the useful and unimportant food items, public or private disposal of the food items and the arrangement of transportation for collection of food items which are not generally collected by any public, private or third party but need to be collected by the sorting or the recycling centre (Sevigné-Itoiz, Gasol, Rieradevall and Gabarrell, 2015).

In most cases it has been observed that food waste is a primary cost factor influencing the restaurants in case of working time or the purchasing cost of the food items. Food waste directly influences the cost of the restaurants where the managers or the chefs take various steps in minimizing the possible waste (Eckert Matzembacher, Brancoli, Moltene Maia and Eriksson, 2020). It is important to identify the common characteristics of the managers in their full service taking away the self-service for the restaurants and especially in prioritizing their price and the quality services over the sustainability of the suppliers and the products. All these factors collectively play an

important role in influencing the waste management and in supporting the economic stability for the restaurant or the food service industry across the world (Faraca, Edjabou, Boldrin and Astrup, 2019).

It is extremely important for the fast food service industry to identify the importance of waste management and to take interest in the process of overall supply chain in order to minimize the possible waste. The solvency of the behaviour of people cannot be ignored, but it is important to increase awareness of the overall process of waste management and how it influences the growth of economy. It is important to raise the importance of cutting the packaging prices, supply more waste bins and also to design different innovative methods to decrease the possible waste (Lino and Ismail, 2013). Most importantly avoidable waste from the restaurants should be utilized and supplied to the needy, possibly avoidable and unavoidable waste should be used for bio diversity or be recycled as much as possible by sending to different farms, implementing biodegradable materials and selling the non-edible in different local farms. This would not only help in cutting the price of waste removal but also would help in generating the economic stability of the restaurants or the food service industry. Most importantly this would help initiating a greener and better recycling options for the environment at large (participation of local restaurants in solid waste management in south coast of Gunungkidul regency, Indonesia, 2020).

## 2.3 How Businesses Make Waste Management?

Organizations can create better waste management strategy with being aware of what kind of waste does the organization create and where the resources of the waste come from. Also, being aware of which waste is recyclable or reusable is substantial for waste management. Additionally, businesses need isolate containers for waste going

to landfill and for management (Australian Government, 2018). Next step is to assign a responsible person in this regard so the process can be carried out hassle free. Environment Unit consisting of a sufficient number of personnel shall be established by this person. Other responsibilities should likewise be made by the individual such as squander assortment staff. Waste occurrence frequency and quantities should be determined. Regulations should be determined such as which legislation is subject to these wastes, how to collect and transport? Maximum storage time should be set by this institution. Containers of predetermined size must be placed in the places where these wastes occur, for better waste collection process. For example containers with lid should be used for hazardous wastes. Information and warning labels must be written on each container indicating the type of waste being thrown into the container (Cuzin, 2019). Containers of different colours can also be used for different wastes if possible. Setting and applying a waste management strategy will increase the success of separate collection of wastes. All personnel should be trained in waste management and all employees should be informed about their responsibilities. A "Temporary Waste Storage Area" should be established for the safe storage of wastes collected separately from the different containers at the source. Different storage areas can be set up for hazardous waste, packaging waste and domestic waste. Packing wastes should be pressed and packed as much as possible to save space during storage and transport. Aqueous wastes should be dewatered as much as possible. These measures provide the company with significant economic advantages in terms of weight and cost. Choosing the right waste organization is important as well. Market research should be conducted in this period. Registrations of all transactions made must be kept on a regular basis (DeBenedetti, 2019).

Food squander is a gigantic issue on the two sides of the lake. In America, around 40% of food produce is squandered, and most part of this is completely edible. The United Kingdom additionally has a food squander issue, and in spite of government endeavours, food squander stays a difficult issue all through Britain (Smil, 2020). Together, rising food costs and monetary unpredictability have expanded worldwide craving in rich and helpless countries the same. However, as the mounting food squander in the US and UK illustrate, the issue isn't of gracefully, yet of dissemination and effectiveness. Endless elements add to food squander: American eatery divides are appropriate for a smorgasbord however not a reasonable supper; befuddling naming on food items that lead numerous customers to arrange food items that are as yet edible; government guidelines that impede giving food to good cause quick to disperse the magnanimity; and promoting plans that energize the acquisition of huge amounts that even the most voracious family units can't devour before the food ruins (Kaye, 2020).

Retailers also play an import role on this issue. However, some have created answers for food squander. Their endeavours are pivotal: the repercussions of mounting food squander incorporate powerful nursery gasses delivered into the environment, squandered vitality, lessening landfill space, and obviously, hunger. Target Corporation, the Minneapolis-based retailer that works 1,750 areas in the US, adopts a humanitarian strategy to tending to food squander (Morone, Papendiek, & Tartiu, 2017). A Target leader clarified in a meeting that the organization accomplices with Feeding America to give a huge number of pounds of food overload that the organization’s stores in any case would send to a landfill. Surely, every one of Target's stores works together with a nearby food bank accomplice to facilitate. By giving neighbourhood control to singular stores, that undesirable and unsold food stays inside

the network so little vehicle and vitality is expected to redistribute it. Target's program propelled in 2001 and the measure of food occupied from landfills has expanded every year to 25millim GBP in 2010 (Dillard, Dujon, & King, 2009). SuperValu, another Minneapolis-zone organization that works nearly 3,000 stores with a few distinctively named chains including Albertson's, adopts a multi-pronged strategy towards overseeing food squander. The organization reported that a zero waste test case program in Santa Barbara, California, will turn out to forty Albertson's stores (Kaye, 2020). Food gifts, fertilizing the soil, and even a wellbeing and wellbeing program prompting clients about more advantageous food choices are behind SuperValu's food squander procedure. These organizations' drives are a beginning; yet more should be done. A few complexities lie behind the food squander problem. Pointless removal of new food proceeds, and the endeavours of dumpster jumpers at chains as Joe Trader's who is a division of Germany's ALDI barely scratch the issues behind food squander. Stores don't need to report food squander insights, and they frequently smash the food in compactors so it can't be disseminated or rescued. A few specialists refer to the requests for protein in rich nations. With twenty per cent of palatable meat winding up in landfill, for instance, little changes in Americans' weight control plans would have any kind of effect (Caradonna, 2014). Indeed, even that most loved extravagance, cheddar, requires ten pounds of milk to make one pound of item. Considering the vitality and water expected to create meat and dairy items, the mounting insights behind the misuse of these nourishments is faltering. At long last, government guidelines that advance the creation of certain staples to the detriment of others likewise make more food than can be shrewdly eaten. An answer will include changes in shopper conduct and gigantic movements by food handling organizations and

retailers. Organizations have a chance to diminish food squander by following Target's and SuperValue's lead (Kaye, 2020).

## 2.4 What are the Benefits of Food Waste Management?

Waste management can include the gathering, preparing and transfer of risky and non-perilous materials from private, business, development, therapeutic and mechanical clients. It can likewise include offices to recuperate vitality and value from squander material (Ogunjimi, 2018).

The best preferred standpoint of waste administration is keeping nature new and slick. These waste transfer units likewise influence the general population to go illness free as all the resultant squanders are legitimately arranged and dealt with. More number of waste transfer units can be put in urban areas so the waste transfer process can be prepared up. Additionally, another point that needs to be touch upon is the fact that this favourable position can be considered just if broad and appropriate wellbeing measures are executed alongside legitimate waste transfer strategies. There is no utilization in just actualizing an insane procedure which, if no utilization to both the general population and nature. These are the best impacts of appropriate waste transfer (Reddy, 2018). Creating proper waste management also creates new employment areas such as positions that include decomposer of the waste, calculating the waste, creating recycling machines and experts in this area. However, costs generally connected with squander administration are the capital expenses of foundation and hardware and the work expenses of those are utilized within the framework. The expenses can be extensively high particularly for a city or area that needs to set up new framework. The costs are identified with the sort and execution of the framework; neighbourhood factors; and the measure of waste that is produced. Financing of waste administration

is an on-going test for some economies. In numerous creating economies, regions have deficient spending plans and access to back or subsidizing to do fundamental strong waste administration activities, for example, accumulation and safe transfer (International Solid Waste Association, 2013).

Utilizing information taken from across 12 nations sets out how industry could make profit while implementing waste management. A worldwide report should be followed to demonstrate the commerce case for ceasing consumable nourishment from being binned. Inside the main year of executing a proper food squander decrease program, seventy six percent of the food outlets recovered their venture. Inside two years of actualizing a program, eighty nine per cent of them did as such (The Guardian, 2019). What's more, by decreasing food squander, the normal site spared multiple pennies on each dollar of cost of products sold. The furniture chain Ikea has simultaneously given a report on how it has decreased food squander in its own eateries in more than 400 stores in 52 different nations around the world, sparing what could be compared to in excess of 3 million dinners from being discarded in about two years (The Guardian, 2019).

33% of all food delivered for human utilization isn't eaten, and the neighbourliness segment is a significant supporter of food squander. The Winnow System called shrewd meter, intends to handle the issue by helping culinary experts gauge and examine the food they're placing in the canister (Gould, 2016). They can utilize a tablet application to recognize the sorts of food they're discarding, and, joined with information gathered from an electronic scale, the brilliant meter can disclose to them the estimation of what's being binned. It is trusted that an exact understanding into what is being squandered and the estimation of that squander will incite gourmet

experts to improve creation forms. Overall, Winnow says, two hundred kitchens have sliced their food squander down the middle utilizing the shrewd meter. Sam's Brasserie and Bar, which is located in London, United Kingdom, spared more than five thousand British Pound in food costs in only a month. Information from the Waste and Resources Action Program (WRAP) gauges that in business kitchens, twenty one percent of food squander emerges from decay, more than forty percent occurs during food arrangement and thirty four percent originates from clients' plates (Eley & Hancock, 2020).

For a long time, squander has been an unavoidable truth for organizations in all divisions of the economy. Managing it was tied in with delivering as meagre as could be expected under the circumstances and agreeing to rules, for example, the European Union's landfill charge. In any case, progressively organizations are beginning to consider waste to be something other than a burden, there is a developing acknowledgment that it tends to be an asset in its own right, conceivably a truly important one. A few areas have been doing this for a considerable length of time, abattoirs broadly figure out how to utilize pretty much all aspects of the creatures they butcher (DeBenedetti, 2019). Indeed, even the blood is currently being utilized as a hotspot for biomaterials, for example, peptides.

Despite the on-going events, numerous organizations manage squander in the most helpful manner, for instance by selling it as feed for the animals or fertilizer. Yet, this action doesn't get a decent cost. Be that as it may, a few organizations are looking past the conventional prospects to make more important items. One of the most encouraging choices is to obtain vitality. The Combination of Rothes Distillery in Rothesay, for instance, creates enough vitality to control more than 9 thousand homes

from a consolidated warmth and force plant that sudden spikes in demand for the side-effects of the refinery. In the interim, McDonald's, through a program called Fries to Fuel, reuses 4.5m litters of utilized cooking oil every year and transforms it into enough biodiesel to fuel a large portion of its appropriation armada. "Running our armada thusly is the comparable, as far as carbon emanations reserve funds, of taking almost 3.000 vehicles off the streets every year" says Paul Pomroy, Macdonald's senior account (Scott, 2020). At a sugar company in the UK, they take it much further. The company says "we expect to change the entirety of our crude materials into economical items." These incorporate dirt, creature feed, lime, betaine, bioethanol and power. Indeed, even the warmth utilized in its Norfolk sugar industrial facility is channelled into the close by nurseries of its unit to help produce tomatoes (Nordic Council of Ministers, 2012). Integrated Waste Management, a unit of garbage removal organization Biffa, is controlling a whole refuse truck armada utilizing biodiesel produced using cooking oil it has gathered from its food industry clients. "The organizations get less expensive garbage removal, we get less expensive fuel and it cuts carbon outflows by 90%," says Robin Chambers 2019, senior supervisor of IWM. "One man's result is another man's crude material " (Scott, 2020).

### 2.4.1 What are the Results of Poor Food Waste Management?

Restaurant food squander can be divided into two; pre-shopper and post-purchaser squander. Pre-customer food squander includes all that is disposed of prior to serving the food, for example, unused spoiled food, results from the readiness cycle, or bundling from the fixings. Post-purchaser food squander includes food squander left behind by the visitors. It is imperative to complete a food waste investigation at your eatery to decide the sort and volume of food that is intended to be reused when the customer leaves them behind. Rotting fruits and vegetables emit a large greenhouse

gas, methane. This is especially worrying in the opinion that 40% of all food in the United States is not eaten (Dillard, Dujon, & King, 2009). Food squander was not an issue when the trailblazer of Baldor Specialty Foods, one of North America's biggest new produce merchants, started exchanging as a handcart in downtown Manhattan a century back. Before the appearance of landfill destinations and coolers, clients would for the most part eat all the neighbourhood products of the soil they purchased instead of discard it. "There wasn't this thought you could place it in a pack, toss it on to a kerb and make it another person's concern," says Thomas McQuillan 2018, VP of technique, culture and supportability at Baldor. Today the food organization, which forms around 600 tons of new products at its plant in Bronx is utilizing innovation to assist it with coming back to it without waste past. Baldor, which produces items such as carrot sticks and melon balls, has built up a product stage for its eatery and merchant clients to follow stock, purchase new food and measure squander, assisting with lessening overflow (Shearman, 2020). Climate following innovation permits Baldor to adjust where it purchases rapidly, diminishing the danger of demolished produce. The organization ceaselessly measures the temperature of product on the way and creates consumable, plant-based items pressing them to safeguard it for more, and diminishing unrecyclable waxed paper bundling.

Mindfulness about the volume of food squandered in individuals' homes has developed as of late, and numerous food organizations are additionally now making a move. Food squander is a global problem. Tech organizations like Amazon and Uber has changed the manner in which items and individuals move from A to B. Such tech businesses are now attempting to assist food with moving from field to fork all the more proficiently. From drones that help more exact cultivating to sun based fuelled cold

stockpiling, creepy crawlies that transform food squander into creature feed to mechanical food processors, the business is ready for advancement (Shearman, 2020).

The conceivable reasons for poor food waste administration include budgetary deficiencies, low levels of awareness and demeanour and lack of knowledge. Yet, the major reason for poor waste administration is again, financial incapability. Money is as a matter of fact essential once it includes squander administration. Furthermore, financial budget is required to buy innovation to tidy up immense amounts of waste. Monetary deficiency causes disappointment in giving legitimate clean offices, upkeeps cost and influences the standard and amount in sterile administrations. Terrible waste administration practices can lead to land and air contamination and can cause respiratory issues and other unfavourable wellbeing impacts as contaminants are assimilated from the lungs into different parts of the body (Vaughn, 2009). Also, poor waste management can cause, increments in the danger of extreme wellbeing suggestions, for example, miscarriages, low birth weight, and specific growths have been observed in people living alongside landfill territories in various investigations. The essential natural issue emerging in view of landfills is groundwater sullying from filters. There are a few dangerous squanders that discover route into the landfills and once they are there, serious pollution comes off (Rinkesh, 2018). Reusing rates have expanded with monetary improvement and wage development, however the specialists recommend that rates could moderate as economies of scale are accomplished (European Commission, 2008).

The UK faces a flood in food squander after grocery store deals hopped by a fifth and eateries were requested to close as a major aspect of the administration's measures to battle the coronavirus pandemic. Figures delivered by Nielsen 2018, the market

information suppliers are leaving numerous stores and stockrooms without stock. The ensuing shutdown of the accommodation division at that point conveyed a second portion of substantial interruption to a flexibly chain that depends on soundness and consistency to keep stock moving and limit squander. "At the point when you rock the gracefully chain like this it turns out to be extremely wasteful," said Mette Lykke, CEO of food squander decrease application Too Good To Go (Nordic Council of Ministers, 2012). For Tony Reynolds, that hazard has just become reality. In the course of recent days the overseeing overseer of the food flexibly business that bears his family name, has needed to dispose of about a fourth of his supply of tomatoes, bananas, avocados and mushrooms. His clients such as inns, bars and cafés, have been advised to quiet down shop due to the coronavirus pandemic. Some of them, for example, Italian-themed chain Carluccio's, have just gone into organization (Eley & Hancock, 2020).

Some food squander, be it estimated in mass or as lost vitality, is unavoidable: potato strips, woody broccoli stalks, steak bones and hamburger cartilage, egg shells, tea leaves. Other waste is avoidable however understandable, some portion of the quotidian wastefulness of human carries on with: a couple of last cuts of stale bread, the rest of some milk or yogurt that is past its best-before date, a bit of greasy meat or colourful natural product dismissed by a youngster. Be that as it may, most food squander is both pointless and avoidable, and, over the previous decade, a progression of studies have given us a superior valuation for the difficulty’s scale also of its extensive ecological and monetary effect. That is a much needed development (Nordic Council of Ministers, 2012). In 2011, when the FAO distributed its previously nitty gritty examination into food squander, it gotten the activity out to the Swedish Institute for Food and Biotechnology. That review found that approximately almost 35 percent

of the food created internationally for human utilization which means 1.3bn tons of food a year is lost or squandered. Typically, the most noteworthy wastage takes place in the EU and North America at about a hundred kilogram per individual every year. Misfortunes in sub-Saharan Africa and South Asia were far lower, at between 6 and 11 kilograms. In 2009, the UK's first food squander evaluation was created by the Waste and Resources Action Program (WRAP) (The Guardian, 2019). Utilizing information from 2007, it found that family units squandered 33% of all their food, with about 90 percent of that waste going to landfill. It inferred that around 60 percent of that waste was avoidable. Be that as it may, an update in 2013 enlisted an empowering shift: UK family food squander was found to have fallen by fifteen percent somewhere between the years of 2007 and 2012, went down sharply to 8,3 million to 7 million tons. Another request found that, somewhere between the years of 1974 and 2005, United State food squander had ascended by fifty percent, with ensuing further increments. Yet, there are negative examples as well. Around twenty percent of certain vegetables, most products of the soil sorts of fish, are squandered at this beginning phase (Smil, 2020). Post-reap misfortunes have enormously decreased in rich economies with legitimate produce taking care of, chilling, refrigeration, defensive bundling and preservative against decay added substances. Be that as it may, such misfortunes stay high in the tropics (Vaughn, 2009). In rich nations, misfortunes at family unit level record for the biggest portion of food squander, for natural products, vegetables and fish yet in addition for grains because of squandered bread.

Rich nations squander food more than other nations The two clearest reasons are that first they produce more than they need and afterward sell that product so inexpensively. In any case, another, less very much valued, factor is the decay of home

cooking (Aardsma, 2018). About portion of all dinners in the US are presently eaten outside the home, a significant wellspring of plate squander especially given the colossal eatery divides in the United States. Individuals in rich nations tend likewise to be overeager spectators of best-before dates despite the fact that you can eat that yogurt daily after it "expires" without any risk of punishment. Food accessibility in the EU and in the US midpoints at around 3,500 (kcal) a day for every capita except the normal food consumption per individual of the west's undeniably inactive and maturing populaces is close to 2,100 kcal. This makes a 1,400 kcal (40 percent) squander hole. In an addition to this, food is excessively modest: it costs the normal American family only eleven percent of its discretionary cash flow (Singh, 2010). In the European Union, customers burn through 15 percent of family unit use on food, yet that excessively is far not exactly previously and then in most low-pay nations. Among wealthy nations, Japan is the main eminent exemption regarding squandering less food (Scott, 2020). That is because of a mix of its high reliance on food imports and a more economical and maturing populace. Normal day by day food accessibility is currently just around 2,400 kcal per capita, altogether lower than the Chinese mean, and food squander sums to just around twenty percent of the all-out flexibly. To exacerbate the situation, these procedures create noteworthy outflows of carbon dioxide, methane and nitrous oxide (Smil, 2020). On the off chance that the world's food squander was a nation, it would be the world's third-biggest producer of ozone harming substances following China and the US, require almost 300 cubic kilometres of water every year. Such requests filter nitrates into groundwater and streams making beach front no man's lands, quickening soil disintegration, diminishing biodiversity and advancing the spread of anti-toxin safe microscopic organisms (Moodie, 2020). Better food education would help in the crusade to check squander. So would more

home cooking and less eating out, at the same time, over the long haul, there is just a single successful measure, particularly given the way that food utilization is reasonably value versatile, which could significantly diminish squander in rich nations: that is paying more for the food we purchase. Completion all food appropriations and upholding food-related natural shields would achieve that objective, however western governments stay reluctant to seek after that course and selfless purchasers anxious to purchase more costly food are rare (Smil, 2020).

### 2.4.2 Recycling of Pre-Consumer Food Wastes

There are 5 main ways to recycle or manage pre-customer food wastes. First of them is to avoid ordering extra items which is potential of redundant. Second is not to buy a special offer product promoted by the supplier, unless your restaurant needs the product. Next one is to mass request things with stable timeframe of realistic usability. Ordering products with longer shelf life and higher shelf life creates less waste, requiring less packaging (Nordic Council of Ministers, 2012). Additionally, using labels on the day of the week is another way to manage food squander. After purchasing or preparing, putting stickers on the products helps the users to be aware of the foods` expiration date. Fourth step is to utilize all aspects of your fixings. The stems of foods grown from the ground are regularly viewed as pointless and disposed of. Instead of throwing these ingredients away, use them as a flavouring material to other dishes as a spice or sauce. Last step, to manage pre-customer food waste is to donate goods for a good reason: If you still have a lot of products, look for donating leftovers to a food bank or shelter (Nordic Council of Ministers, 2012).

### 2.4.3 Recycling of Post-Consumer Food Waste

There are 2 main ways to recycle post customer food. First of them is to offer a container to the guests to allow them to take the service. Guests left behind average of

%17 of their food (Morone, Papendiek, & Tartiu, 2017). Instead of throwing scraps away, give guests a transport box so they can take the food home. Next way is to manage food squander is to start composting to regain food waste and enriching soil nutrients (Nordic Council of Ministers, 2012).

## 2.5 Waste Management in Northern Cyprus

The Turkish Republic of Northern Cyprus is home for various cultures and ethnicities from many nations, so various habits and waste management behaviours have emerged over the years. The "Think Clean" campaign, carried out under the auspices of the Presidency of the Turkish Republic of Northern Cyprus, was initiated and continues throughout the country with the aim of raising awareness for environmental cleaning and protection of the environment. (Gökçebel & Dalokay, 2020). For this reason, comprehensive improvement plans and applications have started to be conducted urgently in the solid waste management system. When environmental awareness in general in the country is handled, there is not enough awareness among the public and other stakeholders about solid waste problems and their impact, and in this sense, it is important to increase the priority of solid waste management.

Monitoring and enforcement activities are being improved and efforts to allocate more resources to control potential environmental pollution continue. The jobs and duties identified with strong waste administration are not satisfactory. This circumstance causes a few wasteful aspects. For instance, despite the fact that the current waste assortment framework has some positive perspectives, the greater part of the 28 regions do their own waste assortment and the joint utilization of vehicles and removal territories for assortment is restricted. (Günsel, 2016). Due to economies of scale, greater cooperation in solid waste management will have economic and environmental

advantages. The coverage of waste collection services is good in terms of the population served, in spite of the fact that there are some provincial regions that don't get assortment administrations. Little data and information are accessible on the measure of waste created and on different parts of waste administration. It is not possible to collect and organize the available data in a single centre. This situation makes planning of waste management difficult. The biggest deficiency in the lack of adequate protection of the environment and public health is in waste disposal. Most of the disposal areas are wild dumps without any management, and waste and garbage are scattered around these areas. All but one disposal areas do not have insulation to reduce the effects of leachate. In our country, only a part of Dikmen landfill has a landfill (Environmental Protection Department, 2020). However, the desired landfill operation cannot be performed in this area, especially in recent years. Wastewater from septic pits is often dumped in landfills, increasing effectively genuine ecological, wellbeing and dangers. Since there is no market interest for recyclable materials, there are very few customary reusing exercises today. The fact that the T.R.N.C. is not recognized and is under isolation also limits the export of such wastes to a large extent. In addition, there is a potential to generate compost from waste. However, the quantity of activities toward this path is as yet not high. The primary concern of the strong waste administration framework is financing and cost recuperation. At present, most regions gather on levies that solitary spread 30% of current waste administration costs. Be that as it may, current removal costs are low. (Environmental Protection Department, 2020). The future waste administration framework will substantially be more expensive than the present framework because of higher garbage removal norms. It is fundamental to create money related administration and cost recuperation frameworks so as to take care of every working cost and furthermore produce income

for progressing speculations. A maintainable strong waste administration framework may be conceivable with these enhancements. The political circumstance of Northern Cyprus is dubious and this influences a few components of strong waste administration, for example, limitations on squander send out. In developing the solid waste management plan in Northern Cyprus, it is important to ensure that future waste legislation and standards are in line with current and future EU policy and legislation (Environmental Protection Department, 2020). Also there are 12 companies that collect different type of waste from companies. The total 12 licensed companies engaged in waste management activities are given below;

| TYPE OF WASTE COLLECTED BY THE ORGANIZATION | NUMBER OF ORGANIZATION |
|---|---|
| VEGETABLE OIL WASTE | 3 |
| FUEL OIL WASTE | 1 |
| WASTE MINERAL OIL | 4 |
| TIRE WASTE | 1 |
| PACKAGING WASTES | 3 |
| CAR BATTERY WASTE | 3 |

Figure 1: Number of organization

The only area in Northern Cyprus that is regularly disposed of solid waste and is subject to inspection is the Güngör Landfill. This dump is not used by all our municipalities. Other municipalities have created their own garbage collection areas, but these garbage collection areas cannot be controlled. Currently, there is no regular recycling mechanism in the TRNC, but there are a total of twenty recycling companies supported by the Ministry of Tourism and Environment, Department of Environment. Only three of them work on solid waste (packaging) recycling, and companies that

recycle are not provided with the necessary financial and logistical support. This causes recycling companies to not work with sufficient productivity. Battery and metal wastes are the most effective recycling types in the TRNC so far; There are four companies with ministry permit focusing on this type of waste (Gökçebel & Dalokay, 2020). The high amount of waste generation can put a huge burden on the public budget. High waste generation can also lead to losses in economic efficiency and competitiveness (Gökçebel & Dalokay, 2020).

Medical wastes are examined under 3 different headings as pathological wastes, sharp-piercing solid wastes and infected wastes. The contamination of the soil by these wastes containing various chemicals, the spreading of these wastes to the soil in the agricultural areas and the consumption of the products obtained by the people have the potential to affect human health. While sterilization must be done first in order to bury these wastes, according to a report published in the Cyprus Newspaper, the machine purchased in the TRNC with the help of EU funds for sterilization between 2015-2018 was not used for any medical waste or hazardous waste (expired drugs, etc.), According to the news published in the newspaper called Yeniduzen, it was stated that since 2018, this machine can only be used for medical waste from hospitals and is still not used for out-of-date medicines from pharmacies (Gökçebel & Dalokay, 2020).

### 2.5.1 Hierarchy Adopted by the Environmental Protection Department

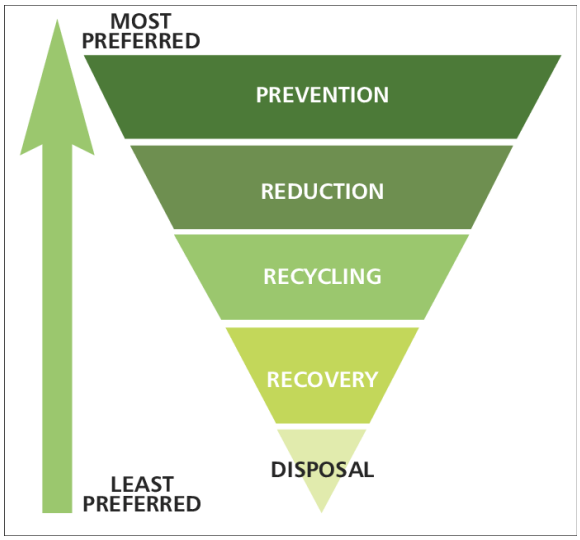

Figure 2: Waste Management Hierarchy

Current waste administration is made by squander pecking order rule. Squandering the board pecking order rule starts right off the bat by forestalling development of waste at that point decreasing it, re-using, recovering and last removal (Environmental Protection Department, 2020). The duties of Solid Waste Branch, which is responsible for the Law on Establishment, Duties and Working Principles of the Environmental Protection Department, have main 10 subheadings. First of them is to determine the principles that will ensure the management of wastes in an environmentally compatible manner, to ensure cooperation and coordination for the implementation of the law and to make the necessary inspections. Next one is to ensure the preparation of regional waste management plans and to determine the principles regarding the domestic and cross-border transportation of wastes in an environmentally friendly manner, to carry out studies on this, to work on the recycling of wastes (Environmental Protection Department, 2020). Further, next duty is to determine the principles that will ensure the management of household wastes in an environmentally compatible manner, to

determine the location criteria for disposal facilities, to determine the latest and cleanest technology and management systems for domestic waste disposal facilities. Furthermore, other duty explains to make training, meetings, plans and projects on waste management and to prepare monthly and annual activity reports related to the branch (Environmental Protection Department, 2020). Besides, other main duty is to ensure the necessary coordination and cooperation with other branch supervisors of the department, moreover to ensure that the works related to the branch are carried out in a timely manner and in a qualified manner in accordance with the standards. Lastly the next duty includes to carry out training activities related to the branch and to perform other duties assigned by their superiors, appropriate to their position (Environmental Protection Department, 2020).

In the Turkish Community of Cyprus regions are the fundamental capable authoritative associations. Released squanders are gathered from family units, ventures and advertisements by capacity vehicles and moved to the territory where they are arranged. Some are moved through stations to regular landfill while some others are conveyed to wild dump yards. Moreover, squander is isolated into various sorts relying upon their synthetic substances by a portrayal study, and consequently it is chosen whether they ought to be arranged, re-utilized or reused. Then again, it costs exceptionally and is a money related weight for districts, just as, in the event that strong waste isn't assessed appropriately, at that point it can likewise be a monetary misfortune (Günsel, 2016).

The natural administration obligations have a place with numerous authoritative foundations. A natural and a region laws have been arranged for normalization of waste control and removal. Municipality’s law’s decides the obligations and duties of

the districts. Then again, Environmental act is as per EU principles, and decides all the chiefs with respect to squander. As indicated by broad administrator squander must be overseen inside the chain of importance, just as, safety measures ought to be taken so as to forestall the mischief upon nature and human wellbeing (Alkan, 2015). Municipalities carry out the responsibilities of assortment, association and removal, while Environmental Protection Department (EPD) controls the arrangement of waste administration. Moreover, clinical waste control and removal guidelines have additionally gone into power. Wellbeing associations and particularly the Ministry of Health are liable for the division at source, transportation, stockpiling and disinfection of created clinical waste (Alkan, 2015). There are 28 municipalities in Northern Cyprus. Most of the 28 districts in the TRNC accomplish crafted by squander assortment by dump trucks, and move the gathered waste to the closest uncontrolled removal regions. In 2006, the quantity of dumping destinations was identified as 72 (Röben and Paralik, 2006). In any case, dumping locales has restricted limits and apply crude techniques for removal. Squander stockpiling in uncontrolled regions, that didn't satisfy any advanced landfill guidelines, made genuine ecological issues in view of expanding waste age connected to expanding populace (Röben and Paralik, 2006).

### 2.5.2 Polluter Pays Principle

The Polluter Pays Principle places an obligation on waste producers to cover the cost of damages arising from waste collection, treatment and disposal. Charges should be set according to the amount and type of waste. The Polluter Pays Principle encourages waste management service users to reduce their waste generation and find alternative approaches such as prevention, reuse, recycling and recovery. The implementation of the Polluter Pays Principle requires that service costs, including overheads and capital expenses, are covered by the waste producer. The basic principle is to cover waste

management service costs with tariffs within reasonable limits and without subsidies (Environmental Protection Department, 2020).

## 2.6 Food Waste Management in Northern Cyprus

It is estimated that around 1,200 tons of medical waste is generated each year. Only 10- 20% of these wastes are potentially infectious (at source) and therefore the group in question can be classified as hazardous waste. The majority of medical waste (90%); contains packaging, cardboard and paper, glass bottles, food waste and other non-contaminated materials. Food waste constitutes 40% of the waste collected by municipalities. This type of waste also pollutes recyclable waste. It is very heavy and has a high transportation cost and is an important source of greenhouse gas emissions. The European Union has mandatory targets for reducing the amount of biodegradable waste (bio-waste) collected by the municipality. This measure of the Integrated Solid Waste Management Plan aims to encourage composting at home and therefore reduce greenhouse gas emissions generated by the waste sector (Environmental Protection Department, 2020).

## 2.7 Pro-environmental consumer behaviour

Food wastage is surely a worldwide event that should be tended to as a critical component of maintainability usage moves. All in all, it has additionally been anticipated which either 30 to 50 percent of food being delivered on the planet for human admission will either be lost or squandered through the gracefully chain yearly. Hypothetically, food misfortune is those gathered all through creation of food, sub-collecting and assembling, though food wastage is a difficulty all through the times of appropriation just as usage. Additionally, in a few non-industrial countries, especially in industrialized nations, shoppers have likewise been perceived as the biggest gathering considered answerable for some the greater part of all out wastage on

sequent, in any applicable method to limit wastage, care ought to be taken (Morone, Papendiek, & Tartiu, 2017).

# Chapter 3

# RESEARCH METHODOLOGY

This chapter will include approach of research design to help reader to understand the validity of the research. This section delineated the strategies that were utilized by the investigation to accomplish its set target through introducing research plan, a description of the population, information assortment technique and data analysis.

## 3.1 Research Design

The investigation received the quantitative overview instrument for essential information assortment which is accomplish better generalizability and give better output. The survey was made dependent on various themes identified with the determinants of consumer contribution on food squander reduction at eateries. Primary data were collected via official online survey creator Google Forms. Survey link shared via social media and mail to participating candidates.

In this research, a descriptive research and a single cross-sectional configuration has been utilized to find the factors of consumer's behaviour in eatery food left-over extenuation. Also, a quantitative methodology has been utilized since all the outcomes in this exploration are introduced in measurable figures and numbers. In addition, a non-probability examining procedure has been utilized for this exploration as the individuals from the objective populace don't have an equivalent possibility of being chosen. As it is referenced, the objective populace has been chosen from individuals in North Cyprus.

## 3.2 Sample and Data Collection

The subject of survey and the point of the examination were completely disclosed to the respondents. Also, members were guaranteed that their reactions would be preserved unknown and private. 206 surveys were gathered. The first part of the survey was made out of segment data of the respondents and the subsequent segment was incorporated 45 five-level Likert-scale items from strongly disagree to strongly agree. Criteria were used to select willing overview members: residents of North Cyprus matured 16 or above who eat out at least once a week.

## 3.3 Questionnaire Development

The questionnaire contains two parts. The second part consists of 45 five-level Likert-scale items adjust people's perception regarding food waste mitigation in North Cyprus which were derived from Filimonau, Matute, Kubal-Czerwinska, Krzesiwo, & Mika, (2019). Survey starts with eight demographic questions. The demographic questions in this study include gender, age, job status, monthly income level, education level, frequency of their restaurant visit, nationality and occupation.

## 3.4 Data Analysis

Different type of examinations were conducted to analyse outcomes from the survey. The analyses include descriptive analysis regression, t-test, ANOVA, descriptive analysis, reliability test (Cronbach`s Alpha) and correlation analysis. Cronbach's alpha test was directed to show the unwavering quality of scales (Salcedo & McCormick, 2017). Connection examination was held to characterize the power and direction of the linear relationship that exists between two variables. Multiple regression method is utilized to clarify the variety in the dependent variable (Salcedo & McCormick, 2017).T-test can be utilized to show if the two gatherings have a statistically significant difference in their mean scores (Salcedo & McCormick, 2017) In many examination

conditions, in any case, there are multiple gatherings that we might want to think about their mean scores. For this situation, analysis of variance (ANOVA) can be utilized (Salcedo & McCormick, 2017).

# Chapter 4

# FINDING AND DISCUSSION

## 4.1 Introduction

The survey was divided into two sections; segment one especially based on the demographic and personal information while the subsequent part explicitly focused on discovering factors of consumer's behaviour in eatery food left-over extenuation. 206 of the respondents completed the survey. IBM SPSS v22 Statistics software program was used to complete analysis.

## 4.2 Demographic Profile of Respondents

According to the Table 1, it can be seen that most of the participants were female with 60.2 percent and minorities were male with approximately 39.8 percent. Also table 1 shows that, nearly half of the participants are between the ages of 16-27 at 49 percent, after that, 36.9 percent of the participants are between ages of 28-37, 8.7 percent are between the ages of 38-47 and the least number of participants is the category with demonstrates 48 and above with 5.3 percent. When it comes to job status, the table shows that the highest percentage belongs to those who works full time. In addition, 23.3 percent of the participants are unemployed, and 4.4 percent of the participants work part-time. Moreover, 41.7 percent of the people who filled the survey, earn 5.000 Turkish Liras and above monthly. In an addition to that, 26.2 of the participants earn less than 3.000 Turkish Liras and 18 percent earn between 3.000 – 4.000 Turkish Liras. Lastly, the minority of the participants earn between 4.000-5.000 Turkish Liras monthly with 14 percent. 54.9 percent of the participants have Bachelor's Degree.

Also, 33.5 percent of the participants has a Master's Degree, following with Ph.D. with 6.3 percent and secondary school with 4.9 percent. Moreover, 69.9 percent of the participants visits restaurants 1-2 times a week. 18.4 percent of participants visits restaurants 2-3 times a week and 4.4 percent visits more than 6 times a week which indicates that they nearly visit restaurants every day of the week. Majority of the participants works for private sector and minority of the participants are unemployed.

Table 1: Respondent Demographic Profile

| Variables | | Frequency | Percent |
|---|---|---|---|
| **GENDER** | Female | 124 | 60,2 |
| | Male | 82 | 39,8 |
| **AGE** | 16-27 | 101 | 49,0 |
| | 28-37 | 76 | 36,9 |
| | 38-47 | 18 | 8,7 |
| | 48 and above | 11 | 5,3 |
| **JOB STATUS** | Full time | 149 | 72,3 |
| | Part time | 9 | 4,4 |
| | Unemployed | 48 | 23,3 |
| **MONTHLY INCOME** | 3.000 TL - 4.000 TL | 37 | 18,0 |
| | 4.000 TL - 5.000 TL | 29 | 14,1 |
| | Less than 3000 TL | 54 | 26,2 |
| | More than 5000 TL | 86 | 41,7 |
| **EDUCATION LEVEL** | Bachelor's Degree | 113 | 54,9 |
| | Master's Degree | 69 | 33,5 |

| | | | |
|---|---|---|---|
| | Ph.D. or Higher | 13 | 6,3 |
| | Primary School | 1 | ,5 |
| | Secondary/High School | 10 | 4,9 |
| **VISITS OF RESTAURANTS** | 1-2 | 144 | 69,9 |
| | 2-3 | 38 | 18,4 |
| | 4-5 | 4 | 1,9 |
| | More than 6 | 9 | 4,4 |
| | None | 11 | 5,3 |
| **OCCUPATION** | Civil servant | 24 | 11,7 |
| | Private sector | 136 | 66,0 |
| | Student | 41 | 19,9 |
| | Unemployment | 5 | 2,4 |

## 4.3 Descriptive Statistics

Descriptive statistics is summing up the current information through specific numbers like mean, middle and so on to make the comprehension of the information simpler (Salcedo & McCormick, 2017). Table 2 shows descriptive statistics with the mean score, the minimum, maximum and standard deviation of each question filled by the participants.

Table 2: Summary of descriptive statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| GENDER | 206 | 1 | 2 | 1,40 | ,491 |
| AGE | 206 | 1 | 4 | 1,70 | ,841 |
| JOB STATUS | 206 | 1 | 3 | 1,51 | ,848 |

| | | | | | |
|---|---|---|---|---|---|
| MONTHLY INCOME LEVEL | 206 | 1 | 4 | 2,92 | 1,130 |
| EDUCATION LEVEL | 206 | 1 | 5 | 1,67 | ,982 |
| HOW OFTEN DO YOU VISIT RESTAURANT IN A WEEK? | 206 | 1 | 5 | 1,57 | 1,092 |
| NATIONALITY | 206 | 1 | 1 | 1,00 | ,000 |
| OCCUPATION | 206 | 1 | 4 | 2,13 | ,630 |

## 4.4 Reliability Analysis

Reliability analysis measures the consistency of responses to a questionnaire prepared according to a predetermined scale type. Also, reliability analysis checks the link between questions related to each scale in the survey (Salcedo & McCormick, 2017).

Table 3: Reliability analysis

| Cronbach's Alpha | N of Items |
|---|---|
| ,878 | 45 |

Based om table 3, since the Cronbach`s Alpha for all the scales is more than 0.6, it can be claimed scales used in this study are highly reliable. Also, it means that all the

questions used for each scale in the survey are connected to each other. Table 4 also shows item by item the Cronbach`s Alpha scores.

Table 4: Reliability analysis

| Item by Item | Cronbach's Alpha |
|---|---|
| A1 | ,674 |
| A2 | ,739 |
| A3 | ,560 |
| A4 | ,609 |
| A5 | ,640 |
| A6 | ,698 |
| A7 | ,737 |
| A8 | ,649 |
| A9 | ,585 |
| A10 | ,662 |
| A11 | ,712 |
| A12 | ,716 |
| B1 | ,649 |
| B2 | ,688 |
| B3 | ,791 |
| B4 | ,747 |
| B5 | ,668 |
| C1 | ,655 |
| C2 | ,617 |
| C3 | ,622 |
| C4 | ,485 |
| D1 | ,685 |
| D2 | ,726 |
| D3 | ,821 |
| D4 | ,650 |
| D5 | ,590 |
| D6 | ,684 |
| D7 | ,622 |
| D8 | ,612 |
| D9 | ,619 |
| D10 | ,637 |
| E1 | ,589 |
| E2 | ,610 |
| E3 | ,533 |
| E4 | ,647 |

| | |
|---|---|
| E5 | ,627 |
| F1 | ,821 |
| F2 | ,794 |
| F3 | ,643 |
| F4 | ,778 |
| G1 | ,771 |
| G2 | ,758 |
| G3 | ,631 |
| G4 | ,668 |
| G5 | ,713 |

## 4.5 Communalities

Table 5 shows the shared characteristics of each factor. It is typically recommended in the literature to drop elements that are under 0.5. According to Table 5, output of questions are 0.5 or more, so they were utilized within all investigations.

Table 5: Communalities

| Question Code | Initial | Extraction |
|---|---|---|
| A1 | 1,000 | ,674 |
| A2 | 1,000 | ,739 |
| A3 | 1,000 | ,560 |
| A4 | 1,000 | ,609 |
| A5 | 1,000 | ,640 |
| A6 | 1,000 | ,698 |
| A7 | 1,000 | ,737 |
| A8 | 1,000 | ,649 |
| A9 | 1,000 | ,585 |
| A10 | 1,000 | ,662 |
| A11 | 1,000 | ,712 |
| A12 | 1,000 | ,716 |
| B1 | 1,000 | ,649 |
| B2 | 1,000 | ,688 |
| B3 | 1,000 | ,791 |
| B4 | 1,000 | ,747 |
| B5 | 1,000 | ,668 |

| | | |
|---|---|---|
| C1 | 1,000 | ,655 |
| C2 | 1,000 | ,617 |
| C3 | 1,000 | ,622 |
| C4 | 1,000 | ,485 |
| D1 | 1,000 | ,685 |
| D2 | 1,000 | ,726 |
| D3 | 1,000 | ,821 |
| D4 | 1,000 | ,650 |
| D5 | 1,000 | ,590 |
| D6 | 1,000 | ,684 |
| D7 | 1,000 | ,622 |
| D8 | 1,000 | ,612 |
| D9 | 1,000 | ,619 |
| D10 | 1,000 | ,637 |
| E1 | 1,000 | ,589 |
| E2 | 1,000 | ,610 |
| E3 | 1,000 | ,533 |
| E4 | 1,000 | ,647 |
| E5 | 1,000 | ,627 |
| F1 | 1,000 | ,821 |
| F2 | 1,000 | ,794 |
| F3 | 1,000 | ,643 |
| F4 | 1,000 | ,778 |
| G1 | 1,000 | ,771 |
| G2 | 1,000 | ,758 |
| G3 | 1,000 | ,631 |
| G4 | 1,000 | ,668 |
| G5 | 1,000 | ,713 |

## 4.6 Independent sample T-test

Following part will discuss the significant difference between the gender in terms of food waste mitigation at restaurants. Independent sample t-test is a parametric technique used to test the significance of the difference between two arithmetic means when each sub-section shows normal distribution characteristics (Salcedo & McCormick, 2017). In the event that, Levene's Test for Equality of Variances is

insignificant (P>0.05), at that point, equivalent changes are expected and it tends to be derived that there is no significant contrast between the constructs and the chosen factors. If, Levene's Test for Equality of Variances is significant (P<0.05), at that point equivalent variances are not accepted and the significant level of t-test for Equality of Means (2-tailed) ought to be considered (Salcedo & McCormick, 2017).

Table 6 reflects the result of T-test. It displays that in twenty for situations, customers act different based on their sexualities. T-test table shows that males and females have significantly different opinions about “being aware that preparing a restaurant orders produces a great deal of food squander”. (t=3.625; 5%), “I feel remorseful when I leave left-ever on my plate” (t= 3.183; 5%), “keen to pay extra money to restaurants that goal to decrease the amount of food squander”(t= 2.611; 5%) and “staying alert that giving unsold dinners to the individuals in need is developing in prominence with eateries around the globe” (t= 3.188; 5%).

Table 6: Independent Sample T-test

| QUESTION CODE | GENDER | N | Mean | T-Test |
|---|---|---|---|---|
| A1 | Female | 122 | 3,93 | ,086 |
| | Male | 81 | 3,91 | (,931) |
| A2 | Female | 124 | 3,94 | 1.046 |
| | Male | 82 | 3,77 | (,297) |
| A3 | Female | 123 | 3,37 | -1.41 |
| | Male | 82 | 3,61 | (,160) |
| A4 | Female | 124 | 2,04 | ,851 |
| | Male | 82 | 1,89 | (,395) |
| A5 | Female | 124 | 4,90 | 1968 |
| | Male | 82 | 4,72 | (,050) |
| A6 | Female | 124 | 1,90 | ,245 |
| | Male | 82 | 1,85 | (,807) |
| A7 | Female | 124 | 4,36 | 1280 |

| | | | | |
|---|---|---|---|---|
| | Male | 82 | 4,18 | (,202) |
| A8 | Female | 123 | 4,25 | 1866 |
| | Male | 82 | 3,98 | (,063) |
| A9 | Female | 124 | 3,26 | ,517 |
| | Male | 82 | 3,17 | (,606) |
| A10 | Female | 123 | 3,46 | 1735 |
| | Male | 82 | 3,15 | (,084) |
| A11 | Female | 124 | 4,50 | ,485 |
| | Male | 82 | 4,44 | (,628) |
| A12 | Female | 124 | 4,43 | -,413 |
| | Male | 82 | 4,48 | (,680) |
| B1 | Female | 121 | 3,72 | -,789 |
| | Male | 82 | 3,83 | (,431) |
| B2 | Female | 121 | 3,65 | -2114 |
| | Male | 82 | 3,93 | (,036) |
| B3 | Female | 123 | 3,59 | -1231 |
| | Male | 82 | 3,76 | (,220) |
| B4 | Female | 123 | 3,58 | -1042 |
| | Male | 82 | 3,73 | (,299) |
| B5 | Female | 123 | 3,80 | -1905 |
| | Male | 82 | 4,01 | (,058) |
| C1 | Female | 123 | 4,07 | -,827 |
| | Male | 82 | 4,17 | (,409) |
| C2 | Female | 123 | 3,60 | ,449 |
| | Male | 82 | 3,54 | (,654) |
| C3 | Female | 123 | 4,12 | ,361 |
| | Male | 82 | 4,07 | (,719) |
| C4 | Female | 123 | 3,90 | 1953 |
| | Male | 82 | 3,62 | (,052) |
| D1 | Female | 123 | 4,12 | 3625 |
| | Male | 82 | 3,65 | (,000) |
| D2 | Female | 123 | 4,52 | 2428 |
| | Male | 82 | 4,26 | (,016) |
| D3 | Female | 123 | 4,43 | 2740 |
| | Male | 82 | 4,12 | (,007) |
| D4 | Female | 123 | 3,72 | 1660 |
| | Male | 82 | 3,45 | (,098) |
| D5 | Female | 121 | 4,43 | ,914 |
| | Male | 81 | 4,32 | (,362) |
| D6 | Female | 123 | 4,33 | 2416 |

| | | | | |
|---|---|---|---|---|
| | Male | 82 | 4,02 | (,017) |
| D7 | Female | 123 | 3,80 | 1183 |
| | Male | 82 | 3,63 | (,238) |
| D8 | Female | 123 | 3,84 | ,922 |
| | Male | 82 | 3,71 | (,358) |
| D9 | Female | 123 | 4,17 | 3188 |
| | Male | 82 | 3,74 | (,002) |
| D10 | Female | 123 | 4,29 | 2684 |
| | Male | 82 | 3,98 | (,008) |
| E1 | Female | 122 | 4,67 | 2253 |
| | Male | 82 | 4,48 | (,025) |
| E2 | Female | 123 | 4,71 | 2034 |
| | Male | 82 | 4,51 | (,043) |
| E3 | Female | 123 | 2,34 | -1909 |
| | Male | 82 | 2,68 | (,058) |
| E4 | Female | 123 | 4,46 | 1253 |
| | Male | 82 | 4,30 | (,212) |
| E5 | Female | 123 | 4,85 | 3012 |
| | Male | 82 | 4,59 | (,003) |
| F1 | Female | 123 | 4,46 | 3183 |
| | Male | 82 | 4,07 | (,002) |
| F2 | Female | 123 | 4,24 | 1592 |
| | Male | 82 | 4,02 | (,113) |
| F3 | Female | 122 | 1,92 | -2267 |
| | Male | 82 | 2,35 | (,025) |
| F4 | Female | 123 | 4,24 | 1716 |
| | Male | 81 | 4,00 | (,088) |
| G1 | Female | 123 | 4,46 | 1929 |
| | Male | 82 | 4,21 | (,055) |
| G2 | Female | 123 | 4,58 | 1792 |
| | Male | 82 | 4,37 | (,075) |
| G3 | Female | 123 | 4,67 | 1290 |
| | Male | 82 | 4,55 | (,198) |
| G4 | Female | 123 | 3,97 | 2611 |
| | Male | 82 | 3,56 | (,010) |
| G5 | Female | 123 | 4,50 | 1915 |
| | Male | 82 | 4,29 | (,057) |

## 4.7 Analyse of Variance

One-way analysis of variance (ANOVA) is used to calculate the significance of the difference between three or more independent means in a normally distributed series. ANOVA alone compares the arithmetic means of three or more groups cumulatively; ANOVA result is found to be significant when at least one of these comparisons is significant. If P value is insignificant (P>0.05) in Leven`s test, ANOVA test can be done. If P value in the ANOVA test is significant (p<0.05), it can be concluded that there is statistically significant difference among the groups.

Following part will discuss the significant difference between the job status based on food waste mitigation at restaurants. On table 7, job status of the participants will take place for Tukey test to examine whether, there is a significant difference between the job status and variables of the study or not. Based on table 7, customers in different job status have significantly different opinions about following questions; “realizing how to purchase items and bundles that are better for the climate” (F=2,375; 10%),“ realizing how to choose items and item bundling that lessen the measure of waste winding up in landfills ” (F= 3.374, 5%). “at every possible opportunity, I attempt to utilize biodegradable or reused items at home” (F= 4.002, 5%).

Table 7: Tukey HSD (JOB STATUS)

| Dependent Variable With Question Code | JOB STATUS | JOB STATUS | F | Sig. |
|---|---|---|---|---|
| A1 | Full time | Part time | 1,569 | ,211 |
| | | Unemployed | | |

| | | | | |
|---|---|---|---|---|
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A2 | Full time | Part time | ,686 | ,505 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A3 | Full time | Part time | 1,050 | ,352 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A4 | Full time | Part time | 1,072 | ,344 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A5 | Full time | Part time | ,127 | ,880 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |

| | | | | |
|---|---|---|---|---|
| | Unemployed | Full time | | |
| | | Part time | | |
| A6 | Full time | Part time | ,299 | ,742 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A7 | Full time | Part time | ,374 | ,688 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A8 | Full time | Part time | ,047 | ,954 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A9 | Full time | Part time | 1,772 | ,173 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |

| | | | | |
|---|---|---|---|---|
| A10 | Full time | Part time | 1,128 | ,326 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A11 | Full time | Part time | ,134 | ,874 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| A12 | Full time | Part time | ,806 | ,448 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| B1 | Full time | Part time | 2,375 | ,096 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |

| | | | | |
|---|---|---|---|---|
| | Unemployed | Full time | | |
| | | Part time | | |
| B2 | Full time | Part time | 1,257 | ,287 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| B3 | Full time | Part time | 3,374 | ,036 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| B4 | Full time | Part time | ,760 | ,469 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| B5 | Full time | Part time | 1,246 | ,290 |

| | | | | |
|---|---|---|---|---|
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| C1 | Full time | Part time | ,699 | ,498 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| C2 | Full time | Part time | 4,002 | ,020 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| C3 | Full time | Part time | 1,924 | ,149 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| C4 | Full time | Part time | 1,313 | ,271 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |

| | | | | |
|---|---|---|---|---|
| D1 | Full time | Part time | 1,208 | ,301 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| D2 | Full time | Part time | 1,438 | ,240 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| D3 | Full time | Part time | ,015 | ,985 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| D4 | Full time | Part time | ,147 | ,863 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |

| | | | | |
|---|---|---|---|---|
| | | Part time | | |
| D5 | Full time | Part time | 1,140 | ,322 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| D6 | Full time | Part time | ,353 | ,703 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| D7 | Full time | Part time | ,052 | ,949 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |

| | | | | |
|---|---|---|---|---|
| D8 | Full time | Part time | 1,219 | ,298 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| D9 | Full time | Part time | 1,060 | ,348 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| D10 | Full time | Part time | 1,999 | ,138 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |

| | | | | |
|---|---|---|---|---|
| | Unemployed | Full time | | |
| | | Part time | | |
| E1 | Full time | Part time | 1,204 | ,302 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| E2 | Full time | Part time | ,896 | ,410 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| E3 | Full time | Part time | ,752 | ,473 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |

| | | | | |
|---|---|---|---|---|
| E4 | Full time | Part time | ,219 | ,803 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| E5 | Full time | Part time | ,267 | ,766 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| F1 | Full time | Part time | 2,247 | ,108 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| F2 | Full time | Part time | 1,594 | ,206 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |

| | | | | |
|---|---|---|---|---|
| | Unemployed | Full time | | |
| | | Part time | | |
| F3 | Full time | Part time | ,532 | ,588 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| F4 | Full time | Part time | 1,388 | ,252 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| G1 | Full time | Part time | 1,584 | ,208 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| G2 | Full time | Part time | ,566 | ,569 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |

| | | | | |
|---|---|---|---|---|
| | Unemployed | Full time | | |
| | | Part time | | |
| G3 | Full time | Part time | ,083 | ,920 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |
| G4 | Full time | Part time | ,649 | ,524 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |

| | | | | |
|---|---|---|---|---|
| G5 | Full time | Part time | 1,654 | ,194 |
| | | Unemployed | | |
| | Part time | Full time | | |
| | | Unemployed | | |
| | Unemployed | Full time | | |
| | | Part time | | |

Following part will discuss the significant difference between the occupation based on food waste mitigation at restaurants Based on table 7. Customers with different occupation have significantly dissimilar opinion about following questions: “people reserve the option to alter the indigenous habitat to suit their necessities” (F=2,141; 10%),“ I am aware about reusing than the normal individual” (F= 1.986, 10%), “I deny purchasing items from organizations blamed for being contaminators” (F= 2.375, 10%), “I am mindful that comprehensive/'eat as much as possible' eatery plans of action create a tons of food squander” (F= 2.476, 5%).

Table 8: Tukey HSD (OCCUPATION)

| Dependent Variable With Question Code | OCCUPATION | OCCUPATION | F | Sig. |
|---|---|---|---|---|
| A1 | Civil servant | Private sector | ,507 | ,731 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A2 | Civil servant | Private sector | ,889 | ,472 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |

| | | | | |
|---|---|---|---|---|
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A3 | Civil servant | Private sector | ,411 | ,801 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A4 | Civil servant | Private sector | 2,141 | ,077 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |

| | | | | |
|---|---|---|---|---|
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A5 | Civil servant | Private sector | ,674 | ,611 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A6 | Civil servant | Private sector | 1,025 | ,396 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |

| | | | | |
|---|---|---|---|---|
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A7 | Civil servant | Private sector | 1,311 | ,267 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A8 | Civil servant | Private sector | 1,156 | ,332 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |

| | | | | |
|---|---|---|---|---|
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A9 | Civil servant | Private sector | 1,578 | ,182 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A10 | Civil servant | Private sector | ,646 | ,630 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |

| | | | | |
|---|---|---|---|---|
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A11 | Civil servant | Private sector | ,771 | ,545 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| A12 | Civil servant | Private sector | ,751 | ,559 |
| | | Student | | |
| | | Unemployment | | |

| | | | | |
|---|---|---|---|---|
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| B1 | Civil servant | Private sector | ,678 | ,608 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| B2 | Civil servant | Private sector | 1,986 | ,098 |
| | | Student | | |

| | | | | |
|---|---|---|---|---|
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| B3 | Civil servant | Private sector | 1,098 | ,359 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| B4 | Civil servant | Private sector | ,638 | ,636 |

| | | | | |
|---|---|---|---|---|
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| B5 | Civil servant | Private sector | ,862 | ,488 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |

| | | | | |
|---|---|---|---|---|
| C1 | Civil servant | Private sector | ,405 | ,805 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| C2 | Civil servant | Private sector | ,989 | ,414 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |

| | | | | |
|---|---|---|---|---|
| | | Student | | |
| C3 | Civil servant | Private sector | ,378 | ,824 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| C4 | Civil servant | Private sector | 2,375 | ,053 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |

| | | | | |
|---|---|---|---|---|
| | | Private sector | | |
| | | Student | | |
| D1 | Civil servant | Private sector | ,326 | ,860 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D2 | Civil servant | Private sector | 1,333 | ,259 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |

| | | | | |
|---|---|---|---|---|
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D3 | Civil servant | Private sector | ,412 | ,800 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D4 | Civil servant | Private sector | 1,050 | ,382 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |

| | | | | |
|---|---|---|---|---|
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D5 | Civil servant | Private sector | 2,466 | ,046 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D6 | Civil servant | Private sector | ,135 | ,969 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |

| | | | | |
|---|---|---|---|---|
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D7 | Civil servant | Private sector | 1,259 | ,287 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D8 | Civil servant | Private sector | 1,157 | ,331 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |

| | | | | |
|---|---|---|---|---|
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D9 | Civil servant | Private sector | ,338 | ,852 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| D10 | Civil servant | Private sector | ,940 | ,442 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |

| | | | | |
|---|---|---|---|---|
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| E1 | Civil servant | Private sector | ,933 | ,446 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| E2 | Civil servant | Private sector | 1,501 | ,203 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |

| | | | | |
|---|---|---|---|---|
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| E3 | Civil servant | Private sector | 2,173 | ,073 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| E4 | Civil servant | Private sector | ,646 | ,630 |
| | | Student | | |
| | | Unemployment | | |

| | | | | |
|---|---|---|---|---|
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| E5 | Civil servant | Private sector | 1,427 | ,226 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| F1 | Civil servant | Private sector | ,842 | ,500 |
| | | Student | | |

| | | | | |
|---|---|---|---|---|
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| F2 | Civil servant | Private sector | ,149 | ,963 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| F3 | Civil servant | Private sector | 3,867 | ,005 |

| | | | | |
|---|---|---|---|---|
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| F4 | Civil servant | Private sector | 1,249 | ,291 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |

| | | | | |
|---|---|---|---|---|
| G1 | Civil servant | Private sector | 1,420 | ,229 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| G2 | Civil servant | Private sector | ,960 | ,431 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |

| | | | | |
|---|---|---|---|---|
| | | Student | | |
| G3 | Civil servant | Private sector | 1,242 | ,294 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |
| G4 | Civil servant | Private sector | 1,408 | ,233 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |

| | | | | |
|---|---|---|---|---|
| | | Private sector | | |
| | | Student | | |
| G5 | Civil servant | Private sector | ,724 | ,576 |
| | | Student | | |
| | | Unemployment | | |
| | Private sector | Civil servant | | |
| | | Student | | |
| | | Unemployment | | |
| | Student | Civil servant | | |
| | | Private sector | | |
| | | Unemployment | | |
| | Unemployment | Civil servant | | |
| | | Private sector | | |
| | | Student | | |

## 4.8 Correlation

Correlation analysis is a statistical method that reveals the direction, degree and importance of the relationship between variables. The coefficient indicating the direction and degree of the relationship is called the correlation coefficient. The correlation coefficient is represented by a lowercase r and the value of r takes values between -1 and +1. If the value of r takes values close to -1, it is determined that there is a negative relationship between the variables, and a positive relationship if it takes values close to +1. If the value of r takes values close to zero, it is concluded that there is no relationship between the two variables (Salcedo & McCormick, 2017).

Table 9: Correlations Matrix

| | | G | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|
| **G** | Pearson Correlation | 1 | ,164* | ,225** | ,442** | ,455** | ,723** | ,281** |
| | Sig. (2-tailed) | | ,020 | ,001 | ,000 | ,000 | ,000 | ,000 |
| | N | 205 | 201 | 201 | 205 | 202 | 205 | 203 |
| **A** | Pearson Correlation | ,164* | 1 | ,094 | ,139* | ,379** | ,290** | ,176* |
| | Sig. (2-tailed) | ,020 | | ,190 | ,049 | ,000 | ,000 | ,013 |
| | N | 201 | 202 | 197 | 201 | 198 | 201 | 199 |
| **B** | Pearson Correlation | ,225** | ,094 | 1 | ,597** | ,368** | ,322** | ,121 |
| | Sig. (2-tailed) | ,001 | ,190 | | ,000 | ,000 | ,000 | ,090 |
| | N | 201 | 197 | 201 | 201 | 198 | 201 | 199 |
| **C** | Pearson Correlation | ,442** | ,139* | ,597** | 1 | ,515** | ,549** | ,304** |
| | Sig. (2-tailed) | ,000 | ,049 | ,000 | | ,000 | ,000 | ,000 |
| | N | 205 | 201 | 201 | 205 | 202 | 205 | 203 |
| **D** | Pearson Correlation | ,455** | ,379** | ,368** | ,515** | 1 | ,622** | ,277** |
| | Sig. (2-tailed) | ,000 | ,000 | ,000 | ,000 | | ,000 | ,000 |
| | N | 202 | 198 | 198 | 202 | 202 | 202 | 200 |
| **E** | Pearson Correlation | ,723** | ,290** | ,322** | ,549** | ,622** | 1 | ,431** |
| | Sig. (2-tailed) | ,000 | ,000 | ,000 | ,000 | ,000 | | ,000 |
| | N | 205 | 201 | 201 | 205 | 202 | 205 | 203 |
| **F** | Pearson Correlation | ,281** | ,176* | ,121 | ,304** | ,277** | ,431** | 1 |
| | Sig. (2-tailed) | ,000 | ,013 | ,090 | ,000 | ,000 | ,000 | |
| | N | 203 | 199 | 199 | 203 | 200 | 203 | 203 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

## 4.9 Regression analysis

The following part will discuss the relationship between food waste mitigation at restaurants and its determinants. Regression analysis is an analysis method used to quantify the connection between at least two factors. If an analysis is made using a single variable, it is called univariate regression, if more than one variable is used, it is called multivariate regression analysis. With regression analysis, information about the existence of the relationship between variables and the strength of this relationship, if any, can be obtained (Salcedo & McCormick, 2017).

The regression model for this variable is:

$G=\alpha+\beta 1A+\beta 2B+\beta 3C+\beta 4D+\beta 3E+\beta 4F+\varepsilon$

where: G= Social Intentions towards Restaurants Food Squander Reduction, A= New Eco-Model, B= Environmental Knowledge, C= Favorable Environmental Behavior at Home, D= Knowledge on Eatery Food Squander, E= Attitudes towards Eatery Food Squander, F= Anticipated Emotions towards Eatery Food Squander $\alpha$=constant term, $\beta 1$, $\beta 2$, $\beta 3$ and $\beta 4$ are predictors' coefficient and $\varepsilon$ is error term.

Table 10 Behavioural Intentions towards Restaurants Food Waste Reduction Model Summary.

| Model | $R^2$ |
|---|---|
| 1 | ,573[a] |

Regression equation is statistically significant at 1% level as overall. The ratio of $R^2$ is 0.573, which means = Behavioral intentions towards restaurants food waste reduction is responsible for about 57% of the changes in the determinants.

| F | Sig. |
|---|---|
| 16,230 | ,000[b] |

Table 11 : Behavioural Intentions Towards Restaurants Food Waste Reduction Coefficients

| **Dependent:** Behavioural Intentions towards Restaurants Food Waste Reduction (G) | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| | (Con) | 1,952 | ,394 | | ,101 | ,901 |
| | A | ,036 | ,070 | ,031 | 4,952 | ,000 |
| | B | -,007 | ,062 | -,007 | -,111 | ,912 |
| | C | ,072 | ,069 | ,073 | 2,040 | ,047 |
| | D | ,003 | ,090 | ,003 | ,033 | ,973 |
| | E | ,618 | ,082 | ,593 | 7,522 | ,000 |
| | F | ,150 | ,074 | ,132 | 2,031 | ,044 |

A positive relationship was found between Behavioural Intentions towards Restaurants Food Waste Reduction (G) (i.e. Food waste mitigation) and New Ecological Paradigm (A); this shows that New Ecological Paradigm is statistically significant and has positive impact on food waste mitigation.

Food waste mitigation and Pro-Environmental Behaviour at Home are positively related to each other, and Pro-Environmental Behaviour has positive influence on Food waste mitigation.

Also, the relationship between Attitudes towards Restaurant Food Waste and Food waste mitigation is statistically significant hence it has a significant effect on Food

waste mitigation whereas Anticipated Emotions towards Restaurant Food Waste has positive influence on Food waste mitigation.

Briefly, new ecological paradigm, supportive of ecological conduct at home, perspectives towards eatery food squander and foreseen feelings towards eatery food squander have significant positive impact on food waste mitigation.

# Chapter 5

# CONCLUSION AND SUGGESTION

## 5.1 Conclusion

Customers should take responsibility on food waste mitigation for restaurants as well. Because reducing food waste will not only be beneficial for restaurants. It will have benefits on sustainable living and it will control the resources. Results showed that all values responsible by customers are significantly influence food waste mitigation in the restaurants based in North Cyprus. Mostly, attitudes towards restaurant food waste has a big impact on food waste mitigation at the restaurants.

As a conclusion, in twenty-four situations, customers act different based on their sexualities. Male and females have altogether various conclusions about "staying alert that preparing an eatery supper creates a ton of food squander", "I feel remorseful when I leave left over on my plate as I probably am aware this adds to eatery food squander", "would follow through on a cost premium in eateries that plan to favourable to effectively decrease the measure of food squander produced" and "staying alert that giving unsold dinners to the individuals in need is developing in prominence with eatery around the globe". Also, there is significant difference between the job status and food waste mitigation at restaurants. Customers in different job status have significantly different opinions on "realizing how to purchase items and bundles that are better for the climate", "realizing how to choose items and item bundling that diminish the measure of waste winding up in landfills", "at every possible opportunity,

I attempt to utilize biodegradable or reused items at home". In an addition to that, there is a significant difference between behavioural intentions towards restaurants food waste reduction and its determinants such as, new ecological paradigm, natural information, favourable to ecological conduct at home, information on eatery food squander, perspectives towards eatery food squander and foreseen feelings towards eatery food misuse of clients. Also, clients in various occupations have essentially extraordinary sentiment on after inquiries as follow: "people reserve the privilege to alter the common habitat to suit their necessities", I find out about reusing than the normal individual “, "I reject purchasing items from organizations blamed for being polluters", "I am mindful that comprehensive/'eat as much as possible' eatery plans of action produce a ton of food squander".

Regression results also indicate that a new ecological paradigm, supportive of natural conduct at home, perspectives towards eatery food squander and foreseen feelings towards eatery food squander have significant positive impact on food waste mitigation.

## 5.2 Suggestion

The importance of food waste management cannot be ignored. Increasing concern and awareness about the environment due to serious environmental pollution has caused businesses to produce environment-oriented plans. At this point, it is observed that the attention of customers has gained a tendency towards becoming customers of environmentally friendly businesses. Also, it is believed that training the employees for a short time on certain days will help them to rest more and be more productive without getting bored.

This study is helpful to restaurants in North Cyprus in terms of explaining the importance of food waste management offer. Customers need to keep in mind that implementing food waste management is essential to divide up the burden of the restaurants. Therefore, implementations of food waste management services should be highly in demand. Innovations increase variety. Millennials comparing to other generations, are more comfortable with the technological innovations which makes them easier targets on the online environment than others. Managers should develop their knowledge and implementations without worsening the available information.

Also, greenhouse gas emissions generated by the waste sector can be reduced by promoting composting. In this sense, home composting requires participation on the basis of household or neighbourhood where appropriate. Green waste composting activities should be encouraged and a facility or business model should be found. Green waste composting projects fell short of expectations or fail.

In Northern Cyprus, starting points should be determined for the transition to a circular economy, and environmentally sensitive steps should be taken with the cooperation of the public and the support of the state. Community awareness plays a key role in the implementation of the circular economy, so steps that will increase public awareness in Northern Cyprus should be a priority. For example, it is an easy and effective option to have classes in schools that will teach students to be environmentally friendly, recycling and similar practices and that these courses should compulsory for all age groups from kindergarten to high school. The most important recommendation can be identified as taking actions to increase the awareness of the general population on food waste related issues in Northern Cyprus, as well as ensuring political credibility and ensuring clear consistency in the guidelines.

Investigation of the green generation customer profile and suggested to investigate the reasons behind become a customer of restaurant which implement food waste management can be suggested for further researches. Also, economical benefits of food waste management can be another research subject.

# REFERENCES


Aardsma, G. (2018, March 21). *Modern Restaurant Management*. Retrieved from Waste Trends Your Restaurant Needs to Know About in 2018: https://modernrestaurantmanagement.com/waste-trends-your-restaurant-needs-to-know-about-in-2018/

Australian Government. (2018, March 15). *Waste management tips for business.* Retrieved from Business : https://www.business.gov.au/info/run/waste-management/waste-management-tips-for-business

Brown, R. B. (2006). *Doing Your Dissertation in Business and Management.* California: SAGE.

Caradonna, J. (2014). *Sustainability: A History.* United Kingdom: Oxford University Press.

Chandrappa, R., & Das, D. B. (2012). *Solid Waste Management: Principles and Practice.* London: Springer-Verlar .

Cuzin, V. (2019, March 21). *Malou*. Retrieved from Food Waste : What Are the Social, Economic, and Marketing Impacts for Restaurants ?: https://malou.io/food-waste-impact-restaurant-5-tips-act/?lang=en

DeBenedetti, J. (2019, June 8). *Environmental Trends in Business*. Retrieved from Environmental Trends in Business: https://bizfluent.com/list-6656162-environmental-trends-business.html

Dillard, J., Dujon, V., & King, M. (2009). *Understanding the Social Dimension of Sustainability.* New York: Taylor & Francis.

Do Something. (2018, April 1st). *Do Something*. Retrieved from 11 Facts About Recycling: https://www.dosomething.org/us/facts/11-facts-about-recycling

Eley, J., & Hancock, A. (2020, July 28). *UK food industry fears waste explosion as coronavirus strains supply chain* . Retrieved from UK food industry fears waste explosion as coronavirus strains supply chain : https://www.ft.com/content/7b6bb903-7688-4520-84f5-9845b0f6bd50

Environmental Protection Department. (2020, August 14th). *General Information About Solid Waste*. Retrieved from General Information About Solid Waste: http://www.cevrekorumadairesi.org/solidwaste/en-index.php

European Commission. (2008). Science for Environmental Policy. *Breaking the link between waste generation and prosperity*, 1.

European Commission. (2017). Best Environmental Management Practice in the Tourism. *Organic Waste Management*, 2-15.

Filimonau, V., Matute, J., Kubal-Czerwinska , M., Krzesiwo, K., & Mika, M. (2019). The determinants of consumer engagement in restaurant food waste. *The determinants of consumer engagement in restaurant food waste*, 15.

Filimonau, V., Matute, J., Kubal-Czerwinska, M., Krzesiwo, K., & Mika, M. (2019). The determinants of consumer engagement in restaurant food waste. *The determinants of consumer engagement in restaurant food waste*, 1-12.

Gökçebel, Ş., & Dalokay, F. (2020, 14th August). *KKTC'de Geri Dönüşüm*. Retrieved from KKTC'de Geri Dönüşüm: https://tabella.org/2020/01/20/kktcde-geri-donusum/

Gould, H. (2016, July 27). *Restaurants have a huge food waste problem; could an app help?* Retrieved from Restaurants have a huge food waste problem; could an app help?: https://www.theguardian.com/sustainable-business/2016/may/27/restaurants-huge-food-waste-problem-smart-meter-winnow-hugh-fearnley-whittingstall

Günsel, C. B. (2016). Environmental Problems In Northern Cyprus: A Descriptive. *Environmental Problems In Northern Cyprus: A Descriptive*, 56.

Ikerd, J. (2012). *The Essentials of Economic Sustainability.* West Hartford: Kumarian Press.

International Solid Waste Association. (2013). Sustainable Solid Waste Management & The Green Economy. *Sustainable Solid Waste Management & The Green Economy*, 4.

Kaye, L. (2020, July 27). *Food retailers must do more to reduce food waste*. Retrieved from Food retailers must do more to reduce food waste: https://www.theguardian.com/sustainable-business/food-retailers-must-reduce-waste

KKTC Res-Bir. (2020, August 15). *Mağusa*. Retrieved from Mağusa: https://www.res-bir.com/copy-of-lefkosa

Moodie, A. (2020, July 27). *How the US can solve its multibillion food waste problem - report*. Retrieved from How the US can solve its multibillion food waste problem - report: https://www.theguardian.com/sustainable-business/2016/mar/09/us-food-waste-environment-ghg-emissions-climate-change

Morgan, S. (2009). *Waste, Recycling and Reuse.* United Kingdom: Evans Brothers.

Morone, P., Papendiek, F., & Tartiu, V. (2017). *Fod Waste Reduction and Valorisation.* Cham: Springer International Publishing.

Nordic Council of Ministers. (2012). *Prevention of Food Waste in Restaurants, Hotels, Canteens and Catering.* Copenhagen: Temanord.

Ogunjimi, A. (2018, March 15). *Advantages and Disadvantages of Building a Waste Management Facility*. Retrieved from Chron: http://smallbusiness.chron.com/advantages-disadvantages-building-waste-management-facility-34415.html

Reddy, C. (2018, May 8th). *Advantages and Disadvantages of Waste Management*. Retrieved from Wisestep: https://content.wisestep.com/advantages-disadvantages-waste-management/

Rhyner, C., Schwartz, L., Wenger, R., & Kohrell, M. (1995). *Waste Management and Resource Recovery.* Washington: Lewis Publisher.

Rinkesh. (2018, May 8th). *Serious Causes of Landfills*. Retrieved from Conserve Energy Future: https://www.conserve-energy-future.com/causes-effects-solutions-of-landfills.php

Salcedo, J., & McCormick, K. (2017). *SPSS Statistics for Data Analysis and Visualization.* Canada: John Wiley & Sons.

Scott, M. (2020, July 27). *Food and drinks companies are seeing worth from their waste*. Retrieved from Food and drinks companies are seeing worth from their waste: https://www.theguardian.com/sustainable-business/food-drinks-companies-value-from-waste

Shearman, S. (2020, July 29). *Businesses find appetite to cut food waste*. Retrieved from Businesses find appetite to cut food waste: https://www.ft.com/content/a66913c8-d888-11e8-aa22-36538487e3d0

Singh, J. (2010). *Solid Waste Management.* New Delhi: I.K International Publishing House Pvt. Ltd.

SkillsYouNeed. (2019, June 28). *Writing your Dissertation: Methodology*. Retrieved from Skills You Need: https://www.skillsyouneed.com/learn/dissertation-methodology.html

Smil, V. (2020, August 01). *The global waste dilemma: where does our food go?* Retrieved from The global waste dilemma: where does our food go?: https://www.ft.com/content/09d28fda-98e4-11e5-9228-87e603d47bdc

The Chartered Institute of Purchasing and Supply . (2007). Knowledge How To. *How to develop a waste management and disposal strategy*, 2.

The Guardian. (2019, July 27). *Restaurants could make £7 for every £1 invested in cutting waste, report reveals*. Retrieved from Restaurants could make £7 for every £1 invested in cutting waste, report reveals: https://www.theguardian.com/global-development/2019/feb/13/restaurants-cutting-waste-food-report-reveals

Trevor , L. M., & Daniel, V. E. (2011). *Waste: A Handbook for Management.* Burlington: Academic Press.

Vaughn, J. (2009). *Waste Management: A Reference Handbook.* California: ABC-CLIO Inc.

Wu, A. (2020, July 24). *Good product, bad package: top sustainable packaging mistakes*. Retrieved from Good product, bad package: top sustainable packaging mistakes: https://www.theguardian.com/sustainable-business/2014/jul/18/good-product-bad-package-plastic-recycle-mistakes

# APPENDIX

**QUESTIONNAIRE**

Dear Participant,

You are asked to partake in the study 'The determinants of consumer behaviours in restaurant food waste mitigation: Evidence from North Cyprus. Your honest opinions are required, all the information that you provide will be confidential.

Thank you for your participation.

Prof. Dr. Sami Fethi and Dervis Kutbay

**Part A: Demographic Information**

**What gender do you identify as? :**

| | |
|---|---|
| **Male** | |
| **Female** | |
| **Prefer not to say** | |

**Age:**

| | |
|---|---|
| **16-27** | |
| **28-37** | |
| **38-47** | |
| **48 and above** | |

**Job Status:**

| | |
|---|---|
| **Full time** | |
| **Part time** | |
| **Unemployed** | |

**Monthly Income Level (TL):**

| | |
|---|---|
| **Less than 3000** | |
| **3000-4000** | |
| **4000-5000** | |
| **More than 5000** | |

**Education Level:**

| | |
|---|---|
| **Primary School** | |
| **Secondary/High School** | |
| **Bachelor's Degree** | |
| **Master's Degree** | |
| **Ph.D. or Higher** | |

**How often do you visit restaurant in a week?**

| | |
|---|---|
| **1-2** | |
| **2-3** | |
| **4-5** | |
| **More than 6** | |
| **None** | |

**Nationality:**

_____

**Occupation**

| | |
|---|---|
| **Student** | |
| **Civil servant** | |
| **Own business** | |
| **Private sector** | |

**Part B:**

**Instructions: For each of the statements below, please indicate the extent of your agreement or disagreement by placing a tick in the appropriate box.**

**The response scale is as follows:**

**Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree**

| **New Ecological Paradigm** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| 1. We are approaching the limit of the number of people the Earth can support | | | | | |
| 2. This planet has plenty of natural resources, we just need to know how to develop them | | | | | |
| 3. The Earth is like a spaceship which has only limited room and resources on-board | | | | | |
| 4. Humans have the right to modify the natural environment to suit their needs | | | | | |
| 5. Plants and animals have as much rights as humans to exit | | | | | |
| 6. Humans were meant to rule over the rest of the nature | | | | | |
| 7. When humans interfere with nature, this often results in disastrous consequences | | | | | |
| 8. The balance of nature is very delicate and can be easily upset | | | | | |
| 9. Human ingenuity will ensure that we do not make the earth inhabitable | | | | | |
| 10. Humans will eventually learn enough about how nature works to be able to control it | | | | | |
| 11. Humans are severely abusing the environment | | | | | |
| 12. If things continue on their present course, we will soon experience a major ecological catastrophe | | | | | |

| **Environmental Knowledge** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| 1. I know how to buy products and packages that are better for the environment | | | | | |
| 2. I know more about recycling than the average person | | | | | |
| 3. I know how to select products and product packaging that reduce the amount of waste ending up in landfills | | | | | |
| 4. I understand the environmental jargon and environmental symbols/labels displayed on product packaging | | | | | |
| 5. I would say that I am knowledgeable about environmental issues | | | | | |
| **Pro-Environmental Behaviour at Home** | **1** | **2** | **3** | **4** | **5** |
| 1. Wherever possible, I try to reduce energy usage at home | | | | | |
| 2. Wherever possible, I try to use biodegradable or recycled products at home | | | | | |
| 3. Wherever possible, I try to serve locally grown food | | | | | |
| 4. I refuse buying products from companies accused of being polluters | | | | | |
| 5. Wherever possible, I try to reduce energy usage at home | | | | | |
| 6. Wherever possible, I try to use biodegradable or recycled products at home | | | | | |
| **Knowledge on Restaurant Food Waste** | **1** | **2** | **3** | **4** | **5** |
| 1. I am aware that cooking a restaurant meal generates a lot of food waste | | | | | |
| 2. I am aware that food wastage from consumer plates is substantial | | | | | |
| 3. I am aware that restaurant buffets generate excessive amounts of food waste | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 4. I am aware that the amount of food waste generated by restaurants, annually on a national scale, is negligible | | | | | |
| 5. I am aware that all-inclusive / 'eat as much as you can' restaurant business models generate a lot of food waste | | | | | |
| 6. I am aware that unpredictable consumer demands causes food waste in restaurants | | | | | |
| 7. I am aware that local food is better for the environment in terms of wastage | | | | | |
| 8. I am aware that bringing food from long distance to cook in a restaurant increases the probability of food waste occurrence | | | | | |
| 9. I am aware that donating unsold meals to the people in need is growing in popularity with restaurants around the world | | | | | |
| 10. I am aware that food waste reduction leads to significant financial savings for restaurant managers | | | | | |
| **Attitudes towards Restaurant Food Waste** | **1** | **2** | **3** | **4** | **5** |
| 1. Restaurants should actively reduce the amount of food waste they generate | | | | | |
| 2. Restaurants should pro-actively offer 'doggy bags' to their customers to reduce food waste | | | | | |
| 3. It is not my responsibility to reduce food waste in restaurants, it is the restaurants | | | | | |
| 4. Restaurants should work together with consumers to reduce the amount of food waste generated | | | | | |
| 5. Restaurants should donate unsold meals to the people in need | | | | | |
| **Anticipated Emotions towards Restaurant Food Waste** | **1** | **2** | **3** | **4** | **5** |
| 1. I feel guilty when I leave leftovers on my plate as I know this contributes to restaurant food waste | | | | | |
| 2. I regret if I cannot finish a meal in a restaurant and leave food on my plate | | | | | |
| 3. I would be ashamed to ask for a 'doggy bag' in a restaurant | | | | | |
| 4. I would feel uncomfortable if I wasted food in a restaurant | | | | | |

| **Behavioural Intentions towards Restaurants Food Waste Reduction** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| 1. I would prefer to dine out in a restaurant which aims to reduce the amount of food waste generated | | | | | |
| 2. I would prefer dining out in a restaurant which participates in a community food donation programme | | | | | |
| 3. I would welcome a menu option which enables me to choose my portion size to reduce plate food waste | | | | | |
| 4. I would be willing to pay a price premium in restaurants that aim to pro-actively reduce the amount of food waste generated | | | | | |
| 5. I would be willing to recommend to other people the restaurants that aim to pro-actively reduce the amount of food waste they generate | | | | | |

(Filimonau, Matute, Kubal-Czerwinska , Krzesiwo, & Mika, The determinants of consumer engagement in restaurant food waste, 2019)